

Meeting Attachments

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Ordinary Meeting

Meeting Date: Monday, 24 April, 2023

Location: Council Chambers, City Administrative Building, Bridge Road, Nowra

Attachments (Under Separate Cover)

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Shoalhaven Sports Board – Wednesday 22 March 2023 Page 22

SB23.4 Sports Grants Program 2022 / 23 Recommendation for Unallocated Funding

HPERM Ref: D23/92498

Department: Community Planning & Projects **Approver:** Jane Lewis, Director - City Lifestyles

Shoalhaven Sports Board 16 November 2022 U

Sports Grants Program (Capital Works) POL19/48
 Form - Shoalhaven Swim Sport Fitness - Sports Grants Program (Capital Works) 2022/23 - Weighted Score Evaluation

1. Report - Sports Grants Program 2022 / 23 - Funding Determinations -

- Action Sheet MIN22.976 SB22.25 Sports Grants Program 2022 / 23
 Successful applications Ordinary Meeting 12 December 2022

Reason for Report

Attachments:

The purpose of this report is to provide further recommendation to Shoalhaven Sports Board regarding use of Unallocated 2022 / 23 Sports Grants Program Funding following previous direction.

Recommendation

That the Shoalhaven Sports Board approve remaining Unallocated 2022 / 23 Sports Grants Program Balance of \$97,908.53 to be transferred to Shoalhaven Swim Sport Fitness to support the Minor Improvement Program Budget expansion by extending the Shoalhaven Sportsground Seasonal Maintenance Programs, as detailed in the report, totalling \$97,908.53.

Options

1. Adopt recommendation as written.

<u>Implications</u>: Enable top-dressing and other surface improvement works to efficiently remediate sportsgrounds where recent or upcoming sub-surface drainage systems have been or are being installed. This will result in expedited recovery, and enhanced quality of facility playing surfaces across the city.

Change or provide an alternative recommendation providing staff direction.
 <u>Implications</u>: Unknown until advice received – this may delay the Sports Grants Program and may result in funding not being spent.

Background

Late last year, a report was presented to Shoalhaven Sports Board's 16 November 2022 meeting, which forms Attachment 1 to this report:

 Report - Sports Grants Program 2022 / 23 - Funding Determinations - Shoalhaven Sports Board 16 November 2022





Shoalhaven Sports Board – Wednesday 22 March 2023 Page 23

Attachments 1 and 2 to the November report will constitute Attachments 2 and 3 to the current report:

- Sports Grants Program (Capital Works) POL19/48
- Form Shoalhaven Swim Sport Fitness Sports Grants Program (Capital Works) 2022/23 - Weighted Score Evaluation

Made at its 16 November 2022 meeting, the recommendation of Shoalhaven Sports Board to Council is shown at Attachment 4 to the current report:

Action Sheet - SB22.25 - Sports Grants Program 2022 / 23 - Funding Determinations
 Shoalhaven Sports Board 16 November 2022

Made at its 12 December 2022 meeting, the resulting resolution of Council is shown at Attachment 5 to the current report:

 Action Sheet - MIN22.976 - SB22.25 - Sports Grants Program 2022 / 23 - Successful applications - Ordinary Meeting 12 December 2022

The total 2022 / 23 Sports Grants Program Budget was \$168,000. Five applications for funding were received totalling \$70,091.47, leaving a balance of \$97,908.53.

These applications were approved by the Board at its meeting held 16 November 2022, resolved by Council at its meeting held 12 December 2022 (MIN22.976 follows) and are currently at various stages of delivery:

RESOLVED ... MIN22.976

"That:

- "1. Council approve the following five (5) applications for the 2022 / 23 Sports Grants Program endorsed by Shoalhaven Sports Board:
 - a. Shoalhaven District Football Association Install underground tank and pump at Ison Park South Nowra - Top-dress Field 1 - \$22,052
 - Shoalhaven United Football Club Top-dress Fields No 3 and No 4 at Lyrebird Park
 \$7.583
 - Milton Ulladulla Rugby League Football Club Erect new goal posts at Bill Andriske Oval - \$6.533
 - d. Berry Riding Club Extension to Spectator Shed at Berry Equestrian Centre -\$20,000
 - e. Milton Ulladulla Junior Rugby League Football Club installation of spectator fence at Ulladulla Sports Park Field 1 \$13,923.47
- "2. The remaining unallocated 2022 / 23 Sports Grants Program balance of \$97,908.53 remain with the Shoalhaven Sports Board until resolved."

Sports Grants Program - Proposed Use of Balance of Funds - 2022 / 23

Originally approved by the Board, it was proposed that the remaining funds of \$97,908.53 be allocated for expansion of the Minor Improvement Program Budget to extend Shoalhaven Sportsground Seasonal Maintenance Programs.





Shoalhaven Sports Board – Wednesday 22 March 2023 Page 24

At Council's Ordinary Meeting held 12 December 2022, the Board's recommendation was amended to that shown above in Point 2.

This report will offer the Shoalhaven Sports Board further opportunity to discuss the use of Unallocated Sports Grants Funds and provide resolution with consideration to the options provided.

Location	Estimated Cost for Topdressing \$
Kangaroo Valley Showground	23,625
Crookhaven Sportsfield (rugby league)	13,135
Callala Sports Field (Soccer)	13,473
Huskisson Sportsground (carnival site/cricket)	7,468
Francis Ryan Oval (rugby league & cricket) -	12,654
Thomson St Sussex Inlet (cricket)	26,182
Total	\$96,537.00
Contingency	1,371.53
Total Remaining Funds from Sports Grants Program 2022 / 23	\$97,908.53

Community Engagement

No external community engagement is necessary for this report, representations have been received from either sporting user groups or identified by SSSF precinct staff who maintain the sports fields. Further engagement will be undertaking with the Shoalhaven Sports Board in considering this report.

Policy Implications

There are no Policy Implications envisaged by this report.

Financial Implications

There are no funding implications as this is an approved program with an annual budget within Council Delivery Program and Operation Plan for 2022/23 financial year.

Risk Implications

The only risks envisaged are potential delays to the Sports Grants Program and / or unspent funds, should an alternative recommendation be provided.





Shoalhaven Sports Board - Wednesday 22 March 2023



Shoalhaven Sports Board - 16 November 2022 Page 1

SB22.25 Sports Grants Program 2022 / 23 - Funding **Determinations**

HPERM Ref: D22/431658

Community Planning & Projects Jane Lewis, Director - City Lifestyles Department: Approver:

1. Sports Grants Program (Capital Works) Attachments: 2. Weighted Score Evaluation

Reason for Report

To advise Shoalhaven Sports Board of funding applications for the Sports Grants Program 2022 / 23 and to seek the Shoalhaven Sports Board approval for allocation of funding to the recommended projects outlined in this report to be referred onto Council for adoption.

Recommendation

That:

- The Shoalhaven Sports Board approve the following five (5) applications for the 2022 / 2023 Sports Grants Program:
 - Shoalhaven District Football Association Install underground tank and pump at Ison Park South Nowra Topdress Field 1 \$22,052
 - b. Shoalhaven United Football Club Topdress Fields No 3 and No 4 at Lyrebird Park
 - Milton Ulladulla Rugby League Football Club Erect new goal posts at Bill Andriske Oval $\$6,\!533$
 - d. Berry Riding Club Extension to Spectator Shed at Berry Equestrian Centre -
 - e. Milton Ulladulla Junior Rugby League Football Club installation of spectator fence at Ulladulla Sports Park Field 1 - \$13,923.47
- Shoalhaven Sports Board approve remaining unallocated 2022 / 23 Sports Grants
 Program balance of \$97,908.53 to be transferred to Swim Sport Fitness to support the
 - a. Expansion of Minor Improvement Program Budget to extend the Shoalhaven sportsground seasonal maintenance programs, with an emphasis on top-dressing to efficiently remediate sportsgrounds where recent or upcoming sub-surface drainage system have / are being installed.

Options

1. Adopt the recommendation as written.

Implications: This will allow Sports Grants Program funds to be allocated and projects to proceed in line with sporting club plans throughout the Shoalhaven and appropriate utilisation of remaining funds. This will also expedite sportsground topdressing improvements.

2. Change or provide an alternative recommendation which provides staff direction.



SB23.4 - Attachment





Shoalhaven Sports Board – Wednesday 22 March 2023 Page 26



Shoalhaven Sports Board – 16 November 2022 Page 2

<u>Implications</u>: Unknown until advice received – this may delay the Sports Grants Program and may result in funding not being spent. May also delay sportsground topdressing improvements.

Background

The Sports Grants Program's purpose is to assist Shoalhaven sporting groups to undertake new works or improvements to existing fixed assets at sporting facilities on Council-managed land. This grant is not intended for maintenance activities.

Sports Grants Program - Applications 2022 / 23

Applications to the Sports Grants Program are invited annually, as outlined by the Sports Grants Policy POL22/64 (Attachment 1). This year, information was distributed to all sporting clubs on Council's database, advising clubs of the scheme and requesting that clubs make an application prior to 17 July 2022.

The total 2022 / 23 Sports Grants Program budget is \$168,000.00. Five (5) applications for funding were received, totalling \$70,091.47.

Applications were assessed against the criteria and provisions as outlined in the Sports Grants Policy POL22/64 (Attachment 1) and assessment scores are recorded in the Weighted Score Evaluation (Attachment 2).

Club	Facility	Project	Cost GST inc (ex in-kind Labour)	Funds Requested	Club / Other Contribution
Shoalhaven District Football Association	Ison Park, South Nowra	Install Underground Tank & Pump - Topdress Field 1	\$33,077.00	22,052.00	\$11,025.00 + \$1,080.00 in- kind labour
Shoalhaven United Football Club	Lyrebird Park, Nowra	Topdress Fields 3 & 4	\$11,375.00	7,583.00	\$3,792.00
Milton Ulladulla Rugby League Football Club	Bill Andriske Oval, Mollymook	Erect New Goal Posts	\$13,067.00	6,533.00	\$6,533.00
Berry Riding Club	Berry Equestrian Centre	Extension to Spectator Shed	\$30,310.00	20,000.00	\$10,310.00
Milton Ulladulla Junior Rugby League Football Club	Ulladulla Sports Park	Install Spectator Fence surrounding Field 1	\$20,885.20	13,923.47	\$6,961.73

All applications comply with the Policy and can be funded within the program budget, therefore, it is recommended that all projects be approved within this funding round.

SB23.4 - Attachment





Shoalhaven Sports Board – Wednesday 22 March 2023 Page 27



Shoalhaven Sports Board – 16 November 2022 Page 3

Sports Grants Program – Proposal for Use of Balance of Funds – 2022 / 23

It is proposed that the funds be allocated for expansion of the Minor Improvement Program Budget to extend the Shoalhaven sportsground seasonal maintenance programs.

Community Engagement

The 2022 / 23 Sports Grants Program was opened for applications from all sporting groups and peak bodies on 21 April 2022. Reminder notifications were sent to these contacts on 29 June 2022 to encourage a healthy uptake of the grant. The Sports Grants Program was also promoted to attendees of the Sporting Groups Workshop.

Policy Implications

All applications comply with the Sports Grants Policy (Attachment 1).

Financial Implications

2022 / 23 Sports Grants Program allocated budget	\$168,000.00
Total funding requested under the 2022 / 23 Sports Grants Program, for five (5) recommended projects in this report	\$70,091.47
Remaining funds if all recommended projects are approved	\$97,908.53

Risk Implications

<u>Development Application – Berry Riding Club</u>

Berry Riding Club's application for an extension to spectator seating requires a Development Application (DA). The club has initiated this process following consultation with Council's Duty Planner and has since lodged a DA through the NSW Planning Portal. The Club has been advised that current wait times for DA approvals are six (6) to nine (9) months.

Should Berry Riding Club be successful in securing Sports Grant Program funding, there is also the possibly that this project will roll into the 2023 / 24 financial year for completion.





Shoalhaven Sports Board – Wednesday 22 March 2023 Page 28



City Administrative Centre

Bridge Road (PO Box 42), Nowra NSW Australia 2541 - DX 5323 Nowra Phone: (02) 4429 3111 - Fax: (02) 4422 1816

Southern District Office Deering Street, Ulladulla - Phone: (02) 4429 8999 – Fax: (02) 4429 8939

Email: council@shoalhaven.nsw.gov.au

Website: www.shoalhaven.nsw.gov.au

For more information contact the Finance Corporate & Community Services Group

SPORTS GRANTS PROGRAM (CAPITAL WORKS)

Policy Number: POL19/48 • Adopted: 27/06/2006 • Amended: 18/12/2007, 28/04/2009, 21/12/2009, 18/05/2010, 21/05/2013, 28/03/2017, 17/04/2018, 29/10/2019 • Minute Number: MIN06.778, MIN07.1842, MIN09.509, MIN09.1789, MIN10.588, MIN13.532, MIN17.247, MIN18.273, MIN19.793 • File: 5270E • Produced By: Finance Corporate & Community Services Group • Review Date: 1/12/2020

PURPOSE

To define the funding framework for sports groups to partner with Council to deliver capital works projects / improvements. The funding framework allows for design and delivery of new works, or improvements to existing capital fixed assets at sporting facilities on Council managed land.

2. STATEMENT

2.1. Who does the policy apply to?

The Sports Grants Program is available to all Shoalhaven based sports groups that meet the provisions of this policy and wish to undertake design for new works or improvements to existing fixed assets on Council managed land.

2.2. Council funding

Council funding for this program is to be reviewed annually during the budget process.

Council's matching financial contribution for this program is available to eligible Shoalhaven based sporting groups on the basis of \$2.00 from Council for each \$1.00 contributed by sporting organisations. Eligible projects will require endorsement from the relevant sporting association.

The program also supports those Shoalhaven based sporting groups who wish to accumulate funds for strategic projects by carrying over Council's matching contribution to the next financial year. However, funds will only be carried over to match the amount collected by the sporting group for the nominated strategic project(s), which are agreed upon by the Shoalhaven Sports Board.

2.3. Capital improvements

Capital improvements to sporting facilities refer to the provision of new, or improvements to existing, capital fixed assets and should be in line with the Community Infrastructure Strategic Plan 2017-2036, and in accordance with the following criteria:

· Consolidation of assets





Shoalhaven Sports Board – Wednesday 22 March 2023 Page 29

Shoalhaven City Council - Sports Grants Program (Capital Works)

- · Current legislation compliance
- Higher usage levels of fewer assets
- · Multiple-use facilities
- · Increased range of activities, services and programs being offered
- Increased participation, particularly by target groups (eg children, aged, disabled, different cultural backgrounds etc)
- . Such improvements typically involve:
 - Design costs for capital projects
 - · Lighting of sports fields
 - · Improvements to amenity blocks
 - · Spectator facilities
 - · In-ground drainage and/or irrigation
 - · Improved playing surfaces
 - · Car park and access road sealing
 - · Long cycle refurbishment of tennis courts

This does not include provision of machinery.

2.4. Sports group involvement

The nature of this program allows Shoalhaven based sporting groups to determine their level of involvement and their preferred methods of collection of funds to partner Council in the improvement of facilities on Council managed land. Such methods could include direct levy of participants, fundraising, sponsorship or successful grant applications.

Council's Sportsgrounds Management Policy outlines the process for all communication which will take place between relevant Sporting Associations or Peak Bodies and Council.

2.5. Criteria for prioritisation

- Compliance with strategic and other plans of council 50%
- II. Value of additional in-kind labour to contribute 15%
- III. Percentage of funding club is contributing 10%
- IV. The apparent "readiness" of the project to proceed 15%
- V. Benefit to other users of the Council Managed Land 10%

3. PROVISIONS

The following provisions apply:

- 3.1. This Sports Grants Program applies to all sports that occur on Council managed land.
- 3.2. Council's matching financial contribution is available for Shoalhaven sporting groups on the basis of \$2.00 from Council for each \$1.00 contributed by the applicant, with evidence of available funds at time of application.
- 3.3. Applications are invited in April each year and must be received by 30 June for the following financial year. The Applications will be considered by three representatives of





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Shoalhaven City Council - Sports Grants Program (Capital Works)

the Shoalhaven Sports Board, a member of Shoalhaven City Council's Inclusion and Access Advisory Group, and two Council staff representatives. The representatives will meet to assess the applications and report to the Shoalhaven Sports Boards first meeting after 1 July.

Applications must include the following:

- · A statement of community benefit
- · Levels of participation
- An assessment, either by the local sporting group or by the peak bodies of the relevant sporting codes, of the future building and sport facility requirements within the City over the next 20 years
- Assessment of the club's financial capacity (including audited financial statements for the preceding three years)
- · A five year forward Business Plan, including financial projections
- · Site plans
- · Quotes for the planned work
 - 3.4. After 1 July the Shoalhaven Sports Board will consider the project priority for the remaining funding pool based on need and the ability of the project to be delivered or part delivered in the relevant financial year. These priority projects will be reported to the Board for endorsement.
 - 3.5. In-kind contributions may be used to value-add to projects but will not substitute for the cash contribution component.
 - 3.6. Funds will not be carried over on a promise of raising matching funds in subsequent years and funds used to match previous Council contributions cannot be used to bid for funds in subsequent years.
 - Projects qualifying for the Program will be subject to a financial limit of \$50,000 in matching funds.
 - 3.8. Where there is more than one application from a sporting code, the Association must indicate its priority. Associations should provide equal access for all clubs to Council's financial allocation. Where no Association / Peak Body exists, Council will liaise directly with the sporting club.
 - Council's funding commitment to this Program will be reviewed annually as part of Council's annual Management Plan/Budget review.
 - 3.10. Once funding is approved contributory funds shall be paid to Council by the Sporting Association / Peak Body (or affiliated Club) prior to the project commencing. Council will provide Purchase Orders as per the successful quotes. All projects shall be overseen by a qualified / licensed operator approved by Council. This will require the qualified / licensed operator providing Council with relevant Work Health & Safety information and Safe Work Method Statements. Council has limited capacity to assist in project delivery and this may require the funds to recover relevant staffing costs. If Council is required to provide this service, it reserves the right to recoup its expenditure from the project allocation.
 - 3.11. After considering a staff report, the Board will recommend to Council the allocation of any unexpended funds for improvements to sports facilities.





Shoalhaven Sports Board - Wednesday 22 March 2023

Shoalhaven City Council - Sports Grants Program (Capital Works)

- 3.12. This policy does not apply to Management Committees, other than Committees administering tennis courts or sports with lease agreements with payments contributing to a capital improvement 'sinking' funds or swimming clubs, Surf Life Saving Clubs and skate park users that are funded from a separate annual capital works budget allocation.
- 3.13. Where a project has not commenced in the financial year following the year of allocation, the funding may be withdrawn and re-allocated. The sports group will be advised prior to the withdrawal of funding.
- 3.14. Where the total project cost is:
- less than \$5,000 one quote should be sought
- over \$5,000 and less than \$24,999 two written quotes should be sought \square over \$25,000 - at least three written quotes should be obtained.

For amounts over \$75,000, formal advertisement for quotes, or a tender process is required - Council staff will advise.

- Projects should be consistent with Council's Community Infrastructure Grants Guidelines and the Community Infrastructure Strategic Plan.
- 3.16. All improvements or alterations to playing fields or facilities will become and remain the property of Council and cannot be removed by the hirer and/or user. Council is not required to compensate the hirer and/or user for the cost of such improvements or alterations.

IMPLEMENTATION

The Finance Corporate & Community Services Group will administer this policy.

5. REVIEW

To be reviewed within one year of the appointment of a new elected Council.





Shoalhaven Sports Board – Wednesday 22 March 2023 Page 32

Shoalhaven City Council - Sports Grants Program (Capital Works)



Sports Grants Program (Capital Works) Project Nomination Form Annual closing date is 30 June



File Reference 24899

PART A: To be completed by the Club(s) nominating the project (please print)	_
Project name:	
Project description:	
lame of reserve / location:	
s the land managed by Shoalhaven City Council? Yes / No	
lame of Club:	
Postal address:Contact person:	
Position held:	
Business phone: Mobile: Fax: Email:	
Does your club have an ABN? Yes / No If yes please supply ABN No.:	
s your club registered for GST? Yes / No	
Ooes your Club have a Business Plan? If yes, please provide a copy of your Business Plan for the lext 5 years, including financial projections.	
Please provide details of any community benefit as a result of the nominated project:	
Club user profile. Please provide a breakdown of your current Club membership: Child (0-11yers) MaleFemale Adults (18-49yrs) MaleFemale Youth (12-17yrs) MaleFemale Seniors (50+yrs) MaleFemale	
Please highlight any changes to membership numbers as a result of this project	
Please provide audited financial statements for the preceding three years to enable assessment of telubs financial capacity.	he
Proposed project starting date: Anticipated project completion date:	
las a Development Application (where applicable) been approved? Yes / No If no, please explain:	





Shoalhaven Sports Board - Wednesday 22 March 2023

Has a Construction Certificate bea	en approved? Yes / No	If no, please	explain:	
Does the project have the supportusers below? Please provide and			yes, please p	rovide a list of
PART A Continue				
Project cost breakdown (Please a	ttach copies of all quote	es)		
Itemised description of all com make up the project		Net Cost	GST	Total Cost
Net Project Cost		\$		
GST			\$	
Total Project cost (i.e. Net Cost				\$
Project funding breakdown (Pleas				1
	Source / Brief Descri	iption	Amount \$	Funding verified
Cash Funds Attach a copy of details				Yes / No
Loan Funds Attach a copy of details				Yes / No
State Government Funds Attach a copy of details				Yes / No
Federal Government Funds Attach a copy of details				Yes / No
In- Kind Donations Attach a copy of details				Yes / No
In-Kind Labour Attach a copy of details				Yes / No
Other Attach a copy of details				Yes / No
Total Funds Available (Must Inc	lude GST)		\$	-
User Contributions Policy Fund	ling Request		\$	
Total In-kind Donations / Labou	ır	-	\$	
Total Project Cost (must equal t	he above Total Project		\$	
Signature of contact person:		Da	ite:	

Shoalhaven City Council - Sports Grants Program (Capital Works)





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Shoalhaven City Council - Sports Grants Program (Capital Works)

The information requested by Council on this form may constitute personal information under the Privacy and Personal Information Protection Act 1998. Council is allowed to collect the information from you to consider this matter. Supplying this information is voluntary. However if you cannot or do not wish to provide the information, Council may not be able to consider the matter. If you need further details, please contact the Information Officer, Shoalhaven City Council.

PART B - To be completed by the relevant Association/Peak Body (please print) Name of organisation: Postal address: Contact person: Position held: Business phone: Mobile: Fax: Email: Does the submitting group have a formal organisational structure (ie President, Secretary etc)? Yes / No. If Yes please provide details: Does the proposed project meet the high priority needs of the sport. Yes / No If yes, please provide details how? Please provide the future building and sporting facility requirements for your sporting organisation, within the City over the next 20 years. Recommendation - If more than one application is submitted by your organisation a priority should be given to this project relative to other projects Signature of contact person: Date: The information requested by Council on this form may constitute personal information under the

The information requested by Council on this form may constitute personal information under the Privacy and Personal Information Protection Act 1998. Council is allowed to collect the information from you to consider this matter. Supplying this information is voluntary. However if you cannot or do not wish to provide the information, we may not be able to consider the matter. If you need further details, please contact the Information Officer, Shoalhaven City Council.

Please send completed nomination forms to: $\underline{\mathsf{council} @\mathsf{shoalhaven.nsw.gov.au}} \ , \mathsf{or}$

The CEO





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Shoalhaven City Council - Sports Grants Program (Capital Works)

Shoalhaven City Council PO Box 42 Nowra NSW 2541

File Reference 24899E

Further Information: Please contact Council on 4429 3111 or council@shoalhaven.nsw.gov.au





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Weighted Score Evaluation

ATTACHMENT 2

	Compliance with strategic & other plans of Council	Value of additional in- kind labour to contribute	Percentage of funding contributed by club	Apparent 'readiness' of the project to proceed	Benefit to other users of the Council- managed Land	Total Score
	/20	/6	/4	/6	/4	/40
Shoalhaven District Football Association - Install Underground Tank & Pump - Topdress Field 1	15	6	1	3	4	29
Shoalhaven United Football Club - Topdress Fields 3 & 4	17	1	1	5	3	27
Milton Ulladulla Rugby League Football Club - Erect New Goal Posts	17	1	4	4	2	28
Berry Riding Club - Extension to Spectator Shed	15	1	2	1	2	21
Milton Ulladulla Junior Rugby League Football Club - Install Spectator Fence surrounding Field 1	14	1	1	2	4	22

CL23.110 - Attachment 1

SB23.4 - Attachment 4





Shoalhaven Sports Board - Wednesday 22 March 2023

INFORMATION ONLY

SHOALHAVEN SPORTS BOARD

16/11/2022

TO: Manager - Community Planning & Projects (Cascun, Stephanie)

Subject: Sports Grants Program 2022 / 23 - Funding Determinations

Target Date: Notes: FYI - This item has been referred to the Ordinary Meeting Monday 12 December 2022 for resolution. This action has been automatically completed in Infocouncil & TRIM.

24899E D22/431658 SB22.25 HPERM Reference Item Number

RECOMMENDATION (Phill Newlyn / Craig Howsan)

That Council:

- Approve the following five (5) applications for the 2022 / 23 Sports Grants Program endorsed
 - Shoalhaven District Football Association Install underground tank and pump at Ison Park South Nowra Topdress Field 1 \$22,052
 - Shoalhaven United Football Club Topdress Fields No 3 and No 4 at Lyrebird Park b.
 - Milton Ulladulla Rugby League Football Club Erect new goal posts at Bill Andriske Oval - \$6,533
 - d. Berry Riding Club Extension to Spectator Shed at Berry Equestrian Centre \$20,000
 - Milton Ulladulla Junior Rugby League Football Club installation of spectator fence at Ulladulla Sports Park Field 1 \$13,923.47
- Approve remaining unallocated 2022 / 23 Sports Grants Program balance of \$97,908.53 to be transferred to Swim Sport Fitness to support the following as endorsed by the Shoalhaven
 - Expansion of Minor Improvement Program Budget to extend the Shoalhaven sportsground seasonal maintenance programs, with an emphasis on top-dressing to efficiently remediate sportsgrounds where recent or upcoming sub-surface drainage system have / are being installed.

CARRIED

Open Item in Minutes

'For Action' action sheets must have notes added and be completed in Infocouncil, go to the Action Menu in Infocouncil (Word)





Shoalhaven Sports Board – Wednesday 22 March 2023 Page 38



'Information only' action sheets are completed automatically in Infocouncil & Trim.

Instructions for viewing/completing an action

- I. Open Word
- 2. Click on Actions Menu on the Infocouncil toolbar
- View your actions (to view 'Information only action sheets' tick 'Information only' & 'Completed/Acknowledged')
- Click the to complete an action (you will be required to enter a note).
- 5. To add extra notes Double click on the required action or highlight the action and click Notes

SB23.4 - Attachment 4





Shoalhaven Sports Board - Wednesday 22 March 2023

FOR ACTION

ORDINARY MEETING

12/12/2022

TO: Social Infrastructure Officer (Coker, Clinton)

Sports Grants Program 2022 / 23 - Successful applications 11/01/2023Subject:

Target Date: Notes:

HPERM Reference Related Report 24899E D22/431658 Item Number SB22.25

RESOLVED (CIr White / CIr D'Ath)

MIN22.976

That:

- 1. Council approve the following five (5) applications for the 2022/23 Sports Grants Program endorsed by Shoalhaven Sports Board:
 - Shoalhaven District Football Association Install underground tank and pump at Ison Park South Nowra - Top-dress Field 1 - \$22,052
 - Shoalhaven United Football Club Top-dress Fields No 3 and No 4 at Lyrebird Park -
 - Milton Ulladulla Rugby League Football Club Erect new goal posts at Bill Andriske Oval - \$6,533
 - d. Berry Riding Club Extension to Spectator Shed at Berry Equestrian Centre \$20,000
 - Milton Ulladulla Junior Rugby League Football Club installation of spectator fence at Ulladulla Sports Park Field 1 - \$13,923.47
- The remaining unallocated 2022/23 Sports Grants Program balance of \$97,908.53 remain with the Shoalhaven Sports Board until resolved.

CIr Findley, CIr Kotlash, CIr Norris, CIr Butler, CIr D'Ath, CIr Copley, CIr Ell, CIr White, CIr Wells, CIr Watson, CIr Kitchener and CIr Gray FOR:

AGAINST: Nil CARRIED

Open Item in Minutes

'For Action' action sheets must have notes added and be completed in Infocouncil, go to the Action Menu in Infocouncil (Word).



'Information only' action sheets are completed automatically in Infocouncil & Trim.





Shoalhaven Sports Board – Wednesday 22 March 2023

Instructions for viewing/completing an action

- Open Word
- Click on Actions Menu on the Infocouncil toolbar
- View your actions (to view 'Information only action sheets' tick 'Information only' & 'Completed/Acknowledged')

 Click the to complete an action (you will be required to enter a note).
- To add extra notes Double click on the required action or highlight the action and click Notes

SB23.4 - Attachment 5





Monthly Investment Report

March 2023



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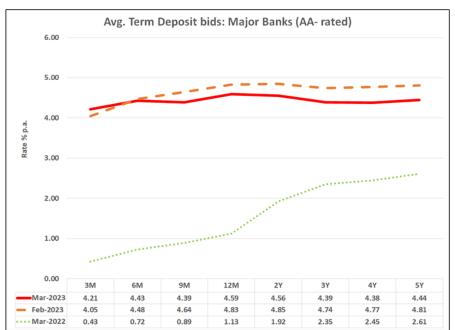




Market Update Summary

Volatility returned across risk markets in March after the collapse of Silicon Valley Bank (SVB) - the 16th largest bank in the US with US\$209bn in assets as at 31 December 2022. Importantly, the US government vowed no depositors would lose money in the collapse and measures were taken by the US Treasury, US Fed and FDIC to prevent a US bank run on deposits. Risk markets reacted positively on assurances of central banks intervening to avoid a banking contagion, as well as pushing forward their expectations of rate cuts earlier than previously anticipated. Markets have been quick to revise their interest rate forecasts following the events surrounding the global banks, as well as central bank rhetoric. A pause by the RBA was delivered in April "to provide additional time to assess the impact of the increase in interest rates to date and the economic outlook".

Despite the aggressive rate hikes, the deposit market has already factored in the current rate hike cycle in recent months. Interestingly, deposit rates shifted lower over March especially at the 1-5 year part of the curve (by around 25-35bp) following contagion fears within the banking sector and the potential for rate hikes towards the back-end of 2023 or early 2024:



Source: Imperium Markets

'New' investments close to or above 4%-4½% p.a. is currently available if Council can place the majority of its surplus funds for terms of 12 months to 3 years. With recessionary fears being priced in coming years, investors may take an 'insurance policy' against future rate cuts by investing across 3-5 year fixed deposits and locking in rates above or close to 4½% p.a. (small allocation only).





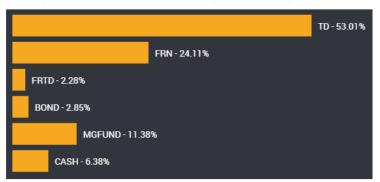
Council's Portfolio & Compliance

Asset Allocation

The majority of the portfolio is directed to fixed and floating rate term deposits, followed by liquid senior FRNs. The remainder of the portfolio is directed to the managed with TCorp, the introduction of fixed bonds with Northern Territory, as well as cash accounts.

Senior FRNs remain relatively attractive as spreads have widened over the past year – new issuances should now be considered again on a case by case scenario. In the interim, fixed deposits for 12 months to 3 years remains appealing following the spike in medium-to longer-term yields during the rate hike cycle.

With recessionary fears being priced in coming years, investors can choose to allocate some longer-term surplus funds and undertake an insurance policy against any potential future rate cuts by investing across 3-5 year fixed deposits, locking in and targeting yields close to or above 4½% p.a.







Term to Maturity

All maturity limits (minimum and maximum) comply with the Investment Policy. Short-Medium Term (1-2 years) assets account for around 12% of the total investment portfolio, with capacity of 5 103m remaining.

We recommend surplus funds be allocated to 1-3 year fixed rate term deposits in combination with any attractive new FRNs (3-5 years) as they come to market (refer to respective sections below).

Compliant	Horizon	Invested (\$)	Invested (%)	Min. Limit (%)	Max. Limit (%)	Available (\$)
✓	0 - 90 days	\$38,189,508	21.77%	0%	100%	\$137,262,406
✓	91 - 365 days	\$62,000,000	35.34%	0%	100%	\$113,451,914
✓	1 - 2 years	\$20,229,287	11.53%	0%	70%	\$102,587,053
✓	2 - 5 years	\$35,070,781	19.99%	0%	50%	\$52,655,176
✓	5 - 10 years	\$19,962,338	11.38%	0%	25%	\$23,900,640
		\$175,451,914	100.00%			





Individual Counterparty Limits

As at the end of March 2023, all counterparty exposures comply within the Policy limits. Capacity limits are also dependent on the movement in the cash balances. Overall, the portfolio is well diversified across the entire credit spectrum, including some exposure to the regional bank (lower rated) ADIs.

Compliant	Issuer	Rating	Invested (\$)	Invested (%)	Max. Limit (%)	Available (\$)
✓	Bendigo Covered	AAA	\$4,007,500	2.28%	100.00%	\$171,444,414
✓	ING Covered	AAA	\$2,206,813	1.26%	100.00%	\$173,245,101
✓	ANZ	AA-	\$3,233,116	1.84%	100.00%	\$172,218,798
✓	CBA	AA-	\$24,612,309	14.03%	100.00%	\$150,839,606
✓	HSBC Bank	AA-	\$1,993,986	1.14%	100.00%	\$173,457,929
✓	NAB	AA-	\$46,213,518	26.34%	100.00%	\$129,238,396
✓	Northern Terr.	AA-	\$5,000,000	2.85%	100.00%	\$170,451,914
✓	NSW (SIRA)	AA+	\$3,077,000	1.75%	100.00%	\$172,374,914
✓	Westpac	AA-	\$14,000,000	7.98%	100.00%	\$161,451,914
✓	Citibank	A+	\$999,647	0.57%	100.00%	\$174,452,268
✓	Macquarie	A+	\$5,954,500	3.39%	100.00%	\$169,497,414
✓	Rabobank	A+	\$5,982,537	3.41%	100.00%	\$169,469,377
✓	Suncorp	A+	\$6,747,168	3.85%	100.00%	\$168,704,747
✓	Bank of China	Α	\$2,485,480	1.42%	100.00%	\$172,966,435
✓	ING Bank	Α	\$20,000,000	11.40%	100.00%	\$155,451,914
✓	Bendigo	BBB+	\$1,650,093	0.94%	10.00%	\$15,895,099
✓	AMP Bank	BBB	\$2,230,941	1.27%	5.00%	\$6,541,655
✓	MyState Bank	BBB	\$3,000,000	1.71%	5.00%	\$5,772,596
✓	Newcastle PBS	BBB	\$2,094,969	1.19%	5.00%	\$6,677,627
✓	NSW TCorp LTG	Unrated	\$19,962,338	11.38%	100.00%	\$155,489,576
			\$175,451,914	100.00%		

In July 2022, ANZ (AA-) announced it was putting a bid to buy Suncorp's banking division for ~\$3.9bn. Should that takeover be formalised, Suncorp-Metway's (A+) current credit rating is likely to be upgraded to ANZ's (AA-), although this still requires approval from the Australian Competition and Consumer Commission (ACCC).

We remain supportive of the regional and unrated ADI sector (and have been even throughout the post-GFC period). They continue to remain solid, incorporate strong balance sheets, while exhibiting high levels of capital – typically, much higher compared to the higher rated ADIs. Some unrated ADIs have up to 25-40% more capital than the domestic major banks, and well above the Basel III requirements.

Overall, the lower rated ADIs (BBB and unrated) are generally now in a better financial position then they have been historically (see the Capital Ratio figure below). The financial regulator, APRA has noted that the Common Equity Tier 1 capital of Australian banks now exceeds a quarter of a trillion dollars. It has increased by \$110 billion, or more than 70%, over the past eight years. Over the same



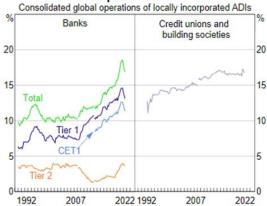


time, banks' assets have grown by 44%. Some of the extra capital is supporting growth in the banking system itself but clearly, there has been a strengthening in overall resilience and leverage in the system is lower.

We believe that deposit investments with the lower rated ADIs should be considered going forward, particularly when they offer 'above market' specials. Not only would it diversify the investment portfolio and reduce credit risk, it would also improve the portfolio's overall returns. The lower rated entities are generally deemed to be the more 'ethical' ADIs compared to the higher rated ADIs.

In the current environment of high regulation and scrutiny, all domestic (and international) ADIs continue to carry high levels of capital. There is minimal (if any) probability of any ADI defaulting on their deposits going forward – this was stress tested during the GFC and the pandemic period. **APRA's mandate is to "protect depositors"** and provide "financial stability".





Per cent of risk-weighted assets; break in March 2008 due to the introduction of Basel II for most ADIs; break in March 2013 due to the introduction of Basel III for all ADIs.

Source: APRA





Overall Credit Quality Limits

The portfolio is well diversified from a credit ratings perspective. The portfolio is predominately invested amongst the investment grade ADIs (BBB- or higher). The allocation to the Unrated category reflects the investment in the TCorp Long-Term Growth Fund.

All ratings categories are within the Policy limits:

Compliant	Credit Rating	Invested (\$)	Invested (%)	Max. Limit (%)	Available (\$)
✓	AAA Category	\$6,214,313	4%	100%	\$169,237,601
✓	AA Category	\$98,129,929	56%	100%	\$77,321,986
✓	A+ to A Category	\$42,169,332	24%	100%	\$133,282,583
✓	A- Category	\$0	0%	40%	\$70,180,766
✓	BBB+ to BBB Category	\$8,976,002	5%	30%	\$43,659,572
✓	BBB- & NR Category	\$0	0%	5%	\$8,772,596
✓	NSW TCorp LTGF	\$19,962,338	11%	100%	\$155,489,576
		\$175,451,914	100.00%		

Pre-pandemic (March 2020), a 'normal' marketplace meant the lower rated ADIs (i.e. BBB category) were offering higher rates on term deposits compared to the higher rated ADIs (i.e. A or AA rated). But due to the cheap funding available provided by the RBA via their Term Funding Facility (TFF) since mid-2020¹, allowing the ADIs to borrow as low as 0.10% p.a. fixed for 3 years, those lower rated ADIs (BBB rated) did not require deposit funding from the wholesale deposit from the likes of Council. Given the higher rated banks had more capacity to lend (as they have a greater pool of mortgage borrowers), they subsequently were offering higher deposit rates. In fact, some of the lower rated banks were not even offering deposit rates at all. As a result, most investors placed a higher proportion of their deposit investments with the higher rated (A or AA) ADIs over the past three years.

The abnormal marketplace experienced over the past few years is starting to reverse as the competition for deposits increases. We are now starting to see some of the lower rated ADIs ("BBB" rated) offering slightly higher rates compared to the higher rated banks ("A" or "AA" rated) on different parts of the curve. Some of this has been attributed to lags in adjusting their deposit rates as some banks (mainly the lower rated ADIs) simply set their rates for the week.

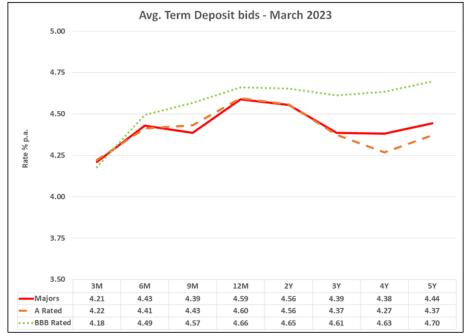
Going forward, investors should have a larger opportunity to invest a higher proportion of its surplus funds with the lower rated institutions (up to Policy limits), from which the majority are not lending to the Fossil Fuel industry. We are slowly seeing this trend emerge, as has been the case over the month of March 2023:

Monthly Investment Report: March 2023

¹ The RBA's Term Funding Facility (TFF) allowed the ADI to borrow as low as 0.10% fixed for 3 years: https://www.rba.gov.au/mkt-operations/term-funding-facility/overview.html







Source: Imperium Markets





Performance

Council's performance for the month ending March 2023 (excluding cash) is summarised as follows:

Performance (Actual)	1 month	3 months	6 months	FYTD	1 year
Official Cash Rate	0.30%	0.82%	1.53%	2.00%	2.11%
AusBond Bank Bill Index	0.28%	0.79%	1.54%	1.97%	2.04%
T/D Portfolio	0.27%	0.71%	1.21%	1.54%	1.76%
FRT/D Portfolio	0.40%	1.14%	2.30%	3.28%	4.13%
FRN Portfolio	0.38%	1.07%	2.15%	3.28%	4.34%
Bond Portfolio	0.09%	0.27%	0.54%	0.81%	1.08%
Council's Fixed Interest^	0.30%	0.81%	1.46%	1.99%	2.45%
TCorp LTGF	1.43%	4.33%	8.04%	7.92%	0.71%
TCorp Long-Term Target^^	0.50%	1.45%	2.95%	4.47%	6.00%
Council's Total Portfolio	0.43%	1.21%	2.20%	2.60%	2.19%
Relative (to Bank Bills)	0.15%	0.42%	0.66%	0.63%	0.15%

[^]Council's Fixed Interest portfolio returns excludes Council's cash account holdings.

 $^{^{\}text{h}}$ TCorp has a target of 3.5% above inflation of $^{\text{h}}$ 2.5%. The long-term target is therefore 6% p.a. on an ongoing basis.

Performance (Annualised)	1 month	3 months	6 months	FYTD	1 year
Official Cash Rate	3.60%	3.35%	3.10%	2.67%	2.11%
AusBond Bank Bill Index	3.39%	3.25%	3.11%	2.63%	2.04%
T/D Portfolio	3.17%	2.90%	2.45%	2.06%	1.76%
FRT/D Portfolio	4.79%	4.69%	4.66%	4.40%	4.13%
FRN Portfolio	4.61%	4.42%	4.36%	4.39%	4.34%
Bond Portfolio	1.11%	1.09%	1.09%	1.08%	1.08%
Council's Fixed Interest^	3.57%	3.32%	2.95%	2.66%	2.45%
TCorp LTGF	18.24%	18.77%	16.78%	10.68%	0.71%
TCorp Long-Term Target^^	6.00%	6.00%	6.00%	6.00%	6.00%
Council's Total Portfolio	5.22%	5.00%	4.46%	3.48%	2.19%
Relative (to Bank Bills)	1.83%	1.75%	1.34%	0.84%	0.15%

[^]Council's Fixed Interest portfolio returns excludes Council's cash account holdings.

For the month of March, the total portfolio (excluding cash) provided a return of +0.43% (actual) or +5.22% p.a. (annualised), outperforming the benchmark AusBond Bank Bill Index return of +0.28% (actual) or +3.39% p.a. (annualised). Over the past year, the portfolio returned a positive return of +2.19% p.a., outperforming bank bills by 0.15% p.a.

The longer-term positive performance continues to be anchored by the handful of deposits that were originally placed for terms greater than 12 months. Going forward, a more optimal strategy in placing

^{^^}TCorp has a target of 3.5% above inflation of ~2.5%. The long-term target is therefore 6% p.a. on an ongoing basis.





deposits across 12-24 months terms is likely to earn up to ½-½% p.a. higher compared to shorter tenors in a normal market environment. There is a growing belief that a recession is not too far away and so locking in rates above 4-4½% p.a. across 2-3 year tenors may provide some income protection against a lower rate environment.

The T-CorpIM Growth Fund contributed to outperformance this month, with the Fund returning +1.43% (net actual) as international shares rebounded. Despite the volatility in the Fund over the past few years, the Growth Fund has performed well over longer-term time periods.





NSW T-CorpIM Growth Fund

The Growth Fund returned +1.43% (actual) for the month of March. The gains this month were attributed to international shares (the MSCI World ex-Australia Index rose +2.93%). Also contributing to the gains was the exposure to fixed bonds (AusBond Composite Bond Index rose +3.16%) as yields fell on expectations about a potential pause on interest rates.

The base case global economic outlook is for a cyclical recession during 2023. Reflecting on data and market pricing during recent months, the risk for central banks to push monetary policy into overtightening mode has increased. This would trigger a signal for recession.

In addition, the expected fiscal drag has been much less in recent months than expected. In the US, the approach of the debt ceiling was pushed back by use of extraordinary measures, but these will run out around May, and we expect fiscal drag to again reassert just at the same time the lagged effects of monetary tightening begin to bite. Therefore, demand destruction is expected to dominate the second half of this year and recession remains largely a base case, with risk that the probability for a hard landing is increased in coming months.

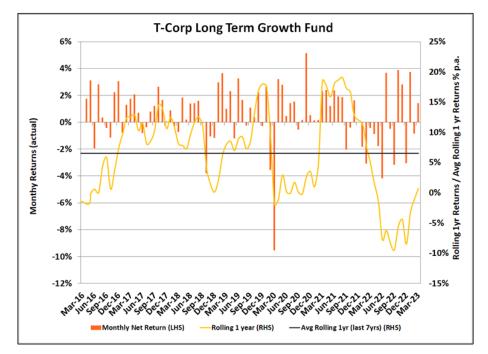
Overall, we remain cautious on the future performance of the T-Corp Growth Fund given the high volatility associated with a diversified growth fund, which generally allocates a range of 60%-80% in domestic and international shares. Investors are bracing for central banks to raise official rates more aggressively than previously anticipated to combat inflation driven by supply-chain bottlenecks, a global energy crunch and ongoing geopolitical risks.

The Fund should be looked at with a long-term view, with a minimum holding period of +7 years. Given the exposure to the volatile asset of shares, Council should expect to see, on average, a negative month once every 3 months over a long-term holding period.

Since Inception	T-Corp Long Term Fund
Negative Months	139 (~1 in 3 months)
Positive Months	266
Total Months	405 (33.75 yrs)
Average Monthly Return	+0.64% (actual)
Median Monthly Return	+1.02% (actual)
Lowest 1 year Rolling Return	-21.12% p.a. (Nov 2008)
Highest 1 year Rolling Return	+29.89% p.a. (Jan 1994)











Council's Term Deposit Portfolio & Recommendation

As at the end of March 2023, Council's deposit portfolio was yielding 3.13% p.a. (unchanged from the previous month), with a weighted average duration of $^{\sim}198$ days (6½ months).

Over a longer-term cycle, investors are rewarded if they can continue to maintain a slightly longer average duration. In a 'normal' marketplace, yields at the long-end are generally offered at a slight premium over shorter tenors.

At the time of writing, we see value in:

	LT Credit Rating	Term	T/D Rate
АМР	BBB	2-3 years	4.85% p.a.^
Hume Bank	BBB+	2 years	4.75% p.a.
ING	Α	2 years	4.60% p.a.
MyState	BBB	2 years	4.60% p.a.
P&N Bank	BBB	2 years	4.52% p.a.
BoQ	BBB+	2 years	4.50% p.a.
Suncorp	A+	2 years	4.48% p.a.
Westpac	AA-	2 years	4.28% p.a.
NAB	AA-	2 years	4.25% p.a.

[^]Contact us to get an additional 20bp rebated commission. Aggregate limits temporarily lifted to \$10m (from \$5m).

The above deposits are suitable for investors looking to maintain diversification and lock-in a slight premium compared to purely investing short-term. For terms under 12 months, we believe the strongest value is currently being offered by the following ADIs (dependent on daily funding requirements):





ADI	LT Credit Rating	Term	T/D Rate
AMP	BBB	11-12 months	4.90% p.a.^
BankVIC	BBB+	12 months	4.85% p.a.
Hume Bank	BBB+	12 months	4.75% p.a.
ING	Α	12 months	4.68% p.a.
MyState	BBB	12 months	4.75% p.a.
P&N Bank	BBB	12 months	4.61% p.a.
Macquarie	A+	12 months	4.60% p.a.
BoQ	BBB+	6 months	4.60% p.a.
Suncorp	A+	12 months	4.58% p.a.
BoQ	BBB+	12 months	4.55% p.a.
NAB	AA-	12 months	4.50% p.a.
Macquarie	A+	3-4 months	4.50% p.a.
NAB	AA-	6 months	4.50% p.a.
Westpac	AA-	12 months	4.43% p.a.
NAB	AA-	3 months	4.35% p.a.

^Contact us to get an additional 20bp rebated commission. Aggregate limits temporarily lifted to \$10m (from \$5m).

If Council does not require high levels of liquidity and can stagger its investments across the longer term horizons (2-5 years), it will be rewarded over coming years if it can roll for an average min. term of 12 months to 3 years (this is where we current value), yielding, on average, up to %-½% p.a. higher compared to those investors that entirely invest in short-dated (under 6 months) deposits.

With recessionary fears being priced in coming years, Council should consider allocating some longer-term surplus funds and undertake an insurance policy by investing across 3-5 year fixed deposits and locking in rates close to or above 4½ p.a. This will provide some income protection if central banks decide to cut rates in future years, assuming inflation is under control.

AMP Business Saver & Notice Account

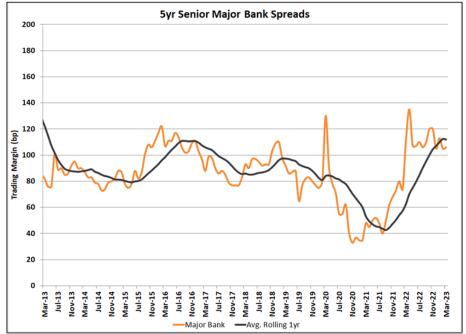
We note the AMP Business Saver and AMP 31 Day Notice Account are now sub-optimal investments given the rise in deposit yields in recent months. We recommend switching into short-dated fixed deposits with the major banks yielding a considerably higher rate of return.





Senior FRNs Review

Over March, amongst the senior major bank FRNs, physical credit securities remained relatively flat at the 5yr part of the curve, whilst widening around 8bp at the 3yr part of the curve. During March, ANZ (AA-) issued a dual 3 & 5 year senior security at +83bp and +106bp respectively, printing \$4.25bn. Major bank senior securities remain fairly attractive again in a rising rate environment (5 year margins above the +105bp level):



Source: IBS Capital

There was a lack of primary issuances in March compared to February. Amongst the "A" rated sector, the securities were marked around 5bp tighter at the 3-5 year part of the curve, whilst the "BBB" rated sector was marked around 5bp wider – typically there are lags amongst the regional sector due to the lack of turnover in the secondary market.

Credit securities are looking much more attractive given the widening of spreads over the past year. FRNs will continue to play a role in investor's portfolios mainly on the basis of their liquidity and the ability to roll down the curve and gross up returns over ensuing years (in a relatively stable credit environment).





Senior FRNs (ADIs)	31/03/2023	28/02/2023
"AA" rated – 5yrs	+106bp	+105bp
"AA" rated – 3yrs	+83bp	+75bp
"A" rated – 5yrs	+120bp	+125bp
"A" rated – 3yrs	+95bp	+90bp
"BBB" rated – 3yrs	+150bp	+145bp

Source: IBS Capital

We now generally recommend switches ('benchmark' issues only) into new primary issues, out of the following senior FRNs that are maturing:

- On or before mid-2025 for the "AA" rated ADIs (domestic major banks);
- > On or before mid-2024 for the "A" rated ADIs; and
- ➤ Within 6-9 months for the "BBB" rated ADIs (consider case by case).

Investors holding onto the above senior FRNs ('benchmark' issues only) in their last few years are now generally holding sub-optimal investments and are not maximising returns by foregoing realised capital gains. In the current challenging economic environment, any boost in overall returns should be locked in when it is advantageous to do so, particularly as switch opportunities become available.

Primary (new) FRNs are now looking more appealing and should be considered on a case by case scenario.





Council's FRN Portfolio - Sale/Switch Recommendations

During the month, Council sold out of the following FRN as it was yielding a low rate to maturity (less than 4% p.a.):

Issuer	Rating	Maturity Date	ISIN	Face Value	Trading Margin	Capital Price (\$)	Unrealised Gain (\$)
WBC	AA-	16/08/2024	AU3FN0048187	\$1,000,000	+53.0bp	\$100.441	\$4,410

A switch into a newly issued (attractive) FRN is suitable. Alternatively, a switch into a term deposit yielding above 4.50%-4.70% p.a. can be achieved with the major banks (AA-) or ING (A) if replacing for a term between 1-3 years.

We recommend that Council retain all its other FRNs at this stage. We will continue to monitor them individually and will advise when it is appropriate to sell to boost the overall returns of the portfolio.

Council's Senior Fixed Bonds

In September 2020, Council has invested into the following NTTC (AA-) fixed bonds:

Investment Date	Maturity Date	Principal	Rate % p.a.	Interest Paid
15/09/2021	15/12/2024	\$3,000,000	1.00%	Annually
15/09/2021	15/12/2025	\$2,000,000	1.10%	Annually
	Totals / Wgt. Avg.	\$5,000,000	1.04%	

We believe this was prudent given the low rate environment and particularly after the RBA's easing decision in early November 2020 and forward guidance towards official interest rates (no rate rises "until at least 2024").

The NTTC bonds are a 'retail' offering and not 'wholesale' issuances. Given the lack of liquidity and high penalty costs if they were to be sold/redeemed prior to the maturity date, they are considered to be a hold-to-maturity investment and will be marked at par value (\$100.00) throughout the term of investment.





Senior Fixed Bonds – ADIs (Secondary Market)

As global inflationary pressures remain, this has seen a significant lift in longer-term bond yields over the past year (valuations fell) as markets have reacted sharply.

This has resulted in some opportunities in the secondary market. We currently see value in the following fixed bond lines, with the majority now being marked at a significant discount to par (please note supply in the secondary market may be limited on any day):

ISIN	Issuer	Rating	Capital Structure	Maturity Date	~Remain. Term (yrs)	Fixed Coupon	Indicative Yield
AU3CB0255776	ING	AAA	Covered	07/09/2023	0.43	3.00%	4.29%
AU3CB0258465	Westpac	AA-	Senior	16/11/2023	0.63	3.25%	4.07%
AU3CB0265403	Suncorp	A+	Senior	30/07/2024	1.34	1.85%	4.31%
AU3CB0263275	Westpac	AA-	Senior	16/08/2024	1.38	2.25%	4.03%
AU3CB0265718	ING	AAA	Covered	20/08/2024	1.39	1.45%	4.23%
AU3CB0266179	ANZ	AA-	Senior	29/08/2024	1.43	1.55%	3.95%
AU3CB0266377	Bendigo	BBB+	Senior	06/09/2024	1.46	1.70%	4.33%
AU3CB0268027	BoQ	BBB+	Senior	30/10/2024	1.59	2.00%	4.44%
AU3CB0269710	ANZ	AA-	Senior	16/01/2025	1.80	1.65%	4.11%
AU3CB0269892	NAB	AA-	Senior	21/01/2025	1.81	1.65%	4.14%
AU3CB0270387	Macquarie	A+	Senior	12/02/2025	1.88	1.70%	4.30%
AU3CB0287415	Westpac	AA-	Senior	17/03/2025	1.97	2.70%	4.05%
AU3CB0291508	Westpac	AA-	Senior	11/08/2025	2.39	3.90%	4.14%
AU3CB0291672	СВА	AA-	Senior	18/08/2025	2.39	4.20%	4.07%
AU3CB0280030	BoQ	BBB+	Senior	06/05/2026	3.10	1.40%	4.57%
AU3CB0282358	ING	AAA	Covered	19/08/2026	3.40	1.10%	4.29%
AU3CB0284149	BoQ	BBB+	Senior	27/10/2026	3.59	2.10%	4.65%
AU3CB0286037	Westpac	AA-	Senior	25/01/2027	3.84	2.40%	4.36%





Economic Commentary

International Market

Volatility returned across risk markets in March after the collapse of Silicon Valley Bank (SVB) - the 16th largest bank in the US with US\$209bn in assets as at 31 December 2022. Importantly, the US government vowed no depositors would lose money in the collapse and measures were taken by the US Treasury, US Fed and FDIC to prevent a US bank run on deposits.

US Treasury Secretary Yellen noted the US federal government "is resolutely committed" to mitigating financial-stability risks where necessary, adding that the government "would be prepared to take additional actions if warranted" to protect bank depositors if smaller lenders are threatened.

Adding to the banking uncertainty was reports that Credit Suisse Group had found "material weakness" in its reporting and control procedures, before borrowing CHF540bn from the Swiss National Bank and subsequently being bought out by UBS (approximately US\$3.25bn).

Before the collapse of SVB, US Fed Chair Powell told Congress that recent data had been "stronger than expected" and "the ultimate level of interest rates is likely to be higher than previously anticipated, and if necessary, we would be prepared to increase the pace of rate hikes".

Across equity markets, the S&P 500 Index gained +3.51%, whilst the NASDAQ added +6.69%. Europe's main indices were mixed, with gains for Germany's DAX (+1.72%) and France's CAC (+0.75%), whilst the UK's FTSE fell (-3.10%).

US headline inflation came in in line with expectations at +0.4% m/m, as expected, while core inflation printed at +0.5% m/m (+0.4% expected). Core inflation is +5.1% in 3 month annualised terms, about the same as its 6 month annualised rate of +5.2%.

The US unemployment rate rose to 3.6% in February, above the expectation for 3.4%, amid a tick higher in the labour force participation rate to 62.5%, its highest level since March 2020.

The Bank of Canada (BoC) kept rates on hold at 4½% as widely expected.

The ECB delivered on its well-flagged 50bp hike to all its main interest rates, undeterred by recent market ructions.

Spanish CPI was +6.1% y/y from +5.9% and +5.7% expected. French CPI was +7.2% y/y from +7.0% and +7.0% expected. Headline German CPI was +1.0% m/m vs. +0.7% expected, taking the annual rate to +9.3% y/y (+9.0% expected).

The MSCI World ex-Aus Index rose +2.93% for the month of March:

Index	1m	3m	1yr	3yr	5yr	10yr
S&P 500 Index	+3.51%	+7.03%	-9.29%	+16.71%	+9.25%	+10.11%
MSCI World ex-AUS	+2.93%	+7.39%	-8.46%	+14.62%	+6.30%	+7.12%
S&P ASX 200 Accum. Index	-0.16%	+3.46%	+0.10%	+16.52%	+8.69%	+8.18%

Source: S&P, MSCI

Monthly Investment Report: March 2023





Domestic Market

The RBA raised rates by 25bp to 3.60%, its tenth consecutive increase. The Statement was less hawkish, but in line with expectations, with the post-Meeting Statement deleting explicit guidance of "further increases in interest rates will be needed over the months ahead". The subsequent Minutes for March suggest the Board is evaluating the case for pausing, saying that "Members agreed to reconsider the case for a pause at the following meeting".

The monthly CPI indicator for February showed annual inflation dropping to +6.8% from January's +7.4%. It was noticeably lower than expectations of +7.2%.

The unemployment rate in February fell to 3.54% (consensus 3.60%), back to its December level, while participation rebounded as expected to 66.6%

APRA said it would hold the "serviceability buffer" – which banks add to market interest rates when assessing new borrowers – at 3% "to maintain prudent lending standards".

Retail sales grew +0.2% m/m in February and has been broadly flat at elevated levels since September last year. The level of retail sales is still 16% above pre-pandemic levels.

House price falls slowed in February with values falling by 0.14% nationwide, the smallest monthly fall since interest rates started rising in May last year. Dwelling approvals fell -27.6% m/m in January.

The January trade surplus was \$11.7bn (consensus \$12.25bn) from an upwardly revised December balance of \$13.0bn. Imports rose +4.6% (or \$2.1bn), driven by a surge in vehicle imports (+30.9% m/m or, \$0.9bn) from already elevated levels. Exports rose by less, up +1.4% (or \$0.8bn).

The Australian dollar lost -0.27%, finishing the month at US67.12 cents (from US67.30 cents the previous month).

Credit Market

The global credit indices widened over March as financial markets were concerned about a contagion from the banking sector. They are now back to their levels in early 2022 (prior to the rate hike cycle from most central banks):

Index	March 2023	February 2023
CDX North American 5yr CDS	78bp	75bp
iTraxx Europe 5yr CDS	88bp	80bp
iTraxx Australia 5yr CDS	92bp	87bp

Source: Markit





Fixed Interest Review

Benchmark Index Returns

Index	March 2023	February 2023
Bloomberg AusBond Bank Bill Index (0+YR)	+0.28%	+0.24%
Bloomberg AusBond Composite Bond Index (0+YR)	+3.16%	-1.32%
Bloomberg AusBond Credit FRN Index (0+YR)	+0.26%	+0.43%
Bloomberg AusBond Credit Index (0+YR)	+1.85%	-0.62%
Bloomberg AusBond Treasury Index (0+YR)	+3.53%	-1.58%
Bloomberg AusBond Inflation Gov't Index (0+YR)	+4.16%	-2.20%

Source: Bloomberg

Other Key Rates

Index	March 2023	February 2023
RBA Official Cash Rate	3.60%	3.35%
90 Day (3 month) BBSW Rate	3.72%	3.56%
3yr Australian Government Bonds	2.94%	3.60%
10yr Australian Government Bonds	3.30%	3.85%
US Fed Funds Rate	4.75%-5.00%	4.50%-4.75%
2yr US Treasury Bonds	4.06%	4.81%
10yr US Treasury Bonds	3.48%	3.92%

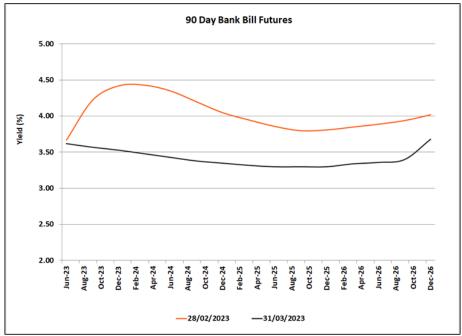
Source: RBA, AFMA, US Department of Treasury





90 Day Bill Futures

Over March, bill futures fell significantly across the board, with the market reacting to the possibility that the RBA may not only pause as early as April, but maybe forced to cut rates later this year. The markets continue to factor in the possibility of a global recession over the next few years, highlighted by the drop in the futures pricing in early 2024:



Source: ASX





Fixed Interest Outlook

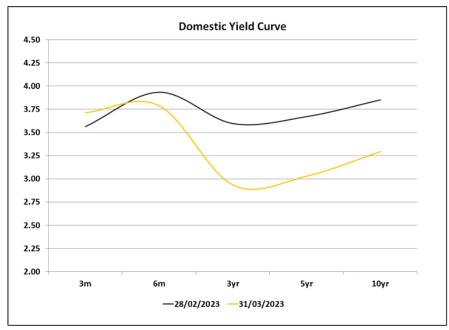
After lifting rates by 25bp to 4.75%-5.00%, the US Fed dot plots continues to pencil in one further hike to 5.00-5.25%. Fed Chair Powell indicated their base case was not any rate cuts this year, against some market expectations. The market's reaction to their statement was interpreted as dovish after they said "some additional policy firming may be appropriate" (toned down from the prior January statement that had "ongoing increases in the target range will be appropriate").

Domestically, after lifting rates by 25bp for a 10th consecutive meeting to 3.60%, the RBA removed February's pre-commitment to more hikes over coming months. There was a hint of data dependency with reference to "when and how much further" tightening of monetary policy will be needed. The market has interpreted this as a possible pause in April after the RBA's ten consecutive rate hikes.

Governor Lowe has commented "with monetary policy now in restrictive territory, we are closer to the point where it will be appropriate to pause interest rate increases to allow more time to assess the state of the economy".

Markets have been quick to revise their interest rate forecasts following the events surrounding the global banks, as well as central bank rhetoric. A pause by the RBA in April is now a strong possibility (previously up to two rate hikes were still largely priced by the market the previous month).

Over the month, yields fell up to 66bp at the long-end of the curve:

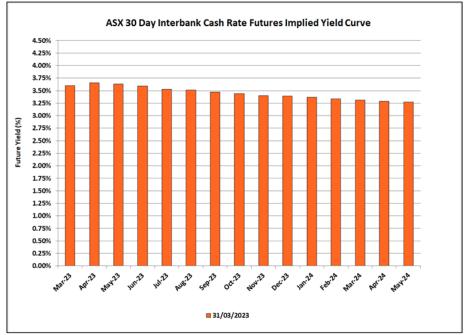


Source: AFMA, ASX, RBA





A softer than expected monthly CPI reading along with fears of a banking crisis and a looming global recession have moved up the potential for a rate cut as early as late 2023 – previously markets were only factoring rate cuts in 2024.



Source: ASX

Disclaimer

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Report on NSW land values at 1 July 2022



11 January 2023

www.valuergeneral.nsw.gov.au



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1. Introduction

The NSW Valuer General is responsible for providing independent and impartial land values for use by the State Government and councils for taxing and rating.

This report provides an overview of the 1 July 2022 land values across NSW and how they were made

Valuers have determined the 1 July 2022 land values for over 2.6 million properties across NSW.

The land values reflect the property market at 1 July 2022. Land values do not include the value of a home or other structures.

Landholders will receive a Notice of Valuation showing their land value before it is used by council for rating. Notices will be issued from January 2023. Councils receive new land values for rating at least every three years. Land values are one factor used by councils to calculate rates.

The new land values will also be used by Revenue NSW to calculate land tax for the 2023 land tax year. Registered land tax clients will receive their land tax assessment from Revenue NSW from January 2023. More information on land tax can be found at revenue.nsw.gov.au.

Land values are publicly available on the Valuer General's website www.valuergeneral.nsw.gov.au along with a wide range of information about land values and the valuation system. Information includes interactive summaries for 2022 land values, property sales, fact sheets and policies explaining how values are made.



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2. NSW summary land information and trends

Number of properties per year

Year	Total property count
2018	2,585,474
2019	2,603,793
2020	2,627,154
2021	2,643,600
2022*	2,663,211

Total land value trends

Year	Total land value	% change from previous year
2018	\$1,837,806,319,161	6.4%
2019	\$1,739,492,538,797	-5.3%
2020	\$1,806,828,023,304	3.9%
2021	\$2,239,770,507,936	24.0%
2022*	\$2,838,089,336,086	26.3%

Number of sales analysed

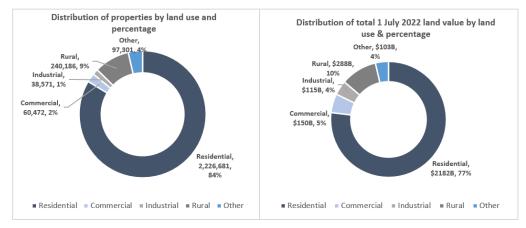
Year	Total sales analysed
2018	46,090
2019	57,361
2020	48,746
2021	67,188
2022*	61,139

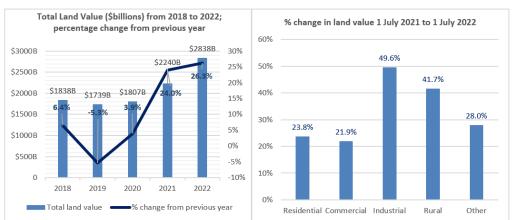
^{*} Data based on the Register of Land values as at 12 November 2022. Data for previous years extracted in November or December of the valuing year, following completion of the annual valuation program. The number of properties recorded on the Register changes regularly due to the inclusion of new subdivisions and amalgamations. All new properties valued in this period are included in the valuation totals. The total numbers of properties and land values reported for prior years may not match that of previous reports for this reason.



NSW land value information and trends

The data compares the valuation totals and the movement in land values from 1 July 2021 to 1 July 2022 for all properties recorded on the Register of Land Values.







3. State-wide land use summary

Total number of properties and land values by land use

Land use	Total property count	2021	2022	% change in land value
Residential	2,226,681	\$1,763,440,153,144	\$2,182,413,771,022	23.76%
Commercial	60,472	\$122,746,193,646	\$149,668,251,267	21.93%
Industrial	38,571	\$76,627,090,545	\$114,635,504,021	49.60%
Rural	240,186	\$203,170,052,013	\$287,912,308,406	41.71%
Other*	97,301	\$80,819,780,451	\$103,459,501,370	28.01%

*Includes community uses, forestry, national parks, nature reserves, open space, recreation, reserved roads, special uses, mines and waterways zones.

The new land values reflect the real estate market at 1 July 2022 and were based on the analysis of over 61,000 property sales.

Overall, land values increased across NSW by 26.3% from \$2.25 trillion to \$2.84 trillion in the 12 months to 1 July 2022.

This has been an exceptional year with increases experienced on a state-wide basis across all property categories.

Residential

Residential land values across the state increased by 23.8% overall from \$1.76 trillion to \$2.18 trillion. The land values were based on the analysis of 49.086 residential property sales across NSW.

All regions across NSW experienced increases in residential land values primarily driven by continued preferences for flexible working arrangements allowing purchasers to seek alternate and affordable lifestyle options. Regional and coastal markets with accessibility to regional and metropolitan centres were particularly sought after. The largest increases in residential values occurred in the Hunter Region where overall values increased by 57.6%, followed by the Murray region at 50%.

Commercial

Commercial land values in NSW increased over the 12 months to 1 July 2022, with the total value of all commercial land increasing by 21.9% to \$149.7 billion. The land values were based on the analysis of 2,117 commercial property sales across NSW.

All regions across NSW experienced increases in commercial land values primarily driven by consumer confidence returning to commercial markets and a resurgence in development activity following subdued conditions due to the pandemic. The largest increases were in the Hunter region where values increased by 51.3% followed by Sydney Central West region where values increased by 38.1%.

Industrial

Industrial land values in NSW increased by 49.6% to \$114.6 billion over the 12 months to 1 July 2022. The land values were based on the analysis of 1,555 industrial property sales across NSW.

The largest increases were in the Sydney South West region where values increased by 70.9% followed by Sydney Central West region at 61.1% due to continued limited supply and very strong demand from the logistics and e-commerce sectors. Across many of the regional areas industrial land values increased as a flow on from the strong rural and residential sectors.



Rural

Rural land values increased across NSW over the 12 months to 1 July 2022, with the total land value of all rural land growing very strongly by 41.7% to \$287.9 billion. The land values were based on the analysis of 7,293 rural property sales across NSW.

Rural land values were primarily driven by continued strong commodity prices, favourable seasonal conditions and sustained demand for quality farming lands. The largest increases were in the Hunter region where values increased by 72.2% followed by the Murray region at 56%. Rural lifestyle properties experienced strong growth following continued flexible work practices especially in areas with relative affordability and proximity to regional and city centres.

Other

The 'Other' category consists of a range of land uses, generally comprising small numbers of properties which tend to follow the trends of other surrounding land values. These land values had a strong increase across NSW over the 12 months to 1 July 2022, with the total land value increasing by 28% to \$103.5 billion.

Zones in each land use

Land Use	Zones included in each land use	
Residential	Environmental Living	Mixed Use
	General Residential	Residential
	High Density Residential	Undetermined, or Village
	Large Lot Residential	Urban UR
	Low Density Residential	Village
	Medium Density Residential	
Commercial	Agribusiness	Enterprise Corridor
	Business	Local Centre
	Business Development	Metropolitan Centre
	Business Park	Mixed Use (Western Sydney Aerotropolis)
	Commercial Core	Neighbourhood Centre
	Employment	Sydney Commercial / Busines
	Enterprise	
ndustrial	General Industrial	Light Industrial
	Heavy Industrial	Working Waterfront
	Industrial	
Rural	Non Urban	Rural Landscape
	Primary Production	Rural Small Holdings
Other	Environmental Conservation	Protection
	Environmental Management	Public Recreation
	Environmental and Recreation	Recreational Waterways
	Forestry	Regional Park
	Infrastructure	Road Widening
	Mines *	Special Activities
	National Parks & Nature Reserves	Special Uses
	Natural Waterways	Tourist
	Open Space	Transition
	Private Recreation	Working Waterways



Note: Mines are not generally separately zoned. However, they have been individually identified and included in the 'Other' category.

4. Regional summaries

NSW has been divided into 19 regional areas for the purpose of providing summaries to describe land value movements for the main property types in the region. The Sydney West region has been separated into 2 regions now referred to as Sydney Central West region and Sydney South West region.

Total land values for NSW by region

Region	Total number of properties	Total land value at 1 July 2022	% change from total 1 July 2021 land value
Central Tablelands	88,204	\$38,994,076,985	44.50%
Central West NSW	74,311	\$31,681,480,816	21.80%
Hunter	95,990	\$54,634,584,262	66.00%
Hunter Coast	301,704	\$202,622,860,914	18.50%
Murray	57,790	\$27,065,762,340	52.80%
North Coast NSW	269,790	\$157,945,678,013	35.90%
North West NSW	62,153	\$36,225,469,389	38.70%
Northern Tablelands	37,715	\$18,530,640,708	46.70%
Riverina	79,484	\$40,631,450,520	45.70%
South Coast NSW	257,567	\$214,408,673,534	38.20%
South East Regional NSW	79,202	\$48,228,540,049	40.60%
Sydney Central	333,333	\$596,797,366,481	23.20%
Sydney City	28,115	\$129,300,308,414	16.50%
Sydney Coast North	114,766	\$301,016,967,666	22.60%
Sydney Coast South	183,620	\$372,724,750,257	15.80%
Sydney North West	164,173	\$185,356,202,367	27.90%
Sydney Central West	176,043	\$154,858,773,216	27.00%
Sydney South West	232,279	\$219,868,793,990	33.30%
Western NSW	26,972	\$7,196,956,165	33.10%

For further information please visit https://www.valuergeneral.nsw.gov.au/ where you will find interactive land value summaries for residential, commercial, industrial and rural properties in all local government areas and different regions across NSW. These pages include information on land value trends, median land values and sale price charts and typical land values for all council areas.



5. Land Valuations in NSW

The Valuer General is responsible for providing accurate and consistent land values for NSW. All land is valued each year.

What is land value?

Land value is the market value of the land only, as if it had sold on 1 July in the valuing year. It does not include the value of buildings or other structures.

Why is land valued?

Land values are used by councils to set rates and by Revenue NSW to calculate land tax.

The 1 July 2022 land values have been provided to Revenue NSW for calculating land tax. Revenue NSW sends registered land tax clients a land tax assessment each year.

Councils receive new land values for rating at least every three years. All councils are currently using 1 July 2019 land values for rating and will be using the 2022 land values in the 2023 rating year.

Where are land values published?

Land values are published on the Valuer General's website. Visit www.valuergeneral.nsw.gov.au to find land values from across NSW.

Land tax assessments from Revenue NSW show the land values used to calculate land tax. Revenue NSW sends registered land tax clients an assessment notice each year.

Registered land tax clients can view the land values Revenue NSW used to calculate their land tax at www.revenue.nsw.gov.au.

When land values are used by councils to set rates, the Valuer General sends landholders a Notice of Valuation to advise the new land value to be used for rating.

More information

To help the community better understand land values and how valuations are made, the Valuer General provides a wide range of free information. Visit www.valuergeneral.nsw.gov.au for:

- Land value summaries for all local government areas and 19 regions covering the state.
 These summaries include land value trends, median land values and sale prices, typical land values for all council areas and land value commentary.
- Final valuation reports for each local government area prepared by the contract valuer undertaking the valuations. The reports address the valuation process, the local real estate market and the new land values.
- Property sales and land values from across NSW are available on the NSW Globe at property, street and suburb level.
- Valuation sales reports, showing sales analysed in the valuation process.
- Policies and fact sheets explaining how valuations are made.

You can also call us on 1800 110 038 to ask questions or discuss concerns.



How is land valued?











Most land is valued using the mass valuation process. This is where properties with similar features are valued together in groups called components. Properties in the component are expected to experience similar changes in value. All properties within a component must have the same zoning.

Representative properties (known as benchmarks) are selected from each component and valued as at 1 July each year. This shows how much the land value has changed in the past year. This change is applied to all properties in the component to work out their new values.

The new values are quality assured for quality and consistency before they are issued.

The example below shows a range of components in a locality. Waterfront properties are grouped separately to non-waterfront properties. Benchmark properties are outlined in blue.



Quality assurance of land values

The 1 July 2022 land values in each local government area were quality assured by both the contract valuer making the valuations and Valuer General NSW before they were accepted and entered onto the Register of Land Values.

While valuations are made through a mass valuation process, each land value must stand up to individual testing and must be able to be supported by available market evidence.

Each contract valuer provided a valuation analysis report and quality statement certifying the quality assurance they undertook in the preparation of the land values. This included meeting annual requirements for the land value verification program. This program requires land values and property information to be individually reviewed through a systematic, risk based program (see table below).



Valuer General NSW checked the overall quality and consistency of the land values through a risk based quality assurance program and system based data integrity checks.

Checks included:

- Compliance with valuation statistical standards
- Compliance with component and benchmarking standards
- Review of the quantity and quality of sales analysis undertaken to support land values
- Review of land value exception reports including significant valuation changes.

State-wide statistical quality measures

Valuation uniformity and quality is tested against a range of checks, audits and comparison against international standards.

Statistical compliance for 1 July 2022 land values met the targets for all major property types.

	2018	2019	2020	2021	2022	Target
% council areas meeting all standards – residential	100	97.0	100	99.2	100	90
% councils areas meeting all standards –commercial	93.2	93.6	96.6	96.0	97.1	85
% councils areas meeting all standards –industrial	91.2	93.8	93.7	95.5	97.2	85
% council areas meeting all standards - rural	79.6	89.0	93.1	93.3	98.1	75

Note: Where an appropriate number of analysed sales (five or more) is not available for a zone, the LGA is not included in the measure.

Land value verification

To ensure the quality of NSW land values contract valuers undertake a systematic, risk-based process of periodically verifying property data and land values. The program provides for the individual review of all land values and supporting data. The verification program is measured for completion against planned targets as detailed below.

Valuation Year	Verified High High risk	%	Verified Moderate	% risk	Verified low Low risk	%	Total Verified	%
	Target p.a: 1009 Cycle: every yea		Target p.a: 33 Cycle: every 3		Target p.a: 20% Cycle: every 5			
2018	104,222	99.99%	144,046	42.80%	497,343	23.18%	745,611	28.83%
2019	98,215	100.00%	142,952	45.75%	590,626	26.92%	831,793	31.93%
2020	104,388	99.97%	133,793	42.64%	574,329	26.00%	812,510	30.93%
2021	124,040	99.99%	131,283	43.42%	557,152	25.09%	812,475	30.69%
2022*	128,565	100.00%	140,430	45.19%	636,859	28.61%	905,854	35.71%

*Data for 2022 extracted 14/11/2022. Data for 2021 extracted 15/11/2021. Data for 2020 extracted 17/12/2020. Data for 2019 extracted 26/11/19. Data for 2018 extracted 20/11/18.



Land tax thresholds

In September each year the Valuer General determines new land tax and premium rate thresholds for the coming year. The requirements for the determination of new thresholds are set out in Division 4A of the Land Tax Management Act, 1956.

The adjustments to the thresholds are based on the annual movement in the average land values of land within residential, commercial, business and industrial zones in NSW. The rate of change of land values in these zones from 1 July 2021 to 1 July 2022 was determined to be 25.616%.

The land tax threshold for the 2023 land tax year was determined to be \$969,000 and the premium rate threshold was determined to be \$5,925,000.

The new thresholds were published in the NSW Government Gazette No. 481 of 14 October 2022.

Consider your land value

If you have concerns about your land value or the property information, visit www.valuergeneral.nsw.gov.au to:

- find out more about your land value and explore interactive land value summaries
- find land values and property sales from across NSW and compare your land value to property sale prices
- read valuation policies and factsheets that explain how valuations are made.

You can also call us on 1800 110 038 to discuss your concerns.

Opportunity for review

If you think your land value or property information on your land tax assessment or Notice of Valuation is incorrect, you can lodge an objection to have it reviewed. You should tell us why you think your land value or property information is wrong. The information you provide will help us do a thorough review. You should provide all the evidence you are relying on at the time you lodge your objection.

More information on the review process and how to lodge an objection can be found at www.valuergeneral.nsw.gov.au, or by calling us on 1800 110 038.

Reviewing your land value

When we receive your objection, we will assign you a review coordinator. Your coordinator will be your contact person during the review process. If you have any concerns about the review process or the outcome of your objection you can contact your coordinator who can arrange a conference for you to discuss any concerns in detail. A valuer who did not make the original valuation will review your land value.

Reviewing your property information

We will review the property information. If we make any changes we will check to see if the change will affect your land value.



Finalising your objection

We will provide the valuer's report to you to consider before we finalise your objection.

You will have 21 days to ask any questions or tell us if there are any matters raised in your objection submission that haven't been addressed or if there is a substantive error of fact. We will consider the information you provide before we finalise your objection.

If we do not hear from you, we will determine your objection based on the valuer's recommendation.

Appeals

If you are not satisfied with the outcome of your objection you can lodge an appeal in the Land and Environment Court of NSW.

Contact us any time to discuss issue or concerns

Call us on 1800 110 038 to discuss concerns with our valuation staff.





Valuer General

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Shoalhaven Final Report 2022



11th November 2022





Acknowledgement of Country

We acknowledge the Traditional Owners and Custodians of the land on which we live and work and pay our respect to Elders past and present.

Executive summary

LGA overview

Shoalhaven Local Government Area

The Shoalhaven Local Government Area (LGA) is in the south-eastern coastal region of New South Wales approximately 200 kilometres south of Sydney. The area is located adjacent to the Tasman Sea and spans approximately 160 kilometres along the coastline. Whilst dedicated as a city it is a somewhat dispersed region comprising some 35 distinct residential suburbs and villages along with another 26 rural localities.

Number of properties valued this year and the total land value in dollars

District SHOALHAV Base year 2022	EN	User Cam	pbell McDonald					
Zone Category	Zones	Properties	2022 Total LVs	2021 Total LVs	% Change 2021/2022	2019 Total LVs	% Change 2019/2021	% Change 2019/2022
A - Residential	A, B4, C4, R1, R2, R3, R4, R5, RU5	49,370	37,302,654,870	26,628,958,380	40.1%	17,820,236,997	49.4%	109.3%
B - Business	B, B1, B2, B3, B5, B6, B7, ENT	787	909,507,460	744,234,840	22.2%	611,214,810	21.8%	48.8%
I - Industrial	I, IN1, IN2, IN3, IN4	541	407,432,200	304,029,060	34.0%	238,771,200	27.3%	70.6%
P - Scenic Protection	P	6	16,818,000	15,784,000	6.6%	14,480,000	9.0%	16.1%
R - Non Urban / Rural	R, RU1, RU2, RU3, RU4, RU6	5,291	7,860,417,320	5,602,577,837	40.3%	3,743,858,456	49.6%	110.0%
S - Special Uses	S, SP1, SP2, SP3	801	741,684,380	567,061,260	30.8%	425,378,260	33.3%	74.4%
XE - Environmental	XE, C1, C2, C3	2,044	1,146,651,500	780,317,190	46.9%	578,410,010	34.9%	98.2%
XR - Recreational	XR, RE1, RE2	1,315	442,726,180	327,095,470	35.4%	283,136,940	15.5%	56.4%
	Grand total:	60,155	48,827,891,910	34,970,058,037	39.6%	23,715,486,673	47.5%	105.9%

State and local government legislation for LGA

Shoalhaven Local Environmental Plan 2014 (SLEP2014) guides planning decisions for the LGA, providing standardised development controls and land use zones.

State Environmental Planning Policy (SEPP) provides for matters of State or regional environmental planning significance.

On 22 October 2014, all of Shoalhaven's current DCPs (Development Control Plans) and some planning policies were consolidated into a single DCP (Development Control Plans) covering the Shoalhaven LGA. The council mostly retained the controls and guidelines of the now redundant DCPs; however, these were reformatted into a single, simplified document that is easier to read. The council has also used this opportunity to remove redundant controls and clarify the intent of previous DCPs.

Market overview and sales of particular interest

Overall land values in the Shoalhaven local government area from July 2021 through to July 2022 have shown a very strong increase, except for commercial land which saw a strong increase.

The increase in market activity has contributed to a tightening of supply of properties across the local government area with significant increases to median sale prices evident in most market segments. Steady demand from owner occupiers and investors is contributing to the value increases

Proximity to larger population centres, such as Sydney, Canberra and to a lesser extent Melbourne, continues to be a major driver of market activity as decentralised home workplaces become more common in the wake of pandemic conditions.





Significant issues and developments

The Shoalhaven Hospital has recently unveiled a \$438 million redevelopment to include a state-of-theart facility with enhanced health services for the community. This update will provide new facilities including cardiology, mental health and aged care wards, more operating theatres and a new emergency department, and there will also be greater access to more specialised staff, equipment and technology (NSW Health 2022). The upgrade of the Princes Highway alignment continues to expose the location to the influence of the Sydney market. Broader macro-economic factors have continued to be the greatest influence on all property markets in the region.

Significant value changes

Residential land values have shown a very strong increase over 2021 levels, particularly in Kiola, Cunjurong Point, Currarong, Mollymook, Ulladulla, Bawley Point and Berry.

Summary of valuation changes to residential land

The market in general from July 2021 through to July 2022 has been characterised by relatively consistent, however, significantly escalated market activity and sales volumes throughout the period. Also, in general terms, values in most of the residential areas appear to have very strongly increased in relation to 2021 levels, however, the quantum has varied somewhat between various towns and villages.

Changes since previous general valuation (2019)

Since the previous general valuation, residential land values have shown a very strong increase. (109.3%)

Changes since previous valuation year (2021)

Since the previous annual valuation, residential land values have shown a very strong increase. (40.1%)

Summary of valuation changes to rural land

Overall, commercial land values saw a strong increase over 2021 levels, however this has varied Overall, rural land values have shown a very strong increase over 2021 levels, particularly in Barrengarry, Budderoo, Croobyar, Little Forest, parts of Nowra Hill, Tomerong, Termeil, Upper Kangaroo River and Woodstock.

Changes since previous general valuation (2019)

Since the previous general valuation, rural land values have shown a very strong increase. (110%)

Changes since previous valuation year (2021)

Since the previous annual valuation, rural land values have shown a very strong increase. (40.3%)

Summary of valuation changes to commercial land

The market in general from July 2021 through to July 2022 has been characterised by relatively consistent locational market activity and increased sales volumes throughout the period. Also, in general terms, values in most of the commercial areas have shown a strong increase over 2021 levels, with the quantum being somewhat inconsistent throughout the various commercial precincts.

Changes since previous general valuation (2019)

Since the previous general valuation, commercial land values have shown a very strong increase. (48.7%)

Changes since previous valuation year (2021)





Since the previous annual valuation, commercial land values have shown a strong increase. (22.2%)

Summary of valuation changes to industrial land

The industrial market in general has shown a very strong increase over 2021 levels, particularly in Bomaderry, North Nowra and South Nowra.

Changes since previous general valuation (2019)

Since the previous general valuation, industrial land values have shown a very strong increase. (70.6%)

Changes since previous valuation year (2021)

Since the previous annual valuation, industrial land values have shown a very strong increase. (34%)





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Disclaimer - Purpose of this report

This report has been prepared on behalf of the Valuer-General. The purpose of this report is to provide an overview of the valuation program for the 1 July 2022 valuation in the Local Government Area of Shoalhaven.

Land valuations must comply with the requirements and assumptions set out in rating and taxing legislation, such as the Valuation of Land Act 1916 (NSW), and Valuer-General policies. The contract permits large numbers of properties to be assessed using mass valuation methodologies.

Although mass valuation methodologies may be less accurate than individually assessed land valuations, they are routinely used across the globe to deliver land valuations for rating and taxing purposes that are within an acceptable range of variation. Consequently, land valuations from the Valuer-General may vary from an individually assessed market valuation for a parcel of land. All land valuations are, however, subject to a risk-based verification process which ensures each parcel of land is individually reviewed periodically.

Whilst the content of this report has been prepared with all due care and skill, the Valuer-General does not warrant that it is complete or free from error.

During the valuation process, information is compiled from third party sources, such as information relating to town planning, land use, zoning, and other market related information. The Valuer-General is not responsible for, and makes no warranty in relation to, the accuracy, currency, reliability or completeness of that information. Readers are directed to contact the source of the information.

The land values made in accordance with the valuation program have been made for rating and taxing purposes only, therefore, the land values should not be used for any other purpose. No reliance should be made on the contents of this report. To the extent permitted by law, the Valuer-General disclaims all liability to any person(s) who relies on, or uses, any information contained in this report.

I GA overview

Location of the district

The Shoalhaven Local Government Area (LGA) is in the south-eastern coastal region of New South Wales approximately 200 kilometres south of Sydney. The area is located adjacent to the Tasman Sea and spans approximately 160 kilometres along the coastline.

Whilst dedicated as a city it is a somewhat dispersed region comprising some 35 distinct residential suburbs and villages along with another 26 rural localities. The Princes Highway passes through the area (north/south) and the South Coast Railway Line traverses the northern section of the area and terminates at Bomaderry. Its topography combines mountainous terrain, flat coastal plain, bays, inlets, lakes, and rivers. The spectacular natural environment is a major attraction of the Shoalhaven area.

Within its boundaries are 109 beaches, 300,000 hectares of National Park and State Forest land. Jervis Bay and Kangaroo Valley are popular natural tourist attractions. The Shoalhaven River provides a significant natural water resource to Shoalhaven Water and Sydney Water. The Shoalhaven's beautiful natural environment plays a central role in the quality of life of the local community. The region's temperate coastal climate, rich array of native flora and fauna, many natural attractions, thriving defence and tourism sectors make the Shoalhaven an appealing place to live and work. The Shoalhaven is adjoined by five other LGAs (Local Government Area) being Kiama, Wingecarribee, Goulburn Mulwaree, Palerang and Eurobodalla. The district covers an area of 4,374 square kilometres and at 2021 had a residential population of 108,531 (Australian Bureau of Statistics) (ABS).





Principal towns

Berry

Berry is an historic settlement situated in the northern region of the Shoalhaven 15 kilometres north east of the major regional centre of Nowra and some 150 kilometres south of Sydney. Berry is surrounded by rural grazing lands and lifestyle properties and is a popular tourist destination particularly for weekend visitors. Berry and surrounds had a population of 4,983 at 2021 census date (ABS, 2021).

Development in the Berry township is predominantly residential in nature, ranging from 1940's heritage style dwellings to contemporary timber framed and brick veneer residences constructed between 1970 – 1990. A premium is generally paid for heritage listed properties due to their central position in the township. The Huntingdale Park subdivision to the west of the township, separated from the retail heart by the by-pass, is now well established with contemporary homes built to a high standard.

Berry remains as a service centre for the surrounding rural lands offering some basic shopping facilities and service industries. The historic nature of the village adds to its overall appeal and it is a very popular weekend stopover due to its position to the Princes Highway.

Bomaderry

Bomaderry is an established residential suburb situated approximately 3 kilometres north of the Nowra Central Business District (CBD) on the northern side of the Shoalhaven River. Bomaderry is bounded by the Shoalhaven River on the south side, Bomaderry Creek on the west side and rural grazing lands to the north and east. The suburb had a population of 6,738 at 2021 (ABS, 2021).

Development in Bomaderry is predominantly residential in nature ranging from early 1960's fibro housing commission residences in the older section of the town to modern project style brick veneer residences in the newer estates. Units and Villas are prevalent where zoning permits.

Bomaderry is a residential suburb of the greater Nowra area and offers its own shopping including a new Woolworths centre, schools and sporting/leisure facilities including a new aquatic centre. The suburb also has a large industrial component on its outer fringes with many light industrial/manufacturing companies' as well as large industry like Manildra. The north-western fringe supports newly established petrol/coffee/convenience/fast food outlets near the new Woolworths development and existing McDonalds and KFC outlets. The South Coast Rail Line terminates at Bomaderry.

Nowra

Nowra is the main administrative service centre for Shoalhaven City Council, located approximately 165 kilometres south of Sydney on the Princes Highway, stretching southward from the Shoalhaven River. The township is bounded by rich alluvial flood plains to the east and vast expanses of National Park and State Forest to the west. The retail core of the town offers a wide variety of national supermarkets/franchises with bulky goods retail located away from the CBD at South Nowra. A variety of office space is available throughout Nowra, near the towns centre, ranging from converted residences to multi storey buildings. A State Office Block houses various government tenants. Nowra is also the manufacturing hub of the Shoalhaven with the Flinders Industrial Estate home to various large and small businesses providing services as diverse as cheese making to the manufacture of specialised airborne equipment along with the provision of services to the naval air station. Nowra, West Nowra, South Nowra and Worrigee had a combined population of 20,009 in 2021 (ABS, 2021).

Development ranges from 1940's weatherboard cottages to 1960's fibro housing commission dwellings in central Nowra, with fringe areas largely developed with contemporary brick veneer residences. Nowra East was mostly developed as a housing commission estate during the 1970's whilst West Nowra and





South Nowra are generally composed of newer project style brick veneer homes. Units, villas, and townhouses are prevalent where zoning permits, generally in central spots close to the town centre.

Nowra is the commercial hub of the northern Shoalhaven and offers banking, shopping, school and sporting and recreation facilities. It remains Shoalhaven's major town.

Ulladulla

Ulladulla is the main service centre for the southern Shoalhaven being approximately 55 kilometres south from Nowra. This is a sprawling suburb that was originally built around the Ulladulla Harbour but has gradually expanded into the former rural lands towards the west and north. The township had a population of 7,262 at 2021 (ABS, 2021).

Development is predominantly residential in nature varying from 1960's fibro housing commission style residences through to modern project style brick veneer residences, with large architect designed residences in positions overlooking the ocean and surrounding coastline. Due to the coastal nature and the sloping topography of the township many of the dwellings have ocean frontage or significant views. Units and villas are predominant on land suitably zoned and are generally for permanent occupation rather than short term holiday rentals.

Premium paid for ocean frontage or ocean views in this location. New subdivisions on the western and northern fringes of the village have sold steadily over previous years. Ulladulla provides the main retail and commercial centre for the southern Shoalhaven providing a diverse retail shopping centre that includes many of the national retailers. Ulladulla Harbour houses the main fishing fleet for the South Coast with a local Co-op and various fish processing outlets. Ulladulla provides public schools, high schools, recreational and community facilities to the surrounding suburbs. The industrial estate is the focal point of many manufacturing and service industries in the southern section of Shoalhaven City.

Villages

Villages are interspersed throughout the LGA; many are located along the coastline with some having retail strips to service local communities and seasonal visitors and are significant to the regions tourism sector. Villages include Huskisson and the Jervis Bay area, Milton, Bawley Point, Bendalong, and Manyana just to name a few.

Main industries

Manufacturing, defence, tourism, and agriculture represent the core income generating economic activities for the Shoalhaven LGA. The agricultural sector remains an important economic activity in the region. Aged care residential service, hospitals and education are also prominent industries.

According to the Shoalhaven City Council, as of 2022 there were 30,221 businesses operating in the Shoalhaven LGA.

This healthy growth in new business is largely due to the strong emphasis placed on economic development by Shoalhaven City Council, which has successfully encouraged a significant number of firms to relocate or set up in the area. In 2020, the NSW State Government also announced a Regional Job Creation Fund to encourage investment in regional NSW which was successful and been reimplemented in 2022.

The Shoalhaven has developed a dynamic manufacturing industry with a total of 546 manufacturing businesses throughout the region in 2022. There has been substantial expansion of the Manildra Group's ethanol and starch plant at Bomaderry over the last decade or so, however, the paper mill at Bomaderry (which was a major employer between the 1960s and 1990s) has since ceased operation.

Many internationally recognised defence contractors operate in the Shoalhaven including Raytheon, Pelair, Boeing, British Aerospace, Air Target Services and Air Affairs. The Department of Defence





operates a few facilities in the Shoalhaven LGA, the largest being HMAS Albatross just south of Nowra. In all, the defence industry contributes approximately \$100 million in annual salaries and some 1800 jobs to the local economy. The Defence Department's capital expenditure during the past few years is estimated at approximately \$157 million (Australian Government, 2017).

The education and training services and facilities available in the Shoalhaven represent a valuable asset for the region. The Shoalhaven Education Precinct - a strategic development combining the University of Wollongong, the Illawarra Institute of Technology, and the State Government, continues to provide the region with economic development opportunities. The joint campus for the University of Wollongong and Illawarra Institute of Technology at Mundamia, to the west of Nowra, continues to provide students with the opportunity to study locally. The Campus includes graduate schools of medicine, nursing, and teaching.

Shoalhaven Hospital has added a purpose-built regional Cancer Care Centre in recent years, and a new multi-storey car park was opened for use in December 2019. The Shoalhaven hospital will soon be a large contributor to the economy after the redevelopment, creating numerous jobs for the community.

The agricultural sector remains an important economic activity for the Shoalhaven. Dairy, fodder crops, nursery products, seeds and cut flowers are key rural activities having a gross value of produce around \$70 million, while Shoalhaven's fishing industry is estimated to contribute \$25 million to the area's economy. The local abalone industry has achieved significant success in exporting its products to Japan. Aquaculture development within Shoalhaven is growing both on land and within the marine environment. The Shoalhaven has a very strong natural resource base including rich agricultural land, forests, and vast waterways.

Opportunities for growth in agriculture exist in value added dairy products, aquaculture, grape and berry growing, organic farming, ecotourism, the nursery industry, turf farming and larger scale fodder production such as hay to supply drought affected regions.

Significant retail centres

The Shoalhaven LGA's retail sector is dominated by the regional township of Nowra with a number of major retail and supermarket chains such as Kmart, Woolworths, Coles, and Aldi already operating. The commercial centre is somewhat disjointed with the main retail centre located on the western side of the Princes Highway and centred around Junction Street, however, the major shopping centre (Stockland Nowra) is situated towards the eastern fringe of town. Shoalhaven City Council has several large holdings (public car parking) within the main CBD and has recently been seeking expressions of interest for redevelopment into a major centre within the core of town. Bulky goods retail development is situated to the south of the town and is centred on the Princes Highway alignment and Central Avenue

The southern coastal township of Ulladulla is the administrative and commercial hub for the southern Shoalhaven. Most of the major supermarket chains are duplicated, albeit on a smaller scale, as for Nowra with various Local and State Government instrumentalities also providing services. There is a recently developed district centre at Vincentia which also included a major supermarket (Woolworths) and specialty shops to service the greater St Georges Basin locality.

Type of residential development

Residential developments are predominantly located in the well serviced, major centres of Nowra, and Bomaderry regions and in concentrated village locations. There have recently been numerous amounts of rezoning in North Nowra and Cambewarra that has the potential to be a large new greenfield development area. Residential development will be commenced within Milton and Ulladulla towards the southern section of the LGA and a significant area of development is also located along the shores of





Jervis Bay and St Georges Basin because of more rezoning activating smaller rural suburbs. Residential development generally comprises predominantly detached single residential dwellings interspersed with unit development and townhouse/villa type accommodation.

The LGA has a wide dispersion of rural residential development on hobby farms, rural lifestyle parcels and larger agricultural holdings. Nowra, Berry, St Georges Basin and Milton have some significant medium density developments and retirement village accommodation. Relatively large-scale residential subdivision is primarily situated within the fringe areas of major population centres, however; smaller infill developments in recent times are common.

Shoalhaven City's building approvals are a leading indicator of the general level of residential development, economic activity, employment and investment within the LGA. Building approvals in the Shoalhaven had a net 11 increased in the 2021-22 period over the 2020-21 levels which coincides with overall increasing value levels.

State and local government legislation for LGA

Shoalhaven Local Environmental Plan 2014 guides planning decisions for the LGA, providing standardised development controls and land use zones.

State Environmental Planning Policy (SEPP) provides for matters of State or regional environmental planning significance.

On 22 October 2014, all of Shoalhaven's current DCPs and some planning policies were consolidated into a single DCP covering the Shoalhaven Local Government Area (LGA). Council mostly retained the controls and guidelines of the now redundant DCPs; however, these were reformatted into a single, simplified document that is easier to read. Council has also used this opportunity to remove redundant controls and clarify the intent of previous DCPs.

The SDCP 2014 includes:

- Introduction/General Information chapters.
- 28 Generic Chapters that apply to the whole LGA.
- 6 Area Specific chapters.

Shoalhaven City Council has development controls including the Shoalhaven Development Control Plan 2014 that affects the subdivision and erection of dwellings which impacts on land values.

These include:





Zone	Minimum allotment size
RU1 Primary Production	40 hectares
RU2 Rural Landscape	40 hectares
RU3 Forestry	Not Applicable
RU4 Primary Production Small Lots	1-2 hectares
RU5 Village	500m² up to 2 hectares
R1 General Residential	500m²
R2 Low Density Residential	500m² (under review)
R3 Medium Density Residential	No minimum lot size
R5 Large Lot Residential	2 hectares
B1-7	No minimum lot size
IN1-4	No minimum lot size
E2	40-80 hectares, 1000 hectares (environmental constraints)
E3	40 hectares
E4	1 hectare
W1,2 and 3	No minimum lot size

Market overview and sales of particular interest

Overall land values in the Shoalhaven local government area from July 2021 through to July 2022 have shown a very strong increase, along with Industrial land. Whereas commercial land saw a strong increase in value.

The escalation of market activity, combined with the adoption of broader lending practices and a low interest rate environment has contributed to a tightening of supply across the local government area with significant increases to median sale prices evident in most market segments. Steady demand from owner occupiers and investors is contributing to the tightening supply within the market.

Proximity to larger population centres (Sydney, Canberra and to a lesser extent Melbourne) continues to be a major driver of market activity as decentralised home workplaces become more common in the wake of pandemic conditions.

Walsh & Monaghan have undertaken significant analysis of the Shoalhaven district property market to provide an accurate and reliable basis of valuation. 1604 sales have been analysed to enable the establishment and verification of land values as at 1 July 2022. A breakup by zone is as follows.

Zone	Number of Sales Analysed
Residential	1268
Business	63
Industrial	24
Open Space	0
Scenic Protection	0
Non-Urban / Rural	211
Special Uses	16
Environmental	22
Recreational	0
Waterways	0
Total	1604





Residential and Villages

Residential land values have shown a very strong increase over 2021 levels, particularly in Kiola, Cunjurong Point, Currarong, Mollymook, Ulladulla, Bawley Point and Berry.

Residential land in Bomaderry, Sanctuary Point/St Georges Basin, sections of Nowra, and the coastal areas of Callala Bay have a strong increase. Other areas with strong increases include Orient Point, Culburra, Callala Beach, Greenwell Point, Huskisson and Sussex Inlet. The large lot sites in Kangaroo Valley and Ulladulla have shown a strong increase.

Larger lots in Bomaderry have shown a slight increase. Cambewarra, Hyams Beach, Myola waterfronts and Erowal Bay have remained steady.

The medium density areas within Berry, Bomaderry, North Nowra, Nowra, Callala and Huskisson have also shown strong land value increases as development potential improves.

The increase of market activity continues to be driven by the low interest rates and purchasers relocating from the larger population centres of Sydney, Canberra and to a lesser extent Melbourne, as working from home becomes more common. This has seen a tightening of supply across the local government area with significant increases to land values evident in most market segments.

Commercial

Overall, commercial land values saw a strong increase over 2021 levels, however this has varied between localities. Shoalhaven Heads/Cambewarra, Milton Local Centre and Ulladulla showed very strong increases.

Some pockets of Bomaderry and Nowra Fringe saw strong increases. Berry and Huskisson both show properties in these sectors having a range of slight increases to steady market movements.

The demand from owner occupiers and investors is contributing to the tightening supply within the market. Affordable investment properties relative to major city prices has increased demand. There has also been additional demand from the residential market as people seeking lifestyle changes also seek properties related to employment activities.

Industrial

The industrial market in general has shown a very strong increase over 2021 levels, particularly in Bomaderry, North Nowra and South Nowra.

However, general industrial land values in Sussex Inlet and Ulladulla along with the light industrial land has shown a slight increase across the LGA.

A relatively limited supply together with the tightly held nature of the market and strong demand from owner occupiers and investors has supported values increases in most industrial precincts.

The diminution of returns from alternate forms of investment and changes to allow borrowing for self-managed superannuation funds continues to encourage investment in property with the market driven by both owner occupiers and investors. The demand from owner occupiers and investors is contributing to the tightening supply within the commercial market sector and this will undoubtedly underpin value levels in the short to medium term.

Rural locations within the LGA

Overall, rural land values have shown a very strong increase over 2021 levels, particularly in Barrengarry, Budderoo, Croobyar, Little Forest, parts of Nowra Hill, Tomerong, Termeil, Upper Kangaroo River and Woodstock.





Primary Production land between 10 and 40 hectares around the Illaroo, Berry and Coolangatta area has shown strong value increases, as too did the smaller rural lots in Nowra and Worrigee, Verons Estate in Sussex Inlet, Tomerong and Wandandian. Value increases within the rural sector are considered partly attributable to a flow on effect from a very strong residential market with purchasers transitioning to lifestyle properties throughout the local government area.

Rural grazing land and rural residential are also highly sought after along the coastal strip. A relatively limited supply coupled with the tightly held nature of the market has under pinned value increases.

Significant issues and developments

Significant developments - from prior to current annual valuation

There are no significant issues or developments driving values within the Shoalhaven Local Government Area, however, the improvement of the Princes Highway alignment and the Nowra Bridge Project continue to further expose the location to the influence of the Sydney market commuters, holiday traffic and road freight. Broader macro-economic factors have continued to be the greatest influence on all property markets in the region.

The culmination of the following 4 projects creates a focus on north Bomaderry as a gateway to Nowra and related investment in this area is now evident (new Woolworths, new petrol/convenience outlets, stronger business zoned sales):

- Berry to Bomaderry Princes Highway Upgrade funded by the State Government, the \$450 million project is well underway. Following on from the completion of the Gerringong Princes Highway upgrade and the Foxground & Berry Bypass in recent years, these road works will extend the improved free-way conditions from just south of Berry through to Bomaderry.
- Nowra Bridge Project / Princes Highway upgrade jointly funded by both the State Government
 and the Federal Government, the \$342 million project is well underway for the development
 and construction of the new four lane bridge over the Shoalhaven River, along with upgraded
 intersections and additional lanes on the Princes Highway. Expected completion date is mid2024
- Moss Vale Road North Urban Release Area (MVRN URA)- detailed planning work for this urban release area, located a few kilometres to the north west of Bomaderry, commenced by council in August 2017.
- Moss Vale Road South Urban Release Area (MVRS URA)- Shoalhaven City Council adopted detailed planning controls for this project in August 2018, marking a significant milestone for the next growth phase in Nowra-Bomaderry's development as a key regional centre on the South Coast. The development aims to provide a high standard urban area capitalising on the beauty of the natural environment and retaining riparian corridors and views of creeks, timbered lands and rural landscapes. The new planning controls have now commenced, enabling the land to be released and subdivided for up to an estimated 840 lots of various sizes in this area.

Risk of inundation and coastal erosion

Local government has a legal obligation under the Environmental Planning and Assessment Act 1979 to manage the coast. Their responsibilities include assessing applications for development with consideration of coast hazards such as erosion, inundation and the impacts of sea level rise.

Generic Chapter 6 of the Shoalhaven Development Control Plan, 'Coastal Management Areas' provides detailed guidelines for coastal management and development in areas of coastal hazard risk, foreshore areas and building on sand dunes. Detailed mapping now identifies affected properties including those properties which would require detailed geotechnical assessment prior to development.





Generic Chapter 9 of the Shoalhaven Development Control Plan, 'Development of Flood Prone Land' provides detailed guidelines to assess the possible affect natural hazards could have upon development. Access to detailed mapping now identifies properties in affected areas.

Significant value changes

Significant value changes - from prior to current annual valuation

Since the prior annual valuation, residential land in Bomaderry, Sanctuary Point/St Georges Basin (ex waterfront), pockets of Nowra and the coastal areas of Callala Bay (ex waterfront), Orient Point, Culburra (waterfront - Curelys Bay), Callala Beach (absolute waterfront), Myola, Greenwell Point (waterfront and waterfront reserve), Huskisson (waterfront), Sussex Inlet Waterfront and Canal front) and the large lot sites of Kangaroo Valley and Ulladulla have shown a strong increase, while Bomaderry large lot has shown a slight increase. Cambewarra, Hyams Beach, Myola (waterfront) and Erowal Bay has remained steady.

The medium density areas within Berry, Bomaderry, North Nowra, Nowra, Callala and Huskisson have also shown strong land value increases over the course of the 2022 valuing year as development potential improves with escalating markets.

Primary Production land between 10 and 40 hectares around the Illaroo/Berry/Coolangatta area has shown strong value level increases, as too did the Rural Landscape land of Nowra/Worrigee and Verons Estate in Sussex Inlet and the Small Lot Primary Production land of Tomerong and Wandandian.

Value increases within the rural sector are considered partly attributable to a flow on effect from a relatively buoyant residential market. Purchasers driving the demand in this sector appear to be transitioning on to lifestyle properties after selling or leveraging properties in residential suburbs throughout the local government area. Genuine rural grazing land and large lot rural residential holdings (40 hectares plus) are also highly sort after along the coastal strip. A relatively limited supply coupled with the tightly held nature of the market has underpinned value increases.

Exceptions to these increases were seen in the Shoalhaven Heads/Cambewarra and Milton Local Centre, Ulladulla Commercial Core and the B5 Ulladulla and Village Business Development land which showed very strong increases, while the Mixed Use zones of Bomaderry and Nowra Fringe saw strong increases. Berry Local Centre and Huskisson Mixed Use both remained steady.

General industrial land values in Sussex Inlet and Ulladulla along with the City wide light industrial land has shown a slight increase. Culburra's IN1 zone and the working waterfront precinct (leasehold tenancies) in Greenwell Point have remained steady.

Significant value changes – from prior to current local government council rating valuation

In terms of overall increases since the prior 2019 to the current 2022 local governments council rating valuation, overall land values have shown a very strong increase in land values. During this period Residential, Rural, and Industrial zoned lands have shown a very strong increase in land values, with the greatest increase occurring between 2021 and 2022 base dates. Generally, the drivers for these increases have been as reported in the "Residential and Villages" and "Rural" section of the Market Overview. Commercial lands have shown strong value increases over this same period.

The strongest of these very strong increases seen in Rural (110%), Residential (109.3%), Environmental (98.2%) market sectors, and the commercial and industrial markets also saw very strong increases with Industrial (70.6%) and Commercial (48.8%).





Overview of the quality assurance process

VGNSW has been provided with detailed valuation analysis reporting, which details the quality assurance process of Walsh and Monaghan and outlines that the verification process and certifies that land values meet all statistical measures and component data analysis. In addition, a quality statement and lists of high value and high-risk properties is also provided in the valuation analysis reporting.

Checks have been undertaken to ensure that all properties have been valued, land values are consistent with each other, land value bases have been correctly determined and all concessions and allowances have been supplied. Additionally, properties that had land values amended through the objection or re-ascertainment process were individually examined to reconcile surrounding land values and ensure accuracy of the grading of surrounding land values.

Benchmarks and reference benchmarks are core elements of the quality assurance processes and are identified and individually valued in accordance with the Contract. Worksheets have been maintained on all properties where calculations are required. We have also ensured that adjustments and assumptions within the market analysis have been based on market evidence and have been fully documented and rationalised.

Author

Report Prepared by:

Adam Hopcroft AAPI CPV

AAPI CPV Contract Services Manager





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My entries

Trevor Dando

BICI City Applications

S308377 SUBMITTED

SECTION 1: APPLICANT PROFILE

a. Lead Contact Name

Trevor Dando

b. Email Address

trevor. dando@shoal haven.nsw.gov. au

c. Title

Section Manager - Works and Services

d. Administrative Entity Name

Shoalhaven City Council NSW Australia

e. Department (if applicable)

City Services

f. Please confirm that you are an official representative or agent of the administrative entity (city, town, metropolitan authority or other local government authority) and have jurisdiction where the proposed projects are located.

Yes

g. Please describe the relationship between the primary point of contact's department and the City Leader (Mayor's Office or equivalent) office.

Shoalhaven City Council organisational structure: Mayor - Chief Executive Officer - City Services Director - Works & Services Section Manager

a. City Leader's Name

Amanda Findley

b. Email Address

amanda. findley@shoal haven.nsw.gov. au

c. Title

Mayor

d. Please describe the City Leader's jurisdiction or authority over your proposed project.



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Elected

f. Please state the date of the end of your City Leader's term, whether they are eligible for reelection/reappointment, and also if they plan to run. Please note any other anticipated transitions in city leadership.

At the present, it is too early to comment on rerunning for re-election (currently, the State Government advise that the next local government elections will be held in September 2024.), notwithstanding there is no envisaged change in support for the project, which has very broad support across the community and all levels of Government

g. Please confirm that your City Leader has reviewed and is supportive of this application.

Yes

a. Administrative Entity Population

108497

b. Administrative Division (e.g. State/Province/Region)

New South Wales

c. Country

Australia

d. Continent

Oceania

SECTION 2: VISION AND AMBITION

1. Pitch your idea! Describe how your cycling infrastructure will be different in 3 years because of your BICI project.

Shoalhaven city council cycling infrastructure proposal is to create a space that has true separation, diving into an awareness of belonging, unravelling the history of the south coast by implementing a series of indigenous artworks and dreamtime themes, while maintaining an emphasis on the historical significance of space and culture all in one, experienced while on a bike.

People need to feel safe using their bikes to get to where they need to go, the proposal will ensure a dedicated bike lane.

The proposal is to cater for cyclists of all ages and abilities, as well as for different kinds of trips.

Cyclist can enjoy the view of the white sandy beaches and clear blue waters while soaking in the natural elements.

2. Compared to how you've delivered existing cycling infrastructure, what makes this proposal unique? We're excited to hear how your approach is different from what has been attempted before.

The proposal builds a combination of the following infrastructure options to make this proposal unique:

Raised, segregated and wider bike lanes. These are proven to be far more effective at encouraging cycling and improving safety (and perceived safety) than cycle lanes painted on the road

Bike hire infrastructure. This includes an option to consider bikes docking stations

Secure bike parking infrastructure. Select racks that provide at least two points of contact with the frame to enable bikes to be locked up securely and ensure parking doesn't obstruct pedestrians. An option to invite local businesses to request or install bike parking on their premises.



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b. Today, what percentage of that cycling infrastructure is fully protected (separated from motor vehicles)? 79.6

c. After this project is implemented, how many kilometers of cycling infrastructure (i.e. cycle lanes) will be available in your city?

362.479

d. After this project is implemented, what percentage of cycling infrastructure will be fully protected (separated from motor vehicles)?

79.7

4. What else sets your project apart? What new design improvements, approaches to delivery, materials, technologies, or other innovations are included as part of this project?

Council, if successful in the application, will consider the option to use an environmentally sustainable material used in the construction of footpaths. The product is recycled glass which is processed at Shoalhaven City Council's very own West Nowra Waste Depot.

This option is a more environmentally sustainable form of concrete. The mix allows for a reduction in the number of raw materials that are used, replacing them with a fine glass sand that is obtained from the glass that Australian households recycle every day.

More than 8,500 tonnes of previously stockpiled glass have been used in local infrastructure such as road base materials, asphalt, concrete, pipe bedding and green ceramics. Council is also currently working with the University of Western Sydney on a project to create concrete made from 93 per cent glass.

Being locally sourced from within the city council itself, there are large cost savings including transportation and logistics, compared to other environmentally sustainable materials available within the state.

- 5. Please provide a letter from your City Leader describing their commitment for your BICI project.
- Mayoral-Letter of Support
- 6. How will you create momentum for other improvements to your city's cycling infrastructure after your BICI project is implemented? How will you create replicable processes or establish policies that ensure that a complete cycle network is built?
- Establishing an Active Transport strategy which will incorporate and include updates to Councils PAMP, and Bike Plan, as well as reviewing Council's Pathway Asset Management Plan
- Working with Local communities, organizations and State Government to establish and implement the proposed Active Transport strategy for all existing and new pedestrian and cycling infrastructure.
- · Incorporating best practice design principles for cycling in land use planning tools
- Ensuring the needs of bike riders are included within the planning and development of open space, the public realm and streetscapes
- Ensure cycling projects support the Road Safety Strategy vision (zero lives lost on our roads by 2050) by making cycling safer
- 7. What percentage of your proposed BICI project will be completed and open for public use by December 2025?

100



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the challenge.

Motor vehicles are a major source of harmful air pollutants. A report by the World Health Organisation (WHO) in 2018 on air pollution and child health, underlines just how big the problem is. Nine out of ten people worldwide breathe polluted air, which is responsible for 7 million deaths every year, many of who are children. (WHO, Air Pollution and Child Health, 2018)

The BICI project addresses this particular challenge by offering public officials a way to address convergent crises in public health, transportation and climate.

At the same time, increased active transport infrastructure can stimulate increased bicycle usage and generate new economic opportunities, like offering low-cost bicycles for sustainable transport, mechanical training to local communities to create jobs, new bicycle, e-bike, and e-scooter hire opportunities, bicycle tour opportunities, cycling tourism opportunities, and the range of industries that would provide support to those demands.

2. If any, what past efforts have the city made to address these challenges?

Council developed its original Pedestrian Access and Mobility Plan (PAMP) in 2001 which has been updated and evolving ever since. In addition, the original Shoalhaven Cycling Strategy was adopted in 1997 and has also evolved, in 2013 the new Bike Plan was adopted, which has also been since integrated into the PAMP and has also further evolved. These are ongoing commitments to the active transport evolution in our communities.

The PAMP and Bike Plans provide the strategy, ranking methodology, and mapping to support the expansion of cycleways, all types of paths, pedestrian crossings and associated bicycle infrastructure across the City. The purpose of the Plan is to:

- · Identify priorities for pedestrians and cyclists
- Continuously improve the network of footpaths, shared user paths, cycleways and pedestrian crossings across the City
- · Assist Council in prioritising works
- Demonstrate an integrated approach to "active transport" planning across the City
- · Assist Council and the community to obtain grant funding for priority improvements

3. What will change in your city as a result of your BICI project? What metrics will you use to understand if you have succeeded?

The council will benefit as a result of the BICI project by reducing the need for people to access more health services as the community ages. Cycling can help to protect from serious diseases such as stroke, heart attack, some cancers, depression, diabetes, obesity and arthritis. Riding a bike to work, school, university or college is a convenient and practical way to incorporate regular exercise into your busy day.

Bikes do less damage to road surfaces than cars. More bikes and fewer cars on the road can reduce congestion and its associated costs.

Bicycle riding facilities can extend the catchments of existing public transport services. On average, 10 times more households are within bike riding distance of public transport than are within walking distance.

The majority of car trips to school are within walking distance. Riding a bike or walking these trips significantly reduces congestion around schools and improves safety for children.

Cycling is easy to fit into your daily routine by riding to the shops, park, school or work.

4. Please describe how you will measure the usage, connectivity, quality, and safety of your cycle network. Please include both quantitative and qualitative data collection.

Council works very closely with the community to ensure infrastructure meets community needs, is fit for purpose, and that inspires and encourages healthy forms of transport.

Methods include:

- Community consultation direct and indirect through regular engagement with the community and groups such as public surveys and information sessions, public correspondence/feedback received, and engagement with the community in the review of strategies and budget planning
- Strategic review of current and future cycleway network through the PAMP and Bike Plan process
- Condition inspections conducted routinely to capture the current condition of the cycleway to input into Asset Management Plans, maintenance schedules and future works programs



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SECTION 4: IMPLEMENTATION CAPACITY

a. 2021

\$1,785,700

b. 2020

\$2,207,000

c. 2019

\$604,600

d. 2018

\$1,740,000

e. 2017

\$2,173,614

2. Please describe the internal and external capacity used to implement cycling infrastructure in your city. Where do you see a need for additional capacity or expertise?

Shoalhaven Council has been increasingly involved in leading cycling infrastructure projects. We have expanded our scope of services to incorporate cycling infrastructure services.

We have built up this expertise in cycling infrastructure while developing strategies, cycling standards, and track treatments, and carrying out cycling audits for various projects.

Council can see a need to develop more skills on the planning and innovative designing of cycling infrastructure, adaptation of techniques used around the globe to evoke behavioral change. We hope by doing this it will help in building individual capacities, enhancing individual skills and knowledge and more so, employing concepts involving experts.

3. How are decisions made on funding cycle networks and mobility programming in your locality? Who makes those decisions?

Projects are put forward each financial year by the district engineers and roads asset manager into the 10-year capital works program to be reviewed and approved by the Councilors. These can include the immediate and future projects up to 10 years of planning. Cycling network projects can include community driven, missing links, cycleway upgrades, and new strategic cycleways.

There is a rolling budget each year for kerb ramp upgrades, community path contributions, and maintenance funding for renewal and replacement of existing cycleways and paths.

Further funding is also sought through grant funding, usually through the state and federal government through active transport programs, federal stimulus programs and tourisms grants. Major projects are reported by Council officers to Councilors to endorse and support when applying for grant funding or allocate Council funds to complete projects.

4. Describe your city's ability to dedicate resources to implementation, including staff and budget. Does it rely on the support of a legislative body, such as city council? If so, please describe that process of approval.

The implementation of cycle network throughout the Shoalhaven can be through four main resources: Local government, State government, developers, and community groups.

Local government is the main resource to implement cycle projects using internal and external resources. Minor



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Developers in the Shoalhaven are conditioned to upgrade or construct a cycleway in the direct vicinity of the development if it is identified in Council's PAMP and bike plan.

Community groups are responsible for a minority of Cycleway projects which mainly consists of gravel or concrete pathways. They are usually completed by qualified volunteers, supervised by Council staff, and completed to Council standards

5. What are the top 2 risks to successfully implementing your BICI project, and what is your plan to mitigate them?

Council envisages that scope creep is one of the top 2 risks that is associated with successfully implementing the BICI project.

Mitigation strategies include the need to communicate the project roadmap with stakeholders from the beginning and hold firm to those parameters.

Creating clear project parameters from the start will strengthen the project scope. Agreeing upon the project scope and communicating that vision with stakeholders from the beginning will leave less room for scope creep. Scheduling regular progress check-ins can also ensure the project stays in line with the original project scope.

Council also foresees that having stretched resources is one of the top 2 risks that is associated with successfully implementing the BICI project.

Resources may include time, skills, money, or tools. Council plans to mitigate resource risk creating a resource allocation plan. A resource allocation plan makes the best use of team resources while maximizing resource impact and supporting team goals.

6. What additional resources, including in-kind funding, will the city or additional partners make available to implement the project and how will you secure them?

The council has a Preferred Supplier Panel & Panel Contracts list in place in order to secure the necessary resources.

- 7. Using the budget template we provided with your registration, please identify how BICI Program grant funding would be used to support your ambitious cycle network goals.
- BICI Budget \$1M
- BICI Budget \$400k
- 8. In the last five years, has your city attempted to change the design of a street to create safe cycle network infrastructure (e.g., removing or relocating automobile parking, removing or narrowing vehicle travel lanes, removing or narrowing sidewalks)?
- -Vincent St, Vincentia the continuation of the "round the bay" cycleway where it was not physically possible to construct the missing link pathway, the existing path was linked to the quiet local street and reclassified a "shared zone" with a speed limit of 10km/hr. This provided a safe redesign of the local street to continue the "round the bay" network
- -Junction St, Nowra the removal of parking lanes on a local street to provide dedicated painted, on-road cycle lanes which connect the Princes Highway to the regional shopping centre
- -Bolong Road, Gerroa Road, and Pyree Lane widening of road and sealing shoulders for addition of separated on road cycle lanes
- -Ferry Lane, Nowra which formalised the grass verge with barrier kerb and gutter with a 2m cycleway behind the kerb.
- This narrowed the travel lane and created space between the vehicles and cyclists.
- -Deering St, Mollymook similar project formalizing the road verge to construct a 2.5m shared user path behind barrier kerb and gutter creating a safe link between the popular Warden Head lighthouse, secluded Rennies Beach and the village of Mollymook.
- -Other shared zones have been implemented recently (Junction Court, Nowra, and the Nowra Administration Centre) this shifts the focus away from motor vehicles, enhances amenity and safety for pedestrians, improves active transport opportunities and experience for users, and resolves missing links in the bicycle network by providing a safer convenient bicycle passage



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towards the last constructed stage of the subject project)

- Iverison Road and Sussex Road, Sussex Inlet (extending the former shared user path network further, to connect
 to the Sussex Inlet foreshore, the William Mulligan Reserve, and to the previously isolated Inasmuch Retirement
 Village), an additional \$200,000 of federal funds towards the recently completed project
- Anson Street and Loralyn Avenue Sanctuary Point when completed will provide a single continuous shared user path network from Basin View to Jervis Bay, an additional \$400,000 of federal funds towards the project

10. Which are the top 3 most important public, private, nonprofit or community organizations needed as stakeholders & supporters in your project? How have you engaged them to date, & how will you ensure their participation & support during implementation?

The top 3 stakeholders and supports of the project include

- Council (have overseen and provided contributory funding since it's commencement) and are 100% committed to its completion (in support of the local community and in support of active transport investment throughout our city)
- Bawley Point Kioloa Termeil Community Association (BPKTCA) the adopted local community consultative body
 letter of support attached
- Shoalhaven Bicycle Users Group (SBUG) the local Bicycle Users Group in our City, very keen supporters of continued active transport investment – letters of support attached

Because of the vast size and geographic spread of Shoalhaven City, Council has adopted local community consultative bodies (CCB's) to provide representation and feedback from the various communities represented. Of Council's 49 towns and villages there is currently 24 adopted CCB's, and the particular CCB that represents the area subject of this project is the Bawley Point Kioloa Termeil Community Association (BPKTCA).

11. To what degree has the community been engaged in planning your BICI project or other cycling infrastructure?

Shoalhaven City Council along with the engagement of the community have been building the pathway for a long time with the earlier stages of the project being delivered incrementally by the community with Council providing annual allocations of funding for materials, and the community providing hundreds of hours of community volunteer and labour.

The community has also continuously raised funds through cake stalls, selling raffle tickets, selling second hand books, etc. and a few years ago were able to secure a \$300,000 Federal Government grant to build a particularly difficult section of the pathway.

After 10 years the project is now almost 70% complete, with approximately 4.3km completed and just over 2km left to build.

The people living in our community are still raising funds as we are committed to finalising our shared user pathway. The BPKTCA have advised Council (January 2023) that they have raised a further AUS \$64,000 recently, which is a fantastic effort and shows ongoing commitment to the cause for this important project, but unfortunately US \$1M is required to complete the project.

12. Please describe the relationship between your administrative entity and community partners or NGOs. Have you worked together before? How do your different backgrounds and objectives contribute to improving cycle network infrastructure in your city?

Please make reference to answer no. 11

SECTION 5: SUPPORTING RESOURCES

- 1. Map of existing cycle network with proposed BICI project locations
- Final Design Stage 1 & 2
- PAMP Bike Plan Bawley Point to Kioloa
- PAMP Bike Plan Kioloa
- Prelim Design sections 1-3



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ers, or





SHARED USER PATH (SUP) MURRAMARANG ROAD, BAWLEY POINT TO KIOLOA

Notes

- This Report is an Environmental Impact Assessment or Review of Environmental Factors (REF) for the Shared Users Path between Bawley Point and Kioloa as per the following plans:
 - Detailed design by Footprint (NSW) Pty Ltd (D21/413589) for "Stage 1" being from Racecourse Beach Nth Carpark to Shelly Beach Carpark
 - Preliminary Design for the entire and remaining SUP to Kioloa (D20/94200)
- Land acquisition or interim licence agreement must be reached with landowner of Lot 1 DP 782318 (Australian National University) prior to commencement of works within this lot.
- Written authorisation from the lessee of Crown Reserve Lot 130 DP 40869 must be obtained prior to commencement of works within this lot.

1. PROPOSED ACTIVITY

1.1 Description

The proposed activity is the construction of a Shared User Path (SUP) adjacent to Murramarang Road, from Bawley Point where an existing SUP terminates in the vicinity of Racecourse Beach access carpark, through to Kioloa in the vicinity of O'Brien Street. The proposed activity would include:

- Construction of a 2m wide and approximately 3.20km long Shared User Path (SUP).
- Pathway construction will involve levelling and excavation to approximately 150mm – 200mm, with sub-base and reinforced concrete over compacted fill or natural ground.





- Extension of existing gabion wall on north side of Butler Creek bridge to stabilise bank in proximity to the creek.
- Extension of numerous stormwater culverts
- Installation of bollards for traffic management at Racecourse Beach Nth carpark
- Clearing of up to up to 1710m² (approx.) native vegetation (refer to section 2.2).
- Sediment and erosion controls will be installed as required to minimise sediment movement into the waterways.
- The SUP is be constructed in part over land owned by Australian National University (Lot 1 DP 782318) and Crown Land under private lease (Lot 130 DP 40869), by authorisation and agreement.

Shoalhaven City Council (SCC) is the proponent and the determining authority under Part 5 of the EP&A Act. The environmental assessment of the proposed activity and associated environmental impacts has been undertaken in the context of Clause 228 of the *Environmental Planning and Assessment Regulation 2000*. In doing so, this Review of Environmental Factors (REF) helps to fulfil the requirements of Section 5.5 of the Act that SCC examine and take into account to the fullest extent possible, all matters affecting or likely to affect the environment by reason of the activity.

1.2 Location

The proposed activity is to be undertaken east of and adjacent to Murramarang Road between Bawley Point and Kioloa in the vicinity of O'Brien St.

Construction of the SUP would occur over the following land:

Lot	Tenure / land manager	Comments
Murramarang Road road reserve	SCC is the road authority	
Lot 1 DP 614466	SCC owned freehold land	
Lot 1 DP 782318	Australian National University (ANU)	licence agreement exists for SUP route passing through this land
Lot 130 DP 40869	Crown Land (R96797) - under lease by Roche Group Pty Ltd	authorisation / licence agreement is required for SUP route passing through this land



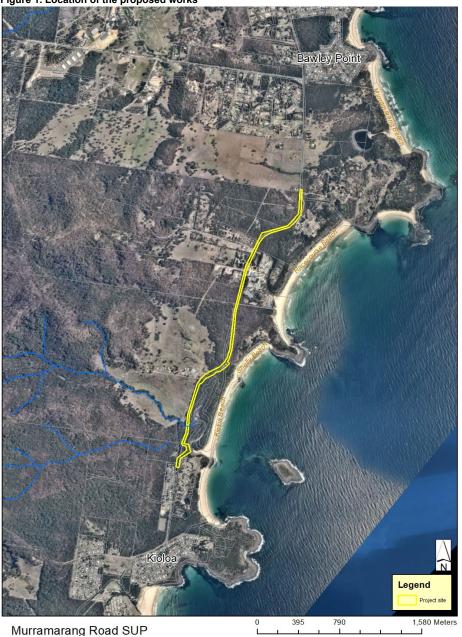


Works over Lot 1 DP 782318 and Lot 130 DP 40869 are to be undertaken only subject to agreement and authorisation with relevant land owner or lease holder.





Figure 1. Location of the proposed works







1.3 Environmental safeguards and measures to minimise impacts

- Prior to works, the eastern boundary of the road reserve shall be surveyed and clearly delineated. Encroachment into the adjacent private lands, without prior authorisation, shall be prevented.
- Prior to works commencing within Lot 130 DP 40869 (Crown Land R96797 under lease by Roche Group Pty Ltd) written agreement and authorisation with relevant land owners and lease holders must be obtained. Any works undertaken within these lots is to be in accordance with relevant conditions of respective agreements.
- Any works within Lot 1 DP 782318 (Australian National University) are to be undertaken in accordance with any relevant conditions of the lease agreement between ANU and CSU (LD7730).
- All works shall be contained within the road reserve, authorised works areas and
 existing cleared land. No machinery, spoil or waste materials are permitted to
 enter or be stored within intact vegetation beyond the road verge.
- Any native vegetation to be cleared must be delineated with flagging tape, high visibility barrier fencing or similar, prior to clearing works and must be to the minimum area required for construction of the SUP.
- An Aboriginal Heritage Site Officer is to be engaged through Batemans Bay Local Aboriginal Land Council to monitor excavation works for potential Aboriginal Heritage items within Area J (as per Figure 7).
- Trees to be cleared must be felled into cleared areas carefully so as not to damage trees to be retained in or beyond the development footprint.
- No hollow-bearing trees, nests or other likely fauna refuge areas were observed during site investigations. However, in the event that any wildlife be significantly disturbed or injured during works, Council's Environmental Officers are to be contacted on 4429 3405, or if unavailable, Wildlife Rescue – South Coast should be contacted on 0418 427 214, to rescue and relocate the animal(s).
- In the event that works are being undertaken during December to February
 inclusive, monitoring of Green and Golden Bell Frog (GGBF) habitat in the locality,
 and monitoring of the site will be undertaken to avoid impact to individual
 dispersing frogs.
- Erosion and sediment controls in accordance with the 'Blue Book' (Landcom 2004) shall be installed and maintained to prevent the entry of sediment into the waterway i.e. water diversion, minimising disturbance, erosion control and rapid re-establishment. Erosion and sediment controls shall be maintained in good





working order for the duration of the works and subsequently until the site has been stabilised and the risk of erosion is minimal. Particular attention shall be given to ensuring that Butlers Creek is protected from any sediment run-off associated with works adjacent to the creek, including the extension of the existing gabion basket.

- The contractor shall keep an emergency spill kit on-site at all times with procedures to contain and collect any leakage or spillage of fuels, oils and greases from plant and equipment.
- To avoid the risk of pollution from machinery, refuelling shall generally be done off site, however if refuelling on site is required, due care shall be taken to avoid spilling fuel and a tray shall be used to catch any accidentally spilt fuel.
- No major equipment maintenance works shall be undertaken on-site.
- Physical disturbance to the embankments adjacent to Butlers Creek shall be minimised and restricted to only what is required for installation of the gabion wall extension.
- Table drains and embankments where disturbed shall be stabilised with jute mesh or similar immediately following completion of works.
- An asset form <u>must</u> be trimmed to file 44574E on commissioning of the assets in Accordance with POL15/8 Asset Accounting Policy section 3.1.4 and POL16/79 Asset Management Policy section 3.3. Asset forms are available at: http://sccintranet/AssetsWorks/TechnicalServices/AssetStrategy/AssetForms.aspx
- This Environmental Assessment shall be reviewed when detailed plans of the remaining SUP (Shelly Beach carpark to Kioloa) become available.





2. ENVIRONMENTAL IMPACT ASSESSMENT

2.1 Existing Environment

The proposed activity would be undertaken adjacent to (and predominantly with the road easement of) Murramarang Road between Bawley Point and Kioloa (refer to Figure 1 above).

For the purpose of this assessment, the site has been divided into eleven areas, designated A through to I (refer to figures 2-7).

Much of the site is moderately disturbed as a result of past management including clearing and maintenance of the road verge, and the existence of informal walking tracks. In three areas (B, C and F), the SUP would encroach into native vegetation.

The site includes a Category 2 Riparian Buffer, associated with Butler Creek.

Photos 1 to 25 show the existing site, surrounding vegetation and other relevant features as discussed.

Habitat and Vegetation Assessment

The site was surveyed by a Council Environmental Officer on 14/01/2020 from 11:00AM until 3:00PM and on 21/01/2020 from 12:00PM to 1:30PM. It was again surveyed on the 24 September 2021 from 11:00 to 16:00 in response to the release of the detailed design plans by Footprint Pty Ltd (Appendix A). The surveys involved vegetation and habitat assessment, recording of all flora species within and immediately adjacent to the subject site, determination of vegetation communities, identification and location of endangered ecological communities (EECs) including Illawarra Lowlands Grassy Woodland EEC and Swamp Oak Floodplain Forest EEC, investigation of fauna signs (including scats), targeted survey for potentially occurring flora species and investigation of exposed soil and trees for potential Aboriginal heritage items.

Vegetation communities

The predominant vegetation type mapped as occurring over and around the site is PCT1206 (Biometric SR641) – *Spotted Gum* – *Blackbutt shrubby open forest on the coastal foothills, southern Sydney Basin and northern South East Corner.* This vegetation type is not associated with any Endangered Ecological Community.

Also mapped as occurring in the vicinity of the site is Biometric SR649 – Swamp Oak – Prickly Tea Tree – Swamp Paperbark swamp forest on coastal floodplains, Sydney Basin and South East Corner, which has no associated PCT, but is associated with Swamp Oak Floodplain Forest EEC.





Through much of the site, the vegetation is dominated by Swamp She-oak (*Casuarina glauca*), with scattered Forest Red Gum (*Eucalyptus tereticornis*) and *Eucalyptus saligna x botryoides* occurring with an often depauperate understorey containing Sweet Pittosporum (*Pittosporum undulatum*), Saw Sedge (*Gahnia* spp.), Spiny Mat-rush (*Lomandra longifolia*) and Tick-bush (*Kunzea ambigua*). At the southern end of the site, through Areas J and K, large Spotted Gum (*Corymbia maculata*) occur with Blackbutt (*E.pilularis*) and *Eucalyptus saligna x botryoides* with an understorey dominated by Sweet Pittosporum.

A full flora species list is provided in Table 1.

Habitat and targeted survey results

A meandering transect survey was undertaken through the site and adjacent vegetation to determine the presence / proximity of EECs. No threatened flora or fauna species were observed during surveys and site inspections. No suitable habitat for locally occurring threatened terrestrial orchids was observed. No glider scars were observed on trees within or in close proximity to the site.

Trees within areas to be impacted were inspected for hollows and recorded as hollowbearing trees where present. No hollows were recorded that would provide suitable habitat for any locally occurring threatened fauna species.

Vegetation observed on site was compared with mapped EECs occurring over and in proximity to the site. Vegetation consistent with Swamp Oak Floodplain Forest occurs in proximity to some northern parts of the site. While scattered indicative tree species of Illawarra Lowland Grassy Woodland occurred occasionally, this EEC was not considered to occur within the site. Both these EECs are considered further, and vegetation present on site assessed against the NSW Scientific Committee determinations for these EECs, in Section 2.3.





Figure 2. Area overview



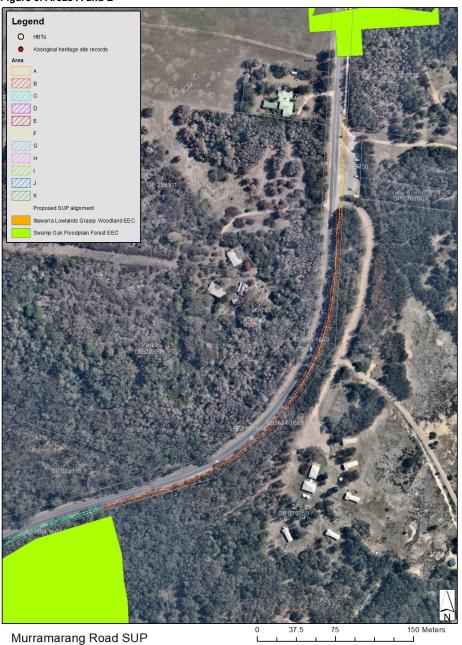
Review of Environmental Factors Shared User Path (SUP) Murramarang Rd, Bawley Point to Kioloa D20/62008

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Figure 3. Areas A and B



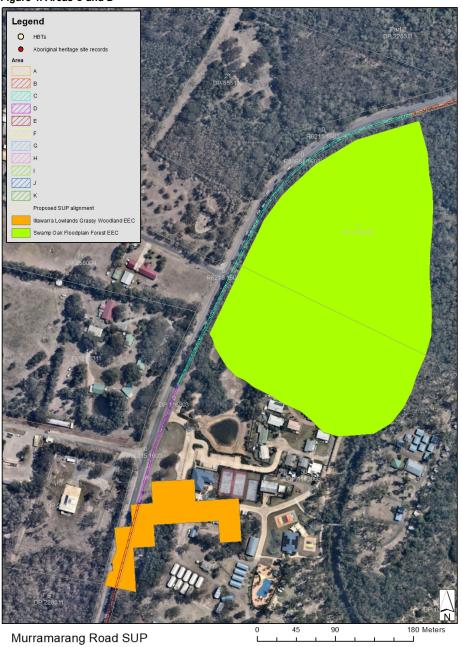
Review of Environmental Factors Shared User Path (SUP) Murramarang Rd, Bawley Point to Kioloa D20/62008

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Figure 4. Areas C and D



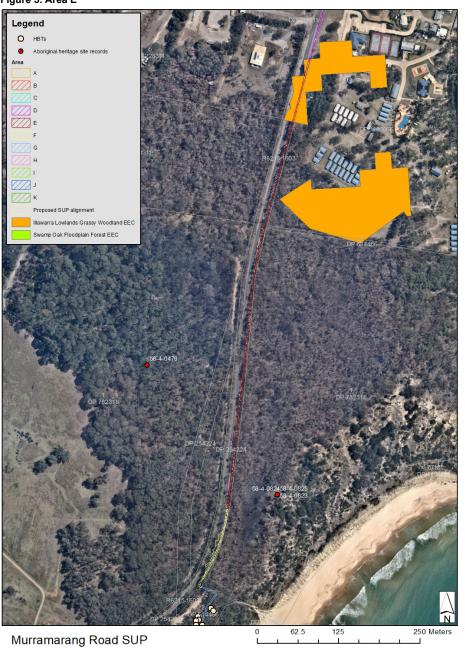
Review of Environmental Factors Shared User Path (SUP) Murramarang Rd, Bawley Point to Kioloa D20/62008

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Figure 5. Area E



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Figure 6. Areas F and G



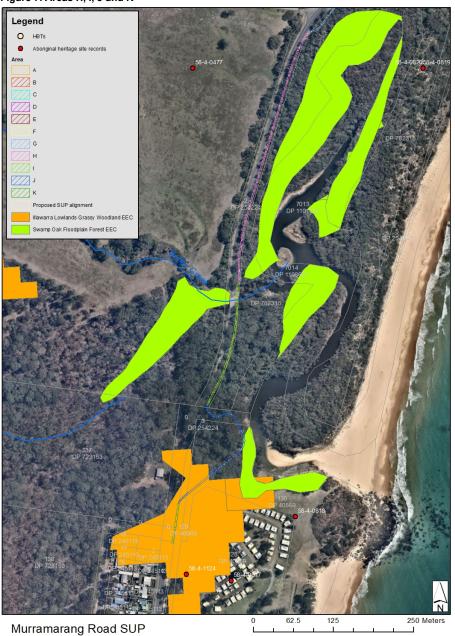
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Figure 7. Areas H, I, J and K

























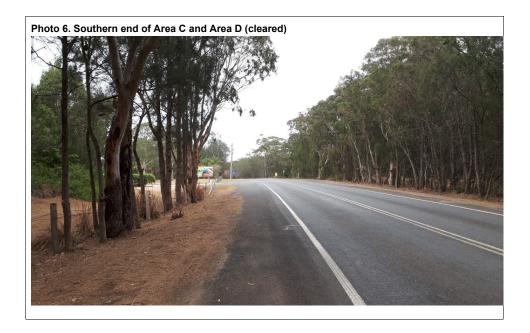




















































































Table 1. Flora species recorded within and immediately adjacent to the site

Botanical name	Common name
Trees	
Casuarina glauca	Swamp She-oak
Eucalyptus botryoides	Bangalay
Eucalyptus tereticornis	Forest Red Gum
Eucalyptus pilularis	Blackbutt
Corymbia maculata	Spotted Gum
Pittosporum undulatum	Sweet Pittosporum
Exocarpus cupressiformis	Cherry Ballart
Shrubs	
Acacia suaveolens	Sweet Scented Wattle
Acacia longifolia subsp. sophorae	Coastal Wattle
Acacia mearnsii	Black Wattle
Pittosporum revolutum	Rough-fruited Pittosporum
Pittosporum multiflorum	Orange Thorn
Solanum stelligerum	Devil's Needles
Notelaea longifolia	Mock Olive
Kunzea ambigua	Tick Bush
Breynia oblongifolia	Coffee Bush
Synoum glandulosum	Scentless Rosewood
*Solanum pseudocapsicum	Madeira Winter Cherry
Sedges, grasses and groundcovers	
Gahnia sieberiana	Red-fruit Saw-sedge
Gahnia melanocarpa	Black-fruit Saw-sedge
Gahnia appressa	Rough Saw-sedge
Lomandra longifolia	Spiny Mat-rush
Carex sp.	Carex
Machaerina (prev. Baumea) juncea	Bare Twig Rush
Pellaea falcata	Sickle Fern
Imperata cylindrica	Blady Grass
Poa labillardieri	Tussock Grass
Eragrostis sp.	Lovegrass
Cynodon sp.	Couch
*Sporobolus africanus	Parramatta Grass
Vines and scramblers	
Marsdenia rostrata	Milk Vine
Parsonsia straminea	Common Silk Pod
Gynochthodes (prev. Morinda) jasminoides	Sweet Morinda





Acid Sulfate Soil Assessment

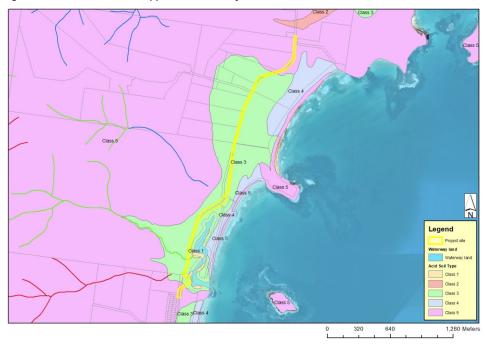
The majority of the site is within land mapped as Class 3 Acid Sulfate Soils, with the northern end of the site occurring within land mapped as Class 5 Acid Sulfate Soils (refer to Figure 8).

The Shoalhaven Local Environment Plan 2014 identifies Class 3 Acid Sulfate Soils as a risk where works will occur more than 1m below the natural ground surface, or where works will lower the water table more than 1m below the ground surface.

As works will involve excavation to a depth of only 200mm (approx.), it is unlikely that there is any risk of Acid Sulfate Soil exposure as a result of the proposed works.

There is no requirement for an Acid Sulfate Soil Management Plan or treatment of excavated material.

Figure 8. Acid Sulfate Soils mapped in the locality







Potentially contaminated land (PCL) records

PCL432 exists over Lot 2 DP 579750. This record was for historic extraction of building sand, with a large-scale sand-mining operation occurring from 1970 to 1997 (D11/416).

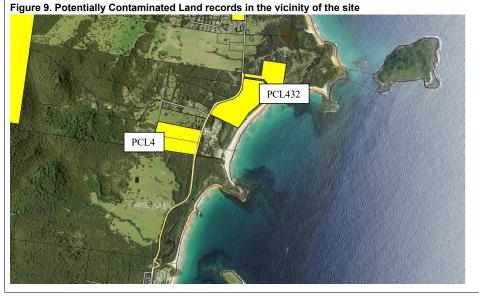
When mineral sands are mined and processed, they result in residues of reject or unmarketable heavy minerals that contain radioactivity. These residues are normally highly insoluble and are generally associated with either the mineral monazite, which is a thorium and rare-earth phosphate, or the dense mineral zircon and other dense minerals such as rutile (titanium dioxide).

Source: NSW Guidance for Licensing of Mineral-sand Mining that Generates Radioactive Residues (2009)

https://www.epa.nsw.gov.au/~/media/EPA/Corporate%20Site/resources/radiation/09354 MineralSand.ashx

These sand operations affected the fore- and hind-dunes of the lot which is located away from Murramarang Road. Potential contaminants are unlikely to occur within or in close proximity to the site. Excavation would only be to a depth of approximately 200mm. It is therefore unlikely that there is any risk of movement or exposure of contaminated soil or materials associated with this PCL as a result of the proposal.

PCL4 exists over Lots 4 and 5 DP 228311. This record exists for historic uncontrolled tipping and filling. Potential contaminants include heavy metals and other variable substances (D01/34870). The currently proposed SUP will occur on the opposite side of the road to this site. Further investigation is not considered warranted.



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2.2 Impacts of the proposal

The inner (western) edge of the footpath would typically be located approx. 5.5-6m from the existing road centreline, except where deviation is required due to steep batters, or within areas G and J where the SUP alignment meanders through treed areas. In such locations the alignment would avoid the removal of trees.

Most of the SUP alignment requires only minor trimming of edge vegetation and minimal removal of understorey vegetation, which does not comprise any important habitat or EEC.

Three areas B, C, E and F require the removal of mature (predominantly Casuarina glauca) trees. Trees of 100mm DBH or greater were considered "mature trees" for the purpose of this assessment. Number of trees to be removed for areas B, C, E and F is 140, 15, 2 and 35 trees respectively (192 trees in total), being comprised of 159 x Swamp Oaks *Casuarina glauca*, 10 x River Red Gums *Eucalyptus tereticornis*, 20 x Bangalays *Eucalyptus botryoides*, and 3 x Cherry Ballart *Exocarpus cuppressiformis*. It is estimated that up to 1710m² native vegetation in total will require clearing. Note that these estimates are likely inflated, as the alignment on the ground will aim to retain as many trees as possible. No trees likely to be removed contain hollows that are suitable for locally occurring threatened species.

Details of likely impacts within each area are provided in Table 1 below.

Table 2. Likely impacts to native vegetation by Area

Area	Approx. chainage & length	Impacts
А	CH 2609.94 – CH 2700 (90m)	Existing area is highly modified and cleared. No impact to native vegetation is required.
В	CH 2700 – CH 3080 (380m)	Up to 1230m² native vegetation comprised of primarily of Casuarina glauca, Lomandra longifolia, Pittosporum undulatum, Gahnia melanocarpa and G.sieberiana, would be removed, including 140 x mature trees (all C.glauca except for 5 x Eucalyptus tereticornis, 1 x Eucalyptus botryoides and 3 Exocarpus cuppressiformis). No trees contain hollows.
С	CH 3080 – CH 3550 (470m)	Up to 150m² of native vegetation would be removed, including up to 15 x mature trees (10x Casuarina glauca, 4x E.tereticornis and 1 E.botryoides). Two E.tereticornis have poorly formed hollows.

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Area	Approx. chainage & length	Impacts
		Extension of existing storm-water pipe at existing grade and installation of new headwall, with grading of swales away from road alignment at four locations.
		Clearing of approx. 14m² understorey vegetation including Kunzea ambigua and Gahnia sp. would be required to extend stormwater pipe.
		Minor trimming of vegetation along edge would be required.
D	CH 3550 – CH 3700 (150m)	Existing area is highly modified and cleared. No impact to native vegetation is required.
E	CH 3700 – CH 4400	1 x mature <i>E. tereticornis</i> and 1 <i>C. glauca</i> would be removed.
	(700m)	Minor trimming of vegetation along edge would be required.
		Extension of existing storm-water pipe at existing grade and installation of new headwall, with grading of swales away from road alignment at three locations.
F	CH 4400 – CH 4520 (120m)	Up to 480m² of native vegetation would be removed including up to 35 mature trees (17 x Casuarina glauca and 18 x Eucalyptus botryoides).
		No trees to be removed contain hollows.
G	CH 4520 – CH 4880 (~385m meandering)	Minor trimming of vegetation and disturbance to / removal of some understorey vegetation.
		Construction of channel crossing (options to be investigated as part of Stage 2 of proposed SUP extension)
Н	CH 4880 – CH 5280 (400m)	Minor trimming of vegetation along edge would be required.
	(400111)	Extension of existing storm-water pipe at existing grade and installation of new headwall, with grading of swales away from road alignment at one location.
I	CH 5280 – CH 5480 (200m)	Minor trimming of vegetation along edge would be required.
	(200111)	Some removal of understorey vegetation (including 2 x <i>Acacia mearnsii</i> and 1x <i>Glochidion ferdinandi</i>) would be required for installation of gabion basket on north side of Butler Creek bridge.





Area	Approx. chainage & length	Impacts
		Extension of existing storm-water pipe at existing grade and installation of new headwall, with grading of swales away from road alignment at two locations.
J	CH 5480 – CH 5730 (~240m meandering)	Minor removal of understorey vegetation (predominantly Pittosporum undulatum) would be required.
K	CH 5730 – CH 5790 (60m)	Existing area is highly modified and cleared. No impact to native vegetation is required.

An assessment of impacts on threatened species and endangered ecological communities has been undertaken in Section 2.3.

In the context of this environmental assessment, the area to be affected by the proposed activity:

- is not known to contain any threatened flora or fauna listed under the NSW
 Biodiversity Conservation Act 2016, the NSW Fisheries Management Act 1994 or
 the Commonwealth Environment Protection and Biodiversity Conservation Act
 1999
- is not an Aboriginal Place in the context of the NSW *National Parks and Wildlife*Act 1974, nor is it known to contain Aboriginal artefacts (see Section 4.1)
- is not mapped or listed on any heritage registers (see Section 4.2)

2.3 Threatened species impact assessment (NSW)

Section 1.7 of the EP&A Act 1979 applies the provisions of Part 7 of the NSW *Biodiversity Conservation Act 2016* and Part 7A of the NSW *Fisheries Management Act 1994* that relate to the operation of the Act in connection with the terrestrial and aquatic environment. Each are addressed below.

2.3.1 NSW Biodiversity Conservation Act 2016 (Part 7)

An assessment of the potential for NSW threatened flora and fauna species occurring onsite or otherwise being impacted by the proposal was undertaken (see Appendix C: *NSW Threatened Species Likelihood of Occurrence Table*).

The following species and endangered ecological communities are known to occur onsite or are considered to have some potential to occur on-site or be otherwise impacted





by the proposal, and therefore required further assessment under Part 7 of the NSW Biodiversity Conservation Act 2016:

- Green and Golden Bell Frog
- Koala
- · Spotted-tailed Quoll
- White-footed Dunnart
- Yellow-bellied Glider
- Illawarra Lowlands Grassy Woodland in the Sydney Basin Bioregion
- Swamp oak floodplain forest of the NSW North Coast, Sydney Basin and South East Corner bioregions

Section 7.3 of the Act provides a five-part 'test of significance' to determine whether a proposed development or activity is likely to significantly affect threatened species or ecological communities, or their habitats. Each Part is addressed below:

Part 1 In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the lifecycle of the species such that a viable local population of the species is likely to be place at risk of extinction.

Green and Golden Bell Frog

Green and Golden Bell Frog inhabits marshes, dams and stream-sides, particularly those containing bullrushes (*Typha* spp.) or spikerushes (*Eleocharis* spp.). Optimum habitat for the species includes water-bodies that are unshaded, free of predatory fish such as Plague Minnow (*Gambusia holbrooki*), with a grassy area nearby and diurnal sheltering sites available. Some sites, particularly in the Greater Sydney region occur in highly disturbed areas (OEH 2017).

The species is active by day and usually breeds in summer when conditions are warm and wet. Males call while floating in water and females produce a raft of eggs that initially float before settling to the bottom, often amongst vegetation. Tadpoles feed on algae and other plant-matter; adults eat mainly insects, but also other frogs (OEH 2017a).

The site does not contain any suitable breeding or refuge habitat for the Green and Golden Bell Frog. There are however, records of the species in the area, including one occurring approximately 880m upstream of Butler Creek bridge. If works were occurring during a large breeding and dispersal event, it is possible the frogs may be present within the site. It is otherwise unlikely that GGBF would occur within the site. The proposal will not affect any suitable habitat for the species.

In the event that works are being undertaken during December to February inclusive, monitoring of the site and GGBF habitat in the locality will be undertaken to avoid impact to individual dispersing frogs.





It is considered unlikely therefore that the Green and Golden Bell Frog would be impacted by the proposed works and the proposed activity is unlikely to have an adverse effect on the lifecycle of the species such that a viable local population of any of these species is likely to be place at risk of extinction.

Koala

The Koala (*Phascolarctos cinereus*) is an arboreal marsupial with fragmented distribution throughout eastern Australia from north-east Queensland to the Eyre Peninsula in South Australia. In New South Wales, koala populations are found on the central and north coasts, southern highlands, southern and northern tablelands, Blue Mountains, southern coastal forests, with some smaller populations on the plains west of the Great Dividing Range.

Koalas inhabit eucalypt woodlands and forests, feeding on the foliage of more than 70 eucalypt species and 30 non-eucalypt species, but in any one area will select preferred browse species. They are inactive for most of the day, feeding and moving mostly at night and spend most of their time in trees, but will descend and traverse open ground to move between trees. Home range size varies with quality of habitat, ranging from less than two ha to several hundred hectares in size.

Koalas are generally solitary, but have complex social hierarchies based on a dominant male with a territory overlapping several females and sub-ordinate males on the periphery. Females breed at two years of age and produce one young per year. (OEH 2019)

The NSW State Environmental Planning Policy (SEPP) Koala Habitat Protection 2019 now replaces SEPP 44 – Koala Habitat Protection (SEPP 44). Core Koala Habitat mapping is not currently available and there is no area specific Koala plan of management for the Shoalhaven. (OEH 2019)

Schedule 2 of the NSW State Environmental Planning Policy (Koala Habitat Protection) 2019 provides feed tree species lists by Koala management area. The overall list of tree species listed under the SEPP has been expanded from 10 to 123, across nine distinct regions of NSW. Within the South Coast Koala management area feed tree species list (below), there are three tree species (highlighted in green) which occur within the site, Spotted Gum, Blackbutt and Forest Red Gum.

South Coast Koala management area feed tree species list

Scientific name	Common name(s)
Allocasuarina littoralis	Black She-oak
Angophora floribunda	Rough-barked Apple

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Corymbia gummifera	Red Bloodwood
Corymbia maculata	Spotted Gum
Eucalyptus agglomerata	Blue-leaved Stringybark
Eucalyptus baueriana	Blue Box
Eucalyptus bosistoana	Coast Grey Box
Eucalyptus consideniana	Yertchuk
Eucalyptus cypellocarpa	Monkey Gum
Eucalyptus elata	River Peppermint
Eucalyptus eugenioides	Narrow-leaved
	Stringybark
Eucalyptus fastigata	Brown Barrel
Eucalyptus globoidea	White Stringybark
Eucalyptus longifolia	Woollybutt
Eucalyptus maidenii	Maiden's Blue Gum
Eucalyptus muelleriana	Yellow Stringybark
Eucalyptus obliqua	Messmate
Eucalyptus paniculata	Grey Ironbark
Eucalyptus pilularis	Blackbutt
Eucalyptus piperita	Sydney Peppermint
Eucalyptus punctata	Grey Gum
Eucalyptus saligna	Sydney Blue Gum
Eucalyptus sclerophylla	Hard-leaved Scribbly Gum
Eucalyptus sieberi	Silvertop Ash
Eucalyptus tereticornis	Forest Red Gum
Eucalyptus tricarpa	Mugga (Red) Ironbark
Eucalyptus viminalis	Ribbon Gum

Of the listed feed tree species occurring on site, only Forest Red Gum would be impacted, with ten trees proposed for removal over the site. Each of these trees exists immediately on the road-side and is disconnected from other suitable vegetation, which typically occurs on the western side of the road, extending toward Murramarang National Park. Site survey did not detect any signs of this species (e.g. scats). It is unlikely that Koalas would occur within the site and very unlikely that any Koala would rely on these trees as a food source.

It is considered unlikely therefore that the Koala would be impacted by the proposed works and the proposed activity is unlikely to have an adverse effect on the lifecycle of the species such that a viable local population of any of these species is likely to be place at risk of extinction.

Spotted-tailed Quoll

The Spotted-tailed Quoll (*Dasyurus maculatus*) has been recorded across a range of habitat types, including rainforest, open forest, woodland, coastal heath and inland riparian forest, from the sub-alpine zone to the coastline. Individual animals use hollow-bearing trees, fallen logs, small caves, rock outcrops and rocky-cliff faces as den sites.

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The Spotted Tail Quoll is mostly nocturnal, although it will hunt during the day. This species spends most of the time on the ground, although also an excellent climber and will hunt possums and gliders in tree hollows and prey on roosting birds. It is a generalist predator with a preference for medium-sized (500g-5kg) mammals, consuming a variety of prey, including gliders, possums, small wallabies, rats, birds, bandicoots, rabbits, reptiles and insects, in addition to eating carrion and taking domestic fowl.

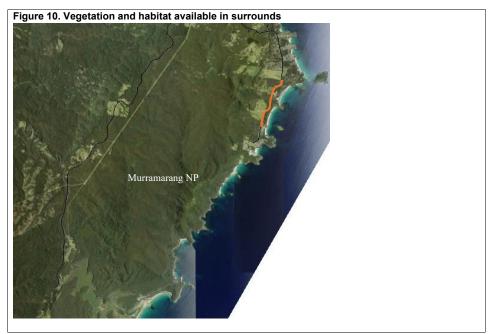
Spotted Tail Quolls use communal 'latrine sites', often on flat rocks among boulder fields, rocky cliff-faces or along rocky stream beds or banks. Such sites may be visited by multiple individuals and can be recognised by the accumulation of the sometimes characteristic 'twisty-shaped' faeces deposited by animals. Females occupy home ranges of 200-500 hectares, while males occupy very large home ranges from 500 to over 4000 hectares. They are known to traverse their home ranges along densely vegetated creeklines. (OEH 2017b).

The site contains marginal suitable foraging habitat for Spotted-tailed Quoll. No suitable den habitat occurs within the site. Native vegetation removal as part of the proposal will be to an area up to approximately 1710m², primarily consisting of Swamp She-oak trees with minimal understorey. Extensive areas of optimal habitat exist to the west and southwest within Murramarang National Park and adjoining lands, exceeding 9000 ha.

It is considered unlikely therefore that the Spotted-tailed Quoll would be impacted by the proposed works and the proposed activity is unlikely to have an adverse effect on the lifecycle of the species such that a viable local population of any of these species is likely to be place at risk of extinction.







White-footed Dunnart

The White-footed Dunnart (Sminthopsis leucopus) is a mouse-like marsupial carnivore with head and body length less than 10 cm. It occurs in Tasmania and along the Victorian and southern NSW coast. The Shoalhaven area is the species' northern-most limit. The White-footed Dunnart is found in a range of different habitats across its distribution, including coastal dune vegetation, coastal forest, tussock grassland and sedgeland, heathland, woodland and forest. In NSW, the species seems to favour vegetation communities with an open understorey structure (contrasting with populations in Victoria which apparently prefer dense shrub and ground layers). It is patchily distributed across these habitats and, where present, typically occurs at low densities. Breeding populations have been recorded in logged forest shortly after disturbance, but these usually do not persist as regeneration proceeds and a dense ground cover of vegetation establishes. Home range and movement patterns of this species vary according to sex. Adult females usually have small, discrete home ranges, approximately 80 metres in length. Adult males have overlapping home ranges, approximately 100 metres in length, but are capable of making regular exploratory movements of up to 1 km. White-footed Dunnarts appear to have only one short breeding season during their lifetime. In NSW and Victoria, mating occurs in late July and August. From August to September, up to ten young are





born, each about 3 mm long. At two months, the young detach from the mothers' teats and are suckled in the nest for about a month before dispersing. The White-footed Dunnart is an opportunistic carnivore that feeds on a variety of ground-dwelling invertebrates and, occasionally, small lizards. They shelter in bark nests in hollows under standing or fallen timber, burrows in the ground, piles of logging debris, in the 'skirts' of grass trees (*Xanthorrhoea* spp.) and cycads (*Macrozamia* spp.) and rock crevices. (OEH 2017c).

The site contains marginal suitable foraging habitat for White-footed Dunnart. No suitable den habitat occurs within the site. Native vegetation removal as part of the proposal will be to an area up to approximately 1710m², primarily consisting of Swamp She-oak trees with minimal understorey. It is unlikely that the White-footed Dunnart would rely on habitat within the site. It is unlikely that White-footed Dunnart would occur within the site during construction hours.

It is considered unlikely therefore that the White-footed Dunnart would be impacted by the proposed works and the proposed activity is unlikely to have an adverse effect on the lifecycle of the species such that a viable local population of any of these species is likely to be place at risk of extinction.

Yellow-bellied Glider

The Yellow-bellied Glider (Petaurus australis) is a large, active, sociable and vocal glider. The species occurs in tall mature eucalypt forest generally in areas with high rainfall and nutrient rich soils. Forest type preferences vary with latitude and elevation; mixed coastal forests to dry escarpment forests in the north; moist coastal gullies and creek flats to tall montane forests in the south. The species feeds primarily on plant and insect exudates, including nectar, sap, honeydew and manna with pollen and insects providing protein. Sap is extracted by incising (or biting into) the trunks and branches of favoured food trees, often leaving a distinctive 'V'-shaped scar. Yellow-bellied Gliders live in small family groups of two - six individuals and are nocturnal. The species use dens, often in family groups, in hollows of large trees. The Yellow-bellied Glider is very mobile and occupies large home ranges between 20 to 85 ha to encompass dispersed and seasonally variable food resources. Dispersal requires continuous habitat connectivity (gliding distance around 120m). Typically produce one young per year (in high quality habitat) but during poor conditions may only breed every second year. Key threats to the species include loss of hollows (generally >30cm) and important feed trees as a result of wildfire, in addition to landscape fragmentation. A highly vocal species with loud, highpitched shrieks audible over 500m away. (OEH 2017d).





The site and adjacent areas may contain suitable foraging and breeding habitat for the Yellow-bellied Glider including along the road corridor. No Yellow-bellied Glider scars were observed on any potential feed trees within or in close proximity to the site, suggesting that this species is not reliant on food resources within or near the site.

No hollow-bearing trees would be removed as part of the proposal. The proposal will not result in the loss of important habitat for this species and will not result in fragmentation or significant reduction in the quality of available habitat.

It is considered unlikely therefore that the Yellow-bellied Glider would be impacted by the proposed works and the proposed activity is unlikely to have an adverse effect on the lifecycle of the species such that a viable local population of any of these species is likely to be place at risk of extinction.

Part 2 - In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:

- (a) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or
- (b) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.

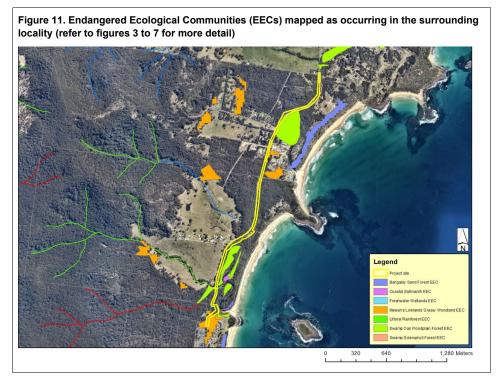
Figure 11 (below) shows the mapped occurrences of endangered ecological communities (EECs) in proximity to the site and the surrounding locality. EECs mapped as occurring within or in close proximity to the site are:

- Illawarra Lowlands Grassy Woodland in the Sydney Basin Bioregion
- Swamp oak floodplain forest of the NSW North Coast, Sydney Basin and South East Corner bioregions

Refer to figures 3 to 7 for more detail.







Illawarra Lowlands Grassy Woodland EEC

Illawarra Lowlands Grassy Woodland occurs on relatively gently sloping to undulating lands less than about 200 m elevation on Berry Siltstone, Budgong Sandstone and Quaternary alluvium. This community comprises vegetation types that occupy the Illawarra coastal plain and escarpment foothills. Characteristic tree species in the Illawarra Lowlands Grassy Woodland are Eucalyptus tereticornis, Eucalyptus eugenioides, Eucalyptus longifolia, Eucalyptus bosistoana and Melaleuca decora. The understorey is not necessarily grassy as moist forest vegetation types are also included within this broad community. Common shrub species include Acacia mearnsii and Dodonaea viscosa subsp. angustifolia.

(NSW Scientific Committee 2011a)

Scattered Forest Red Gum (*E.tereticornis*) trees occur through the site. These trees are typically isolated and occurring amongst Swamp She-Oak vegetation. Understorey in each of these locations is neither grass dominated, nor comprised of shrub species characteristic of this EEC.





In two areas, ILGW EEC is mapped as occurring over the site. Area E (refer to Figure 5) is mapped as containing ILGW for a length of approx. 100m, however this area (shown in Photo 26 below) is dominated by Swamp She-oak and contains only scattered Forest Red Gum and an absence of understorey.

Areas J and K are mapped as containing ILGW for a length of approx. 60m in each area. Over both areas, the vegetation is comprised of Spotted Gum (*E.maculata*) with shrubby understorey dominated by Sweet Pittosporum. Opposite Area K, in the vicinity of O'Brien Street, ILGW was observed to occur, but this vegetation will not in any way be affected by the proposal.

The proposal will not involve any direct removal of vegetation which is consistent with Illawarra Lowlands Grassy Woodland EEC and is unlikely to result in any indirect impact to ILGW. Nor will the proposal fragment, remove canopy or understorey species, introduce edges, or introduce invasive flora species to ILGW.

The proposal is therefore unlikely to adversely affect the extent or composition of Illawarra Lowland Grassy Woodland EEC such that a local occurrence of the EEC will be placed at risk of extinction.









Swamp Oak Floodplain Forest (SOFF EEC)

Swamp Oak Floodplain forest of the NSW North Coast, Sydney Basin and South East Corner bioregions endangered ecological community is associated with grey-black clayloams and sandy loams, where the groundwater is saline or sub-saline, on waterlogged or periodically inundated flats, drainage lines, lake margins and estuarine fringes associated with coastal floodplains. Swamp Oak Floodplain Forest generally occurs below 20 m (rarely above 10 m) elevation in the NSW North Coast, Sydney Basin and South East Corner bioregions. The structure of the community may vary from open forests to low woodlands, scrubs or reedlands with scattered trees. The combination of features that distinguish Swamp Oak Floodplain Forest from other endangered ecological communities on the coastal floodplains include: its dominance by a tree canopy of either Casuarina glauca or, more rarely, Melaleuca ericifolia with or without subordinate tree species; the relatively low abundance of Eucalyptus species; and the prominent groundcover of forbs and graminoids. It generally occupies low-lying parts of floodplains, alluvial flats, drainage lines, lake margins and fringes of estuaries; habitats where flooding is periodic and soils show some influence of saline ground water. This latter habitat feature sets it apart from other floodplain communities.

Swamp Oak Floodplain Forest may adjoin or intergrade with several other endangered ecological communities, which collectively cover all remaining native vegetation on the coastal floodplains of New South Wales. The boundaries between these communities are

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dynamic and may shift in response to changes in hydrological regimes, fire regimes or land management practices.

(NSW Scientific Committee 2011b)

While the canopy of the vegetation present within much of the northern portion of the site (Areas A through to H) is dominated by *Casuarina glauca*, the understorey is not characterised by a prominent groundcover of forbs and graminoids, which distinguishes the EEC. The vegetation present on site is therefore not regarded as Swamp Oak Floodplain Forest, but does however serve as a buffer to this EEC in certain locations, particularly in proximity to Area C, where an approximately 372m stretch is adjacent to vegetation mapped as SOFF ECC.

The EEC is also mapped as occurring over or in close proximity to Areas H and J. The vegetation within Area J is comprised of Spotted Gum with an understorey dominated by Sweet Pittosporum, so cannot be SOFF EEC.

It is therefore considered that Swamp Oak Floodplain Forest will not be directly impacted by the proposal.

Vegetation removal would occur in Areas B (up to approx. 1230m²), C (up to approx. 150m²) and F (up to approx. 480m²), in each case as a narrow, linear strip. Removal of any vegetation serving as a buffer to the EEC will occur along the existing exposed edges of Murramarang Road and will not create new edges or introduce weeds or additional edge effects. A buffer of at least 5m will be retained to the mapped occurrence of SOFF EEC.

The proposal and associated works will not further contribute to adversely modifying the composition of the existing vegetation. Exotic flora species and other threatening processes will not be introduced. The proposal is therefore unlikely to substantially and adversely modify the composition of the ecological community, and will not result in isolation or further fragmentation of the local occurrence of Swamp Oak Floodplain Forest such that its local occurrence is likely to be placed at risk of extinction.





Part 3 - In relation to the habitat of a threatened species or ecological community:

- (a) the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity
- (b) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and
- (c) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality.

No important habitat for threatened species would be removed (see Part 1).

The proposal will not result in isolation or further fragmentation of any local occurrence of Illawarra Lowlands Grassy Woodland or Swamp Oak Floodplain Forest. Additional edges and additional edge impacts will not be introduced.

The proposal will therefore not affect the long-term survival of any threatened species or endangered ecological community in the locality.

Part 4 – Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).

No "areas of outstanding biodiversity values" have been declared in the City of Shoalhaven.

Part 5 – Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.

The only key threatening process listed in the Act considered relevant to the proposed activity is Clearing of Native Vegetation. The impact of the proposal, however, is not considered to be significant as it is unlikely lead to:

- destruction of habitat which causes a loss of biological diversity and extinction of species or loss of local genotypes
- fragmentation of populations resulting in limited gene flow between small isolated populations, reduced potential to adapt to environmental change and loss or severe modification of the interactions between species
- riparian zone degradation such as bank erosion leading to sedimentation that affects aquatic communities

Review of Environmental Factors Shared User Path (SUP) Murramarang Rd, Bawley Point to Kioloa D20/62008





- disturbance to habitat which would promote the establishment and spread of exotic species which may displace native species
- expansion of dryland salinity
- significant reduction of habitat for threatened species
- significant loss of leaf litter, removing habitat for a wide variety of vertebrates and invertebrates.

As a result, the proposed activity is considered unlikely to result in the operation of, or significantly increase the impact of this key threatening process.

2.3.2 NSW Fisheries Management Act 1994 (Part 7A)

No marine or freshwater species listed as threatened under the Act are likely to occur within or in close proximity to the site.

2.4 Threatened species impact assessment (Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act))

An EPBC Protected Matters Report was generated on 25 February 2020. Of those threatened species and endangered ecological communities reported as likely occurring or having habitat within the area of the report, Greater Glider (V), Illawarra Lowlands Grassy Woodland in the Sydney Basin Bioregion (CE) and Swamp oak floodplain forest of the NSW North Coast, Sydney Basin and South East Corner bioregions (E) were considered to require further assessment. Additional, highly mobile species including migratory birds may occur occasionally and transiently within the vicinity of the proposed activity but would not be affected by the proposal.

- Greater Glider (Vulnerable)
- · Spotted-tailed Quoll (Endangered)
- Illawarra and south coast lowland forest and woodland ecological community (Critically Endangered)
- Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland endangered ecological community (Endangered)





Critically endangered and endangered species - Significant impact criteria Species to consider: Spotted-tailed Quoll		
Criteria	Assessment	
lead to a long-term decrease in the size of a population	The site contains marginal suitable foraging habitat for Spotted-tailed Quoll. No suitable den habitat occurs within the site. Native vegetation removal as part of the proposal will be to an area up to approximately 1710m², primarily consisting of Swamp She-oak trees with minima understorey. Extensive areas of optimal habitat exist to the west and south-west within Murramarang National Park and adjoining lands exceeding 9000 ha. Site survey did not detect any signs of the species on the site. The proposed activity will not directly impact any known population of the Spotted-tailed Quoll.	
reduce the area of occupancy of the species	No	
fragment an existing population into two or more populations	No	
adversely affect habitat critical to the survival of a species	Habitat on site is considered marginal suitable habitat for the species and survey did not detect any signs of the species. The proposed activity will not remove or otherwise impact habitat critical to the survival of the species.	
disrupt the breeding cycle of a population	No	
modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	No important habitat will be impacted	
result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat	No invasive species will be introduced	
introduce disease that may cause the species to decline	No disease will be introduced	
interfere with the recovery of the species	No	
Assessment	It is considered unlikely that the Spotted-tailed Quoll would be impacted by the proposed works and the proposed activity is unlikely to have an adverse effect on the lifecycle of the species such that a viable local population of any of these species is likely to be place at risk of extinction.	





Vulnerable species - Significant impact criteria Species to consider:		
Greater Glider		
Criteria	Assessment	
lead to a long-term decrease in the size of an important population of a species	The proposal does not involve the removal of any HBTs. The site and adjacent area does not contain any known population of Greater Glider. The proposed activity will not directly impact the Greater Glider, will not affect or disrupt breeding and will not impact on breeding or foraging habitat.	
reduce the area of occupancy of an important population	No	
fragment an existing important population into two or more populations	No	
adversely affect habitat critical to the survival of a species	No important habitat will be impacted	
disrupt the breeding cycle of an important population	No	
modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	No important habitat will be impacted.	
result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	No invasive species will be introduced	
introduce disease that may cause the species to decline	No disease will be introduced	
interfere substantially with the recovery of the species	No	

Critically endangered and endangered ecological communities - Significant impact criteria EECs to consider:

- Illawarra and south coast lowland forest and woodland ecological community (CE)
- Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland endangered ecological community (E)

Criteria	Assessment
reduce the extent of an ecological community	DoEE (2017) defines the "Extent of Occurrence"
	as: the area contained within the shortest
	continuous imaginary boundary which can be
	drawn to encompass all the known, inferred or
	projected sites of present occurrence of an
	ecological community, excluding cases of
	vagrancy. This measure may exclude
	discontinuities or disjunctions within the overall
	distributions of the ecological community (e.g.
	large areas of obviously unsuitable habitat). This





Critically endangered and endangered ecological communities - Significant impact criteria EECs to consider:

- Illawarra and south coast lowland forest and woodland ecological community (CE)
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	an ecological community	,
Linear buffers to Coastal Swamp Oak Forest will		
be reduced slightly (up to 2 – 3m) in width, but	Poview of Environmental Factors	

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Critically endangered and endangered ecological communities - Significant impact criteria EECs to consider:

- Illawarra and south coast lowland forest and woodland ecological community (CE)
- Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland endangered ecological community (E)

Criteria	Assessment
modify or destroy abiotic (non-living) factors	will be retained to at least 5m. No additional impacts will be introduced that would reduce the resilience or otherwise affect the survival of this EEC. The proposal will not modify or destroy abiotic
(such as water, nutrients, or soil) necessary for an ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns cause a substantial change in the species composition of an occurrence of an ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting	factors necessary for any ecological community's survival. The proposal will not affect existing local hydrological functions. The proposal and associated works will not further contribute to adversely modifying the composition of the existing vegetation.
cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to: — assisting invasive species, that are harmful to the listed ecological community, to become established, or — causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community which kill or inhibit the growth of species in the ecological community, or	Exotic flora species and other threatening processes will not be introduced or advantaged as a result of the proposal. No chemicals or pollutants will be mobilised or introduced such that they might kill or inhibit the growth of species in the ecological community.
interfere with the recovery of an ecological community.	The proposal is situated within an existing road corridor. The proposal will not restrict or otherwise interfere with the recovery of an ecological community.

2.5EP&A Act Clause 228 matters of consideration

Clause 228(2) of the *Environmental Planning and Assessment Regulation 2000* lists the factors to be taken into account when consideration is being given to the likely impact of an activity on the environment under Part 5 of the EP&A Act. The following assessment deals with each of the factors in relation to the proposed activity.





Table 1 Clause 228 (EP&A Regulation) matters

DOES THE PROPOSAL:	ASSESSMENT	REASON
a) Have any environmental impact on a community?	Positive	The purpose of the proposed activity is to construct a shared-user path (SUP) adjacent to Murramarang Road, between Bawley Point and Kioloa linking existing SUPs at either end. The proposed SUP would provide for pedestrian and cyclist travel between Bawley Point and Kioloa and a safer alternative than using the road or road shoulder. The proposed activity would not have any impact on other community services and infrastructure such as power, waste water, waste management, educational, medical or social services. Traffic control may involve minor and temporary disruption to Murramarang Road.
b) Cause any transformation of a locality?	Negligible - Positive	The locality's current use would remain unchanged. A safer pedestrian and cyclist travel option would be created.
c) Have any environmental impact on the ecosystem of the locality?	Low adverse	The five-part test of significance provided in Section 2.4 concludes that the proposed activity would not have a significant impact upon endangered ecological communities or threatened fauna or flora.
		No food resources critical to the survival of a particular species would be removed.





DOES THE PROPOSAL:	ASSESSMENT	REASON
		No threatened species, ecological communities, endangered populations or their habitats will be significantly impacted by the proposal With the implementation of the specified environmental mitigation measures (Section 1.3), environmental impacts will be minimal, aquatic ecosystems are not likely to be adversely affected by the
		proposed activity and there is not likely to be any long-term or long-lasting impact through the input of sediment and nutrient into the ecosystem.
d) Cause a diminution of the aesthetic, recreational, scientific or other environmental quality or value of a locality?	Low adverse	In the context of the locality, the visual impact of the SUP would be minimal. The proposed SUP would provide for (relatively) safe pedestrian and cyclist travel between Bawley Point and Kioloa and opportunity for appreciation of the aesthetic and environmental values of the site.
		Impact to the environmental values of the site would be minimal and not significant.
e) Have any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural,	Negligible	The proposed activity would not negatively affect any aesthetic, architectural, cultural, historical, scientific or social values, but would make the site more accessible increasing the appreciation of aesthetic, social and natural values.
cultural, historical, scientific, or social significance or		No items in the vicinity of the work site which are listed on the State Heritage

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DOES THE PROPOSAL:	ASSESSMENT	REASON
other special value for present or future generations?		Register and the Shoalhaven Local environmental Plan would be impacted by the proposal.
		The site is not within an Aboriginal Place declared under the <i>National Parks and Wildlife Act 1974</i> .
		In accordance with the NSW Department of Environment, Climate Change and Water's Due Diligence Code of Practice, the proposed activity does not require an Aboriginal Heritage Impact Permit as the activity is unlikely to harm an Aboriginal artefact (refer to Section 4.1).
f) Have any impact on the habitat of protected fauna (within the meaning of the Biodiversity Conservation Act 2016)?		The site's value to fauna is considered low. No trees containing suitable hollows for fauna would be removed. A small area of marginal fauna habitat would be removed by the activity and therefore the potential impact is considered to be insignificant or inconsequential.
	Low adverse	The five-part test of significance, provided in Section 2.3 above, concludes that the proposed activity would not have a significant impact upon threatened fauna.
		The specified environmental mitigation measures (Section 1.3) would mitigate indirect impacts to fauna and habitat including through control of sediment.
g) Cause any endangering of any	Negligible	There are no species likely to rely on the site of the proposed works to the extent

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DOES THE PROPOSAL	ASSESSMENT	REASON
species of animal, plant or other form of life, whether living on land, in water or in the air?		that modification would put them further in danger.
h) Have any long term effects on the environment?		The works would be relatively short term and the noise generated will occur during normal working hours.
	Negligible	In the long-term, the impacted area will stabilise and long term effects are considered unlikely.
		The proposed activity would not use hazardous substances or use or generate chemicals which may build up residues in the environment.
i) Cause any degradation of the quality of the environment?		The environmental safeguards (Section 1.3) to be undertaken would minimise impacts and risks to the quality of the environment.
	Low adverse	The proposal would not intentionally introduce noxious weeds, vermin, or feral animals into the area or contaminate the soil.
j) Cause any risk to the safety of the environment?		The proposed activity would not involve hazardous wastes and would not lead to increased bushfire or landslip risks.
	Negligible	The activity is not going to adversely affect flood or tidal regimes, or exacerbate flooding risks.
k) Cause any reduction in the range of beneficial	Negligible - Positive	The local environment will remain unchanged. The environment is currently used as a road and roadside. The proposed

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DOES THE PROPOSAL:	ASSESSMENT	REASON
uses of the environment?		activity would be ancillary and improve this use.
Cause any pollution of the environment?	Low adverse	The proposal would involve a temporary and local increase in noise during the construction phase due to the use of machinery. However this will not affect any sensitive receivers such as residential areas, schools, childcare centres and hospitals. Sediment and erosion control in accordance with the Blue Book will be implemented to minimise movement of sediment into the creek from the embankments. It is unlikely that the activity (including the environmental impact mitigation measures) would result in water or air pollution, spillages, dust, odours, vibration or radiation.
m) Have any environmental problems associated with the disposal of waste?	Negligible	The waste that would be disposed off- site can be recycled or re-used in accordance with resource recovery exemptions or taken to a licensed waste facility. There would be no trackable waste, hazardous waste, liquid waste, or restricted solid waste as described in the NSW Protection of the Environment Operations Act 1997 requiring off-site disposal.
n) Cause any increased demands on resources (natural or otherwise) which	Negligible	The amount of resources that would be used are not considered significant and would not increase demands on current resources such that they would become in short supply.

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DOES THE PROPOSAL:	ASSESSMENT	REASON
are, or are likely to become, in short supply?		This is a relatively small scale construction project that is unlikely to increase demands on current resources such that they would become in short supply.
o) Have any cumulative environmental effect with other existing or likely future activities?	Negligible	The assessed low adverse or negligible impacts of the proposal are not likely to interact.
p) Any impact on coastal processes and coastal hazards, including those under projected climate change conditions	Negligible	The proposed activity would have no effect on coastal processes including those projected under climate change conditions. The proposal site is not located in an identified coastal hazard area.





3 PERMISSIBILITY

3.1 Environmental Planning and Assessment Act 1979

Section 4.1 (Development that does not need consent) of the EP&A Act states that:

"If an environmental planning instrument provides that specified development may be carried out without the need for development consent, a person may carry the development out, in accordance with the instrument, on land to which the provision applies."

In this regard, clause 97(1) of the NSW *State Environmental Planning Policy (Infrastructure)* 2007 (Infrastructure SEPP) provides that:

Development for any of the following purposes is exempt development if it is carried out by or on behalf of a public authority or the Minister responsible for Crown roads (within the meaning of the Roads Act 1993) in connection with a road or road infrastructure facilities and complies with clause 20—

(c) erection, installation, maintenance, reconstruction or replacement of any of the following, and any associated landscaping works—
(iv) pedestrian and cyclist facilities (such as footpaths, street lighting, kerb adjustments and ramps, pedestrian fences, refuges, holding rails, and bollards).

The proposal meets the definition of "pedestrian and cyclist facilities" and would be carried out in connection with Murramarang Road, for which Shoalhaven City Council is the road authority. The proposal can therefore be regarded as exempt development.

The NSW *Environmental Planning & Assessment Act 1979* provides that exempt development can be carried out without requirement for environmental impact assessment (EP&A Act Clause 1.6).

Considering the presence of mapped endangered ecological communities (EECs), threatened species records and Aboriginal heritage records, due diligence called for a detailed environmental assessment to avoid, minimise and mitigate against potential impacts to these values. This REF provides this assessment.

3.2 Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

No EPBC listed threatened species or endangered ecological communities will be adversely impacted by the proposal (refer to section 2.4 for more detail).

No matters of significance, i.e.:

listed threatened species and communities





- · listed migratory species
- · Ramsar wetlands of international importance
- Commonwealth marine environment
- world heritage properties
- · national heritage places
- the Great Barrier Reef Marine Park
- · nuclear actions
- a water resource, in relation to coal seam gas development and large coal mining development

would be affected as a result of the proposal.

Further assessment and referral to the Commonwealth is not required.

3.4 Other legislation

The proposed activity is permissible under environmental legislation (Table 1).

Table 1 Summary of legislation and permissibility

NSW State Legislation
Environmental Planning and Assessment Act 1979 (EP&A Act)
Permissible √ Not permissible □
Justification:
The Infrastructure SEPP provides for this work to be undertaken without development consent (refer to Section 3.1). In circumstances where development consent is not required, the environmental assessment provisions outlined in Part 5 of the Act are required to be complied with. This REF fulfils this requirement.
Shoalhaven Local Environmental Plan 2014 (SLEP)
Permissible √ Not permissible □
Justification:
Under the SLEP the proposed activity may have required development consent. The provisions of SEPP Infrastructure, however, prevail over the SLEP where there is an inconsistency by virtue of Section 3.28 of the EP&A Act. Consequently, development consent is not required.





State Environmental Planning Policy (Coastal Management) 2018
Permissible √ Not permissible □
Justification: The proposed activity would be undertaken in areas mapped for the purposes of this
SEPP as "Coastal Use Area" and "Coastal Environment Area". The provisions of the SEPP for these areas relate to development consent considerations. As the proposed activity does not require development consent these provisions are not relevant.
The proposed activity would not be undertaken in areas mapped as coastal wetland or littoral rainforest. The proposed activity also does not comprise "coastal protection works".
Heritage Act 1977
Permissible √ Not permissible □
Justification:
The proposed activity would not disturb an item of state heritage significance.
 The Act also provides statutory protection to relics, archaeological deposits, artefacts or deposits. Section 139 to 146 of the Act require that excavation that is likely to contain, or is believed may contain, archaeological relics is undertaken in accordance with an excavation permit issued by the Heritage Council. The Act defines an archaeological relic as "any deposit, artefact, object or material evidence that: a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement; or
b) is of state and local heritage significance"
See Section 4.2 for more information. As the site has little to as a subscale size has the site has a subscale size has
As the site has little to no archaeological potential, a permit is not required.
Wilderness Act 1987
Permissible √ Not permissible
Justification:
The proposed activity is not located within a wilderness area declared under this Act.
National Parks and Wildlife Act 1974 (NP&W Act)
Permissible √ Not permissible □
Justification:
 The Act provides the basis for the legal protection and management of Aboriginal sites in NSW. Under Sections 86 and 90 of the Act it is an offence to disturb an Aboriginal object or knowlingly destroy or damage, or cause the destruction or





damage to, an Aboriginal object or place, except in accordance with a permit ot consent under section 87 and 90 of the Act.

 As there are no recorded sites or visible objects and as the site is on 'disturbed land', the Due Diligence Guidelines requires no further assessment as it is reasonable to conclude that there is a low probability of objects occurring in the area of the proposed activity and an AHIP is not required. Refer to Section 4.1 for more information.
Protection of the Environment Operations Act 1997
Permissible √ Not permissible □
Justification:
The proposed activity does not constitute scheduled development work or scheduled activities as listed in Schedule 1 of the Act. The proposed activity therefore does not require an environmental protection licence.
Biodiversity Conservation Act 2016
Permissible √ Not permissible □
Justification:
 The proposed development is unlikely to have a significant impact on species and communities listed in the schedules of the Act (refer to Section 2.3 of this REF).
 The proposed development is not within an area declared to be of "outstanding biodiversity value" as defined in the Act.
 The proposed development is unlikely to have a significant impact on threatened species and/or threatened ecological communities listed in the schedules of the Act. Therefore there is no requirement to 'opt in' to the Biodiversity Offset Scheme.
 There are no serious and irreversible impacts on biodiverstiy values present at the site of the proposed activity.
The proposed activity therefore is not deemed to be <i>likely to significantly affect threatened species</i> and a Biodiversity Development Assessment Report (BDAR) is not required. It is also a defence to a prosecution for an offence under Part 2 of the Act (harming animals, picking plants, damaging the habitat of threatened species or ecological communities <i>etc</i>) if the work was essential for the carrying out of an activity by a determining authority within the meaning of Part 5 of the EP&A Act after compliance with that Part. The activity is considered permissable as this REF has been prepared and determined in accordance with the EP&A Act.
Aboriginal Land Rights Act 1993
Permissible √ Not permissible □
Justification:





An Aboriginal Land Claim exists over Part Lot 130 DP 40869 which is held by the Crown (Crown Reserve R96797) and licenced to Roche Group Pty Ltd (Kioloa Beach Holiday Park owner).
Council is currently in discussion with the land manager (licence holder), seeking authorisation to construct the footpath over this lot.
The footprint and value of the footpath over this lot is not considered significant and therefore not high risk in the event that the Land Claim is granted.
Local Land Services Act 2013
Permissible √ Not permissible □
Justification:
Any clearing of vegetation would be of a kind that is authorised under Section 60O(b)(ii) of the Local Land Services Act 2013 ("an activity carried out by a determining authority within the meaning of Part 5 of the Act after compliance with that Part."). No separate authorisation under the Act is required.
Roads Act 1993
Permissible √ Not permissible □
Justification:
 SCC is the roads authority for Murramarang Road. Section 71 provides that a roads authority (e.g. Council) may carry out road work on any public road for which it is the roads authority and on any other land under its control.
 Section 88 allows a roads authority, "despite any other Act or law to the contrary, remove or lop any tree or other vegetation that is on or overhanging a public road, in its opinion, it is necessary to do so for the purpose of carrying out road work or removing a traffic hazard.
Crown Land Management Act 2016
Permissible √ Not permissible □
Justification:
Part Lot 130 DP 40869 is held by the Crown (Crown Reserve R96797), licenced to Roche Group Pty Ltd (Kioloa Beach Holiday Park owner).
Council is currently in discussion with the land manager (licence holder), seeking
authorisation to construct the footpath over this lot.
authorisation to construct the footpath over this lot. Water Management Act 2000





Justification:

- Local councils are exempt from s.91E(1) of the Act in relation to all controlled activites that they carry out in, on or under waterfront land (by virtue of clause 41 of the Water Management (General) Regulation 2018.
- The proposal would not interfere with the aquifer and therefore an interference licence is not required (s.91F).

Commonwealth	Legislation					
Commonwealth	Native Title Act 1	994				
Permissible √	Not permissible					
Justification:						

- Native Title has been extinguished over the Murramarang Road reserve by previous exclusive posession acts such as dedication of the reserve as a public road, construction of the road and continued use as a public road prior to 1994 (comencement of the Act). Consultation or approval from native title claimants is not required.
- Native Title has been extinguished over Council freehold Lot 2 DP 614466 by previous exclusive posession acts.
- Native Title does not exist over privately owned lots Lot 2 DP 579750 and Lot 1 DP 782318.
- Part Lot 130 DP 40869 is held by the Crown (Crown Reserve R96797), licenced to Roche Group Pty Ltd (Kioloa Beach Holiday Park owner) and may be subject to Native Title. Native Title Assessment was undertaken under Subdivision J (D19/9866) involving notification and opportunity to comment to relevant parties (D19/10759, D19/42731). The proposed activity is therefore considered a valid future act.





4 HERITAGE

4.1 Indigenous

Under Section 86 of the NSW National Parks and Wildlife Act 1974 (NPW Act) it is an offence to disturb, damage, or destroy any Aboriginal object without an Aboriginal Heritage Impact Permit (AHIP). The Act, however, provides that if a person who exercises 'due diligence' in determining that their actions will not harm Aboriginal objects has a defence against prosecution if they later unknowingly harm an object without an AHIP (Section 87(2) of the Act). To effect this, the NSW Department of Environment, Climate Change and Water have prepared the Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (hereafter referred to as the 'Due Diligence Guidelines) to assist individuals and organisations to exercise due diligence when carrying out activities that may harm Aboriginal objects and to determine whether they should apply for an AHIP.

In accordance with the Due Diligence Guidelines (DECCW 2010), a search on the Aboriginal Heritage Information Management System (AHIMS) on 9 January 2020 indicated that eleven Aboriginal heritage sites are known to exist in proximity to the proposed activity (see Figure 10 below and refer to Figures 3 to 7 for more detail).

Most of the site can be regarded as being on 'disturbed land' as defined by the Due Diligence Guidelines i.e.:

"Land is disturbed if it has been the subject of a human activity that has changed the land's surface, being changes that remain clear and observable. Examples include ploughing, construction of rural infrastructure (such as dams and fences), construction of roads, trails and tracks (including fire trails and tracks and walking tracks), clearing vegetation, construction of buildings and the erection of other structures, construction or installation of utilities and other similar services (such as above or below ground electrical infrastructure, water or sewerage pipelines, stormwater drainage and other similar infrastructure) and construction of earthworks."

The proposed SUP alignment predominantly follows the road verge which has been subject to disturbance as a result of clearing and the road construction and maintenance. Areas where the SUP alignment deviates from the road verge, it follows existing informal tracks and/or existing cleared and disturbed areas, with only minimal removal of understorey vegetation required.

No recorded Aboriginal heritage sites occur in close proximity to the proposed SUP such that there is a risk of impact to these sites (refer to Table 3).

Visual assessment of the soil surface throughout the project site did not detect any artefacts or other Aboriginal heritage objects.





Table 3. AHIMS records in proximity to project site

Site ID	<u>Easting</u>	<u>Northing</u>	Site features	Site types	<u>Comments</u>
58-4-1124	262536	6062601	Artefact : -, Grinding Groove : - , Shell : -		25m adjacent to unnamed estuary inlet
58-4-0477	262546	6063391	Artefact : -	Open Camp Site	141m to west of project site
58-4-0817	262606	6062591	Shell : -, Artefact : -	Midden	92m from project site, adjacent to unnamed estuary inlet
58-4-0818	262706	6062691	Shell : -, Artefact :	Midden	192m from project site, on beach
58-4-0820	262906	6063391	Shell : -, Artefact :	Midden	Two records at same site occurring on hind
58-4-0819	262906	6063391	Shell : -, Artefact :	Midden	dune 35m from project site.
58-4-0470	262906	6063991	Artefact : -	Open Camp Site	146m to west of site
58-4-0821	263006	6063391	Shell : -, Artefact :	Midden	On beach 123m from project site
58-4-0823	263106	6063791	Shell : -, Artefact :	Midden	Three records at same site occurring on hind
58-4-0824	263106	6063791	Shell : -, Artefact :	Midden	dunes approx. 158m from project site with
58-4-0825	263106	6063791	Shell : -, Artefact : -	Midden	low-lying swamp between record location and project site.

A tree containing a scar at the base (refer to Photo 29) was disregarded as potentially being the result of cultural practices based on the following:

- Location in local environment on road verge where damage due to vehicle impact or maintenance machinery and activities (e.g. road-side slashing) is likely;
- Age of the tree estimated at no more than 30 years (likely much younger), considering that the species is *Eucalyptus salgna x botryoides*, a relatively fast growing species, and only 25cm (approx.) DBH;

and considered against the criteria provided in Long 2005.

Within Area J (see Figure 10 below), while there are no visible middens or artefacts, it is considered that there is moderate propensity for Aboriginal heritage items, given the close proximity to the watercourse and beach, in addition to the older tree age class indicating that disturbance in this location may have been limited to clearing of understorey vegetation, with little disturbance to the soil surface. In this area, any excavation associated with the project will be monitored by an Aboriginal Heritage Site Officer engaged from Batemans Bay Local Aboriginal Land Council.

As no recorded sites would potentially be impacted and as the area that would be impacted by the proposal is 'disturbed land', Due Diligence Guidelines requires no further

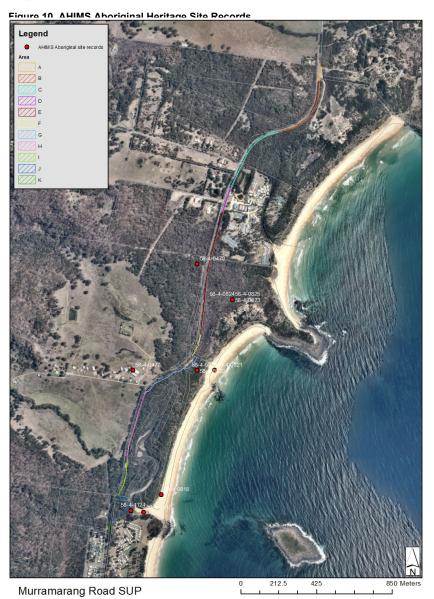




assessment as it is reasonable to conclude that there is a low probability of objects occurring in the area. An Aboriginal Heritage Impact Permit (AHIP) is not required and the work can proceed with caution and with monitoring of works within Area J as noted above.











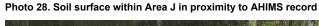




Photo 29. Tree with scarring on lower trunk



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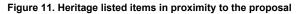




4.2 Non-Indigenous

The proposed road works would not come within proximity to items of local heritage significance or any items on the State Heritage Register or listed in the Shoalhaven Local Environmental Plan.

A heritage item exists over Lot 1 DP 782318 (Australian National University land) as shown in Figure 11 below. The heritage listing (NSW Heritage ID 2390439) applies to a Federation weatherboard residence which was the former mill manager's office and former Post Office, in association with nearby workers cottages. The heritage listing applies only to residential buildings. Each of these lie on the west side of Murramarang Rd, away from the road and at no risk of being impacted by the proposed SUP.









5 CONSULTATION WITH GOVERNMENT AGENCIES 5.1 Infrastructure SEPP

The proposed activity:

- would not be undertaken within or adjacent to land reserved under the National Parks & Wildlife Act 1974
- would not be undertaken within or adjacent to a marine park or aquatic reserve declared under the Marine Estate Management Act 2014
- would not be undertaken in the foreshore area within the meaning of the Sydney Harbour Foreshore Authority Act 1998
- · does not comprise a fixed or floating structure in or over navigable waters
- is not a development for the purposes of an educational establishment, health services facility, correctional centre or group home, or for residential purposes, in an area that is bush fire prone land.
- would not increase the amount of artificial light in the night sky and located on land within the dark sky region as identified on the dark sky region map
- · would not be undertaken within Defence communications facility buffer
- would not be undertaken on land in a mine subsidence district within the meaning of the Mine Subsidence Compensation Act 1961, and
- would not be undertaken on flood liable land.

The consultation requirements specified under Part 2 of the Infrastructure SEPP therefore do not apply.

5.2 NSW Department of Primary Industries (Fisheries)

The proposal involves some disturbance and excavation in proximity to Butlers Creek, which occurs within an area mapped as Key Fish Habitat (refer to: https://www.dpi.nsw.gov.au/ data/assets/pdf file/0004/634351/ShoalhavenKFHMap.pdf (), however will not involve dredging or reclamation within the creek-line or impact to riparian vegetation. An enquiry was sent to DPI Fisheries to determine the need for authorisation. The response received from Jillian Reynolds, Fisheries Manager, NSW Department of Primary Industries, on 11 March 2020 (D20/85216) stated

"As the works will be taking place in within the existing bridge embankment and are out of the creek channel then a permit will not be required for these works. Please ensure that best practice sediment and erosion controls are fully implemented to protect the waterway from any run off."

A Fisheries Permit is therefore not required.





6 COMMUNITY ENAGAGEMENT

The SUP project has had widespread community support by the Bawley Point and Kioloa communities since its inception in 2013 and has been unfolding in stages with continued support and input from Bawley Point & Kioloa Community Association and Community Connect Committee (e.g. D19/390185 and D19/21124).

A licence agreement has been reached with Australian National University (LD7730) for constructing the SUP over areas within Lot 1 DP 782318 – part of Area G, as referred to in this REF.

Discussions are in progress involving pursuit of a licence agreement with J.Nelson (see D19/232685), owner of Lot 2 DP 579750 as an interim measure preceding land acquisition for minor encroachment between CH 3170 and 3380 (approx.) (refer to Sheet 3 of attached Preliminary Plans – D20/92400).

Agreement is yet to be reached with Roche Group Pty Ltd as lessee of Part Lot 130 DP 40869 for construction of the SUP over areas within this lot.





7 SIGNIFICANCE EVALUATION

The proposed activity, which includes the implementation of the environmental safeguards specified in Section 1.3, is unlikely to have a significant impact on the environment for the following reasons:

- An assessment of the statutory matters of consideration reveals no potential medium or high adverse impacts.
- All identified potential negligible or low adverse impacts are considered acceptable considering the need for the activity.
- There are a number of impact mitigation measures that would be in place to reduce any adverse environmental effect.
- The Section 2.3 threatened species impact assessment (NSW) including NSW BC
 Act 2016 Test of Significance indicates that the proposed activity is unlikely to
 have a significance effect on threatened species, populations or ecological
 communities listed under NSW legislation. The evaluation of 'not significant'
 determines that an environmental impact statement, Species Impact Statement
 (SIS) or Biodiversity Development Assessment Report (BDAR) is not required.
- The Section 2.4 threatened species impact assessment (Commonwealth) indicates that the proposed activity is unlikely to have a significance effect on threatened species, populations or ecological communities listed under the Commonwealth EPBC Act 1999.





8 DETERMINATION

This Review of Environmental Factors has assessed the likely environmental impacts, in the context of Part 5 of the *Environmental Planning and Assessment Act 1979*, of a proposal by Shoalhaven City Council for the construction of a Shared User Path (SUP) adjacent to Murramarang Road between Bawley Point and Kioloa.

Shoalhaven City Council has considered the potential environmental effects of the proposal and the effectiveness and feasibility of measures for reducing or preventing detrimental effects. It is determined that:

- The proposed safeguards identified in the report (Section 1.3) shall be adopted and implemented.
- It is unlikely that there will be any significant environmental impact as a result of the proposed work and an Environmental Impact Statement is not required for the proposed works.
- The proposed activity is not likely to significantly affect NSW listed threatened species, populations or ecological communities, or their habitats and a SIS / BDAR is not required.
- The proposed activity is not an EPBC Act 'controlled action' and does not require Commonwealth referral.

Troy Punnett	
Unit Manager – District Engineer South	
Shoalhaven City Council	Date:

Document Review

	Name	Signature	Date
Author	Jeff Bryant	J.0-7-1	7/4/2020
Reviewer	Geoff Young	afly	24/9/2021





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APPENDIX A: PRELIMINARY PLANS (see D20/92400) AND DETAILED PLANS FOR STAGE 1 (D21/413589)





APPENDIX B: NSW THREATENED SPECIES LIKELIHOOD OF OCCURRENCE TABLE

Likelihood of occurrence table

The table of likelihood of occurrence evaluates the likelihood of threatened species to occur on the subject site. This list is derived from previously recorded species within a 5 km radius (taken from Office of Environment and Heritage (OEH) Wildlife Atlas) around the subject site. Ecology information has been obtained from the Threatened Species Profiles on the NSW OEH website (www.threatenedspecies.environment.nsw.gov.au).

Likelihood of occurrence in study area

- 1. Unlikely Species, population or ecological community is not likely to occur. Lack of previous recent (<25 years) records and suitable potential habitat limited or not available in the study area.
- 2. Likely Species, population or ecological community could occur and study area is likely to provide suitable habitat. Previous records in the locality and/or suitable potential habitat in the study area.
- 3. Present Species, population or ecological community was recorded during the field investigations.

Possibility of impact

- Unlikely The proposal would be unlikely to impact this species or its habitats. No EP&A Act 7-Part Test or EPBC Act significance assessment is necessary for this species.
- 2. Likely The proposal could impact this species, population or ecological community or its habitats. An EP&A Act 7-Part Test and/or EPBC Act significance assessment is required for this species, population or ecological community.





Endangered Ecological Community name	Status	Likelihood of presence within areas impacted by the activity
Bangalay Sand Forest of the Sydney Basin and South East Corner Bioregions	Endangered - NSW BC Act	Mapped as occurring approximately 40m from the site near the southern end, but site surveys confirmed that this EEC does not occur in close proximity such that it is at risk of being impacted by the proposal. No vegetation removal will occur in proximity to this EEC. No indirect impacts including erosion and sediment movement will affect this EEC.
Coastal Saltmarsh in the NSW North Coast, Sydney Basin and South East Corner Bioregions	Endangered - NSW BC Act Vulnerable - Commonwealth EPBC Act	Mapped as occurring approximately 55m from the site at one point in the southern portion of the site, but site surveys confirmed that this EEC does not occur in close proximity such that it is at risk of being impacted by the proposal. No vegetation removal will occur in proximity to this EEC. No indirect impacts including erosion and sediment movement will affect this EEC.
Freshwater wetlands on coastal floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions	Endangered - NSW BC Act	Does not occur on-site and is not mapped as occurring in close proximity to the site (nearest records are approx. 950m to the north of the site).





Illawarra Lowlands Grassy Woodland in the Sydney	Endangered - NSW BC Act	Mapped as occurring over or in close proximity to the site in three locations.
Basin Bioregion	Critically Endangered - Commonwealth <i>EPBC Act</i>	
Littoral Rainforest in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	Endangered - NSW BC Act Critically Endangered - Commonwealth EPBC Act	Does not occur on-site and is not mapped as occurring in close proximity to the site (nearest records are approx. 1.5km to the south of the site).
Swamp oak floodplain forest of the NSW North Coast, Sydney Basin and South East Corner bioregions	Endangered - NSW BC Act Endangered - Commonwealth EPBC Act	Mapped as occurring in close proximity to the site in two locations.
Swamp sclerophyll forest on coastal floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions	Endangered - NSW BC Act	Occurs in the surrounding area (approx. 430m to the south of the site), but site surveys confirmed that this EEC does not occur in close proximity such that it is at risk of being impacted by the proposal.

Species name	Status	Habitat requirements (www.environment.nsw.gov.au)	Likelihood of presence within areas impacted by the activity
FLORA			





Scrub Turpentine Rhodamnia rubescens	Critically Endangered NSW BC Act	Found in littoral, warm temperate and subtropical rainforest and wet sclerophyll forest usually on volcanic and sedimentary soils.	No – no habitat present
AMPHIBIANS			
Green and Golden Bell Frog <i>Litoria aurea</i>	Vulnerable EPBC Act Endangered NSW BC Act	Heath, woodland and open dry sclerophyll forest on a variety of soil types except clay based. Whilst in non-breeding habitat it burrows below the soil surface or in the leaf litter. Breeding frogs will call from open spaces, under vegetation or rocks or from within burrows in the creek bank. Egg masses are laid in burrows or under vegetation in small pools. After rains, tadpoles are washed into larger pools where they complete their development in ponds or ponded areas of the creekline. Tadpole development ranges from Breeding habitat of this species is generally soaks or pools within first or second order streams. They are also commonly recorded from 'hanging swamp' seepage lines and where small pools form from the collected water.	No suitable habitat occurs on site. However, records occur in the locality including one on Butler Creek approx. 880m upstream of the site.
MICRO-CHIROPTERA	N BATS		
Eastern Bentwing-bat Miniopterus orianae oceanensis	Vulnerable EPBC Act	Specific caves are known maternity sites with other caves being primary roosting habitat outside breeding period. Also uses derelict mines, storm-water tunnels, buildings and other man-made structures. Hunts in forested areas, catching moths and other flying insects above the tree tops.	Possibly occurring transiently within the site outside of construction hours. No important habitat will be removed or otherwise affected.

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Eastern False Pipistrelle Falsistrellus tasmaniensis	Vulnerable NSW BC Act	Prefers moist habitat that contains trees greater than 20 m high with a dense undertstorey. They are fast flyers. Roosts in hollow trunks of eucalyptus trees, in colonies of 3 – 80. Also may roost in caves and old wooden buildings. This species changes roost every night. Roosts on consecutive nights are usually less than 750 m apart. This species has a home range of up to 136 ha (Churchill, S 2008, Australian Bats, Jacana Books, Crows Nest, NSW). Although they prefer habitat with a dense understorey, they prefer to forage along flyways to avoid the thick understorey. They prefer continuous forest and avoid remnant vegetation. However, they have been recorded in open forests (Churchill, S 2008, Australian Bats, Jacana Books, Crows Nest, NSW).	Possibly occurring transiently within the site outside of construction hours. No important habitat will be removed or otherwise affected.
Eastern Freetail-Bat Micronomus norfolkensis	Vulnerable NSW BC Act Vulnerable EPBC Act	Small tree hollows/fissures in bark for roosting in dry sclerophyll forest, woodland, swamp forests and mangrove forests east of the Great Dividing Range.	Possibly occurring transiently within the site outside of construction hours. No important habitat will be removed or otherwise affected.
Golden-tipped Bat Kerivoula papuensis	Vulnerable NSW BC Act	Found in rainforest and adjacent wet and dry sclerophyll forest up to 1000m. Also recorded in tall open forest, <i>Casuarina</i> -dominated riparian forest and coastal <i>Melaleuca</i> forests.	Possibly occurring transiently within the site outside of construction hours. No important habitat will be removed or otherwise affected.



Thoulhaven City Council

Review of Environmental Factors Part 5 Assessment EP&A Act 1979

		Roost mainly in abandoned hanging Yellow-throated Scrubwren and Brown Gerygone nests, also in tree hollows, dense foliage and epiphytes; located in rainforest gullies on small first- and second-order streams. Will fly up to two kilometres from roosts to forage in rainforest and sclerophyll forest on mid and upperslopes. Specialist feeder on small web-building spiders	
Greater Broad-nosed Bat Scoteanaux ruepelli	Vulnerable NSW BC Act	Found mainly in gullies and river systems that drain the Great Dividing Range, it utilises a variety of habitats from woodland through to moist and dry eucalypt forest and rainforest, below 500m, though it is most commonly found in tall wet forest. Although this species usually roosts in tree hollows, it has also been found in buildings. Forages after sunset, flying slowly and directly along creek and river corridors at an altitude of 3 - 6 m	Possibly occurring transiently within the site outside of construction hours. No important habitat will be removed or otherwise affected.
Southern Myotis (Large- footed Myotis) Myotis macropus	Vulnerable NSW BC Act	This species is predominantly roosts in caves, however, is known to roost in trees and man-made structures close to water. Roosts are generally located close to water, where the bats forage in small groups of three or four. They have a strong association with streams and permanent waterways in areas that are vegetated rather than cleared (Churchill, S 2008, Australian Bats, Jacana Books, Crows Nest, NSW	Possibly occurring transiently within the site outside of construction hours. No important habitat will be removed or otherwise affected.

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		They feed on small fish, prawns and aquatic macroinvertebrates. They have a preference towards large still pools, rather than flowing streams. They will also forage an aerial insects flying over water. They use their large feet to capture prey items (Churchill 2008).	
BIRDS			
Eastern Ground Parrot Pezoporus wallicus wallicus	Vulnerable NSW BC Act	The Eastern Ground Parrot occurs in near coastal low heathlands and sedgelands, generally below one metre in height and very dense (up to 90% projected foliage cover). These habitats provide a high abundance and diversity of food, adequate cover and suitable roosting and nesting opportunities for the Ground Parrot, which spends most of its time on or near the ground. When flushed, birds fly strongly and rapidly for up to several hundred metres, at a metre or less above the ground (OEH 2013)	Unlikely to occur. No suitable habitat occurs on site. No important habitat will be removed or otherwise affected.
Eastern Reef Egret Egretta sacra	Migratory EPBC Act	The Eastern Reef Egret lives on beaches, rocky shores, tidal rivers and inlets, mangroves, and exposed coral reefs.	Unlikely to occur. No suitable habitat occurs on site. No important habitat will be removed or otherwise affected.
Gang-gang Cockatoo Callocephalon fimbriatum	Vulnerable NSW BC Act	Tall mountain forests and woodlands, particularly in heavily timbered and mature wet sclerophyll forests. In winter, may occur at lower altitudes in drier more open eucalypt forests and woodlands, and often found in urban areas. preferring more	Possibly occurring transiently within the site. Highly mobile species. No important habitat will be removed or otherwise affected.





		open eucalypt forests and woodlands, particularly	
		in box-ironbark assemblages, or in dry forest in	
		coastal areas. Favours old growth attributes for	
		nesting and roosting	
Glossy Black-cockatoo	Vulnerable NSW BC Act	The GBC inhabits open forest and woodlands of the	Possibly occurring transiently within the site.
Calyptorhynchus lathami		coast where stands of she-oak occur. In the Jervis	Highly mobile species. No important habitat will
Carypioinymenus tamami		Bay region they feed almost exclusively on the	be removed or otherwise affected. No feed trees
		seeds of the black she-oak Allocasuarina littoralis,	were observed during survey.
		shredding the cones with their bill	
Hooded Plover	NSW BC Act: Critically	In south-eastern Australia Hooded Plovers prefer	Unlikely to occur. No suitable habitat occurs on site.
Thinornis rubricollis	Endangered	sandy ocean beaches, especially those that are broad	No important habitat will be removed or otherwise
		and flat, with a wide wave-wash zone for feeding,	affected.
	EPBC Act: Vulnerable	much beachcast seaweed, and backed by sparsely	
		vegetated sand-dunes for shelter and nesting.	
		Occasionally Hooded Plovers are found on tidal bays	
		and estuaries, rock platforms and rocky or sand-	
		covered reefs near sandy beaches, and small beaches	
		in lines of cliffs. They regularly use near-coastal saline	
		and freshwater lakes and lagoons, often with	
		saltmarsh. Hooded Plovers forage in sand at all levels	
		of the zone of wave wash during low and mid-tide or	
		among seaweed at high-tide, and occasionally in dune	
		blowouts after rain. At night they favour the upper	
		zones of beaches for roosting. When on rocks they	
		forage in crevices in the wave-wash or spray zone,	
		avoiding elevated rocky areas and boulder fields. In	
		coastal lagoons they forage in damp or dry substrates	
		and in shallow water, depending on the season and	
		water levels. In eastern Australia, Hooded Plovers	
		usually breed from August to March on sandy ocean	





Little Eagle Hieraaetus morphnoides	Vulnerable NSW BC Act	beaches strewn with beachcast seaweed, in a narrow strip between the high-water mark and the base of the fore-dunes. They often nest within 6 m of the fore-dune, mostly within 5 m of the high-water mark, but occasionally among or behind dunes. Occupies open eucalypt forest, woodland or open woodland. She-oak or acacia woodlands and riparian woodlands of interior NSW are also used. Nests in tall living trees within a remnant patch, where pairs build a large stick nest in winter	Possibly occurring transiently over or within the site. Highly mobile species. No important habitat will be removed or otherwise affected.
Little Lorikeet Glossopsitta pusilla	Vulnerable NSW BC ACT	Forages primarily in the canopy of open Eucalyptus forest and woodland, yet also finds food in Angophora, Melaleuca and other tree species. Riparian habitats are particularly used, due to higher soil fertility and hence greater productivity. Isolated flowering trees in open country, e.g. paddocks, roadside remnants and urban trees also help sustain viable populations of the species Roosts in treetops, often distant from feeding areas. Nests in proximity to feeding areas if possible, most typically selecting hollows in the limb or trunk of smooth-barked Eucalypts. Entrance is small (3 cm) and usually high above the ground (2–15 m). These nest sites are often used repeatedly for decades, suggesting that preferred sites are limited. Riparian trees often chosen, including species like Allocasuarina	Possibly occurring transiently within the site. Highly mobile species. No important habitat will be removed or otherwise affected.





Masked Owl – Tyto novaehollandiae	Vulnerable NSW BC Act	Dry eucalypt forests and woodlands from sea level to 1100 m. Inhabits forest but often hunts along the edges of forests, including roadsides. The typical diet consists of tree-dwelling and ground mammals, especially rats. Pairs have a large home-range of 500 to 1000 hectares. Roosts and breeds in moist eucalypt forested gullies, using large tree hollows or sometimes caves for nesting. Requires old growth elements-hollow bearing tree resources for nesting and prey source.	Possibly occurring transiently over or within the site outside of construction hours. Highly mobile species. No important habitat will be removed or otherwise affected.
Powerful Owl Ninox strenua	Vulnerable NSW BC Act	Coastal Woodland, Dry Sclerophyll Forest, wet sclerophyll forest and rainforest- Can occur in fragmented landscapes Roosts in dense vegetation comprising species such as Turpentine Syncarpia glomulifera, Black She-oak Allocasuarina littoralis, Blackwood Acacia melanoxylon, Roughbarked Apple Angophora floribunda, Cherry Ballart Exocarpus cupressiformis and a number of eucalypt species. requires old growth elementshollow bearing tree resources for nesting and prey resource. Nests in large tree hollows in large eucalypts that are at least 150yrs old. Often in riparian areas. Large home range	Possibly occurring transiently over or within the site outside of construction hours. Highly mobile species. No important habitat will be removed or otherwise affected.
Ruddy Turnstone	Migratory	In Australasia, the Ruddy Turnstone is mainly found	Unlikely to occur. No suitable habitat occurs on site.
Arenaria interpres	EPBC Act	on coastal regions with exposed rock coast lines or coral reefs. It also lives near platforms and shelves, often with shallow tidal pools and rocky, shingle or gravel beaches. It can, however, be found on sand, coral or shell beaches, shoals, cays and dry ridges of	No important habitat will be removed or otherwise affected.



sand or coral. It has occasionally been sighted in estuaries, harbours, bays and coastal lagoons, among low saltmarsh or on exposed beds of seagrass, around sewage ponds and on mudflats. In southern Australia the Ruddy Turnstone prefers rockier coastlines and is less numerous on large embayments with extensive mudflats. The Ruddy Turnstone mainly forages between lower supralittoral and lower littoral zones of foreshores, from strand-line to wave-zone. They often forage among banks of stranded seaweed or other tide-wrack. They are also known to forage on exposed rocky	
low saltmarsh or on exposed beds of seagrass, around sewage ponds and on mudflats. In southern Australia the Ruddy Turnstone prefers rockier coastlines and is less numerous on large embayments with extensive mudflats. The Ruddy Turnstone mainly forages between lower supralittoral and lower littoral zones of foreshores, from strand-line to wave-zone. They often forage among banks of stranded seaweed or other tide-wrack.	
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among banks of stranded seaweed or other tide-wrack.	
They are also mis wit to retage on emposed roomy	
platforms, coral reefs and mudflats. In the south-east	
Gulf of Carpentaria they feed only on mangrove	
mudflats, especially those near shingle beaches.	
Sometimes they feed around coastal lagoons and	
sewage treatment ponds, occasionally among low	
vegetation in saltmarsh, on exposed beds of seagrass,	
or among dunes on coral cays. The have sometimes	
been known to forage in grassy areas above the	
tideline, in short pasture, or in ploughed paddocks.	
The Ruddy Turnstone roosts on beaches, above the	
tideline, among rocks, shells, beachcast seaweed or	
other debris. They have also been observed roosting	
on rocky islets among grassy tussocks, and on	
mudflats and sandflats. They sometimes fly around, or	
land on, ships at sea	
Short-tailed Shearwater Migratory Coastal, oceanic. Unlikely to occur. No suitable ha	
Ardenna tenuirostris No important habitat will be remo	oved or otherwise
affected.	





Shy Albatross	NSW BC Act	This pelagic or ocean-going species inhabits	Unlikely to occur. No suitable habitat occurs on site.
Thalassarche cauta	Vulnerable	subantarctic and subtropical marine waters, spending	No important habitat will be removed or otherwise
	EPBC Act Vulnerable	the majority of its time at sea. While at sea, it soars on	affected.
		strong winds and when calm, individuals may rest on	
		the ocean, in groups during the breeding season or as	
		individuals at other times. Occasionally the species	
		occurs in continental shelf waters, in bays and	
		harbours. The species feeds on fish, crustaceans, offal	
		and squid and may forage in mixed-species flocks.	
		Food may be caught by seizing prey from the water's	
		surface while swimming, by landing on top of prey,	
		diving for prey beneath the water and by scavenging	
		behind fishing vessels. Known breeding locations	
		include Albatross Island off Tasmania, Auckland	
		Island, Bounty Island and The Snares, off New	
		Zealand, where nesting colonies of 6-500 nests occur	
		and may contain other species such as the Australian	
		Gannet. Located on sheltered sides of islands, on cliffs	
		and ledges, in crevices and slopes, nests are used	
		annually and consist of a mound of mud, bones, plant	
		matter and rocks.	
Sooty Owl	Vulnerable	Occurs in rainforest, including dry rainforest,	Possibly occurring transiently over or within the site
Tyto tenebricosa	NSW BC Act	subtropical and warm temperate rainforest, as well as	outside of construction hours. Highly mobile
		moist eucalypt forests	species. No important habitat will be removed or
			otherwise affected.
Sooty Oystercatcher	Vulnerable	Shore bird – breeds in sand or coral scrapes on	Unlikely to occur. No suitable habitat occurs on site.
Haematopus fuliginosus	NSW BC Act	offshore islands	No important habitat will be removed or otherwise
			affected.





Sooty Tern	Vulnerable	The Sooty Tern is found over tropical and sub-tropical	Unlikely to occur. No suitable habitat occurs on site.
Onychoprion fuscata	NSW BC Act	seas and on associated islands and cays around Northern Australia. In NSW only known to breed at Lord Howe Island. Occasionally seen along coastal NSW, especially after cyclones. The Sooty Tern is found over tropical and sub-tropical seas and on associated islands and cays around Northern Australia. In NSW only known to breed at Lord Howe Island. Occasionally seen along coastal NSW, especially after cyclones.	No important habitat will be removed or otherwise affected.
Square-Tailed Kite Lophoictinia isura	Vulnerable NSW BC Act	Summer breeding migrant to the south-east, including the NSW south coast, arriving in September and leaving by March. Found in a variety of timbered habitats including dry woodlands and open forests. Shows a particular preference for timbered watercourses large hunting ranges of more than 100km2 Nest within large hollow bearing trees generally within 200m of riparian areas.	Possibly occurring transiently over or within the site. Highly mobile species. No important habitat will be removed or otherwise affected.
Swift Parrot Lathamus discolour	Endangered EPBC Act Endangered NSW BC Act	Migrates to the Australian south-east mainland between March and October. On the mainland they occur in areas where eucalypts are flowering profusely or where there are abundant lerp (from sap-sucking bugs) infestations. Favoured feed trees include winter flowering species such as Swamp Mahogany (Eucalyptus robusta), Spotted Gum (Corymbia maculata), Red Bloodwood (C. gummifera), Mugga Ironbark (E. sideroxylon), and White Box (E. albens). Commonly used lerp infested trees include Inland Grey Box E. microcarpa, Grey Box E. moluccana and	Possibly occurring transiently over or within the site. Highly mobile species. No important habitat will be removed or otherwise affected.





		Blackbutt E. pilularis. Return to some foraging sites on a cyclic basis depending on food availability. Following winter they return to Tasmania where they breed from September to January, nesting in old trees	
		with hollows and feeding in forests dominated by	
Varied Sittella Daphoenositta chrysoptera	Vulnerable NSW BC Act	Tasmanian Blue Gum Eucalyptus globulus. Inhabits eucalypt forests and woodlands, especially those containing rough-barked species and mature smooth-barked gums with dead branches, mallee and Acacia woodland	Possibly occurring transiently within the site. Highly mobile species. No important habitat will be removed or otherwise affected.
Wedge-tailed Shearwater Ardenna pacificus	Migratory EPBC Act	A pelagic, marine bird known from tropical and subtropical waters. The species tolerates a range of surface-temperatures and salinities, but is most abundant where temperatures are greater than 21 °C and salinity is greater than 34.6 %. In tropical zones the species may feed over cool nutrient-rich waters. The species has been recorded in offshore waters of eastern Victoria and southern NSW, mostly over continental slope with sea-surface temperatures of 13.9–24.4 °C and usually off the continental shelf in north-west Australia.	Unlikely to occur. No suitable habitat occurs on site. No important habitat will be removed or otherwise affected.
White-bellied Sea-Eagle Haliaeetus leucogaster	NSW BC Act Vulnerable	Found in coastal habitats (especially those close to the sea-shore) and around terrestrial wetlands in tropical and temperate regions of mainland Australia and its	Possibly occurring transiently over or within the site. Highly mobile species. No important habitat will be removed or otherwise affected.
	Migratory EPBC Act	offshore islands. The habitats occupied by the sea- eagle are characterized by the presence of large areas of open water (larger rivers, swamps, lakes, the sea). Birds have been recorded in (or flying over) a variety of terrestrial habitats. The species is mostly recorded in coastal lowlands, but can occupy habitats up to	





	,		-
		1400 m above sea level on the Northern Tablelands of	
		NSW and up to 800 m above sea level in Tasmania	
		and South Australia. Birds have been recorded at or in	
		the vicinity of freshwater swamps, lakes, reservoirs,	
		billabongs, saltmarsh and sewage ponds. They also	
		occur at sites near the sea or sea-shore, such as around	
		bays and inlets, beaches, reefs, lagoons, estuaries and	
		mangroves. Terrestrial habitats include coastal dunes,	
		tidal flats, grassland, heathland, woodland, forest	
		(including rainforest) and even urban areas. Breeding	
		has been recorded on the coast, at inland sites, and on	
		offshore islands. Breeding territories are located close	
		to water, and mainly in tall open forest or woodland,	
		although nests are sometimes located in other habitats	
		such as dense forest (including rainforest), closed	
		scrub or in remnant trees on cleared land.	
		Forages over large expanses of open water; this is	
		particularly true of birds that occur in coastal	
		environments close to the sea-shore, where they forage	
		over in-shore waters. However, the White-bellied Sea-	
		Eagle will also forage over open terrestrial habitats	
		(such as grasslands). Birds may move to and	
		congregate in favorable sites during drought or food	
		shortage.	
MAMMALS			
Eastern Pygmy-possum	Vulnerable NSW BC	Rainforest, sclerophyll forest & woodland to heath	Unlikely to occur. No suitable habitat occurs on
Cercatetus nanus	Act	 but heath & woodland preferred. Forages on 	site. No important habitat will be removed or
	Act	banksias, eucalypts & bottlebrushes.	otherwise affected.





Greater Glider	Vulnerable EPBC Act	Feeds exclusively on eucalypt leaves, buds, flowers	Possibly occurring within or in close proximity to
Petauroides Volans		and mistletoe. Shelter during the day in tree hollows	the site. Records occur immediately adjacent to the
		and will use up to 18 hollows in their home range.	road.
		Occupy a relatively small home range with an average	
		size of 1 to 3 ha. Give birth to a single young in late	
		autumn or early winter which remains in the pouch for	
		approximately 4 months and is independent at 9	
		months of age. Usually solitary, though mated pairs	
		and offspring will share a den during the breeding	
		season and until the young are independent. Can glide	
		up to a horizontal distance of 100m including changes	
		of direction of as much as 90 degrees. Very loyal to	
		their territory.	
Grey-headed Flying-fox	Vulnerable EPBC Act	Occur in subtropical and temperate rainforests, tall	Possibly occurring transiently over or within the
Pteropus poliocephalus	Vulnerable NSW BC Act	sclerophyll forests and woodlands, heaths and swamps	site. Highly mobile species. No important habitat
	Vulliciable NSW BC Act	as well as urban gardens and cultivated fruit crops.	will be removed or otherwise affected.
		Roosting camps are generally located within 20km of	
		a regular food source and are commonly found in	
		gullies, close to water, in vegetation with a dense	
		canopy.	
Koala	Vulnerable NSW BC Act	Eucalypt woodland and forest Home range sizes vary	Possibly occurring on site. Eucalyptus tereticornis is
Phascolarctos cinereus		with quality of habitat ranging from less than two ha	listed as a feed tree under SEPP 44 – Koala Habitat
		to several hundred ha. Preferred tree species on the	Protection.
		south coast are Eucalyptus amplifolia, E.viminalis, &	
		E.tereticornis but numerous other species also known	
		food trees.	
Southern Brown Bandicoot	Endangered EPBC Act	Southern Brown Bandicoots are largely crepuscular	Unlikely to occur. No suitable habitat occurs on site.
(eastern)	Endangered NSW BC Act	(active mainly after dusk and/or before dawn). They	No important habitat will be removed or otherwise
Isoodon obesulus obesulus		are generally only found in heath or open forest with a	affected.
		heathy understorey on sandy or friable soils. They	
		1	



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Spotted-tailed Quoll Dasyurus maculatus	Endangered EPBC Act Vulnerable NSW BC Act	feed on a variety of ground-dwelling invertebrates and the fruit-bodies of hypogeous (underground-fruiting) fungi. Their searches for food often create distinctive conical holes in the soil. Males have a home range of approximately 5-20 hectares whilst females forage over smaller areas of about 2-3 hectares. Nest during the day in a shallow depression in the ground covered by leaf litter, grass or other plant material. Nests may be located under Grass trees Xanthorrhoea spp., blackberry bushes and other shrubs, or in rabbit burrows. The upper surface of the nest may be mixed with earth to waterproof the inside of the nest. Recorded across a range of habitat types, including rainforest, open forest, woodland, coastal heath and inland riparian forest, from the sub-alpine zone to the coastline. Individual animals use hollow-bearing trees, fallen logs, small caves, rock outcrops and rocky-cliff faces as den sites. Mostly nocturnal, although will hunt during the day; spends most of the time on the ground, although also an excellent climber and will hunt possums and gliders in tree hollows and prey on roosting birds. Use communal 'latrine sites', often on flat rocks among boulder fields, rocky cliff-faces or along rocky stream beds or banks. Such sites may be visited by multiple individuals and can be recognised by the accumulation of the sometimes characteristic 'twisty-shaped' faeces deposited by animals. Females occupy home ranges up to about 750 hectares and	Possibly occurring within or in close proximity to the site. Records occur immediately adjacent to the road.
		occupy home ranges up to about 750 hectares and males up to 3500 hectares. Are known to traverse their home ranges along densely vegetated creeklines.	





Squirrel Glider	NSW BC Act Vulnerable	Inhabits mature or old growth Box, Box-Ironbark	Unlikely to occur. No suitable habitat occurs on site.
Petaurus norfolcensis		woodlands and River Red Gum forest west of the	No important habitat will be removed or otherwise
		Great Dividing Range and Blackbutt-Bloodwood	affected.
		forest with heath understorey in coastal areas. Prefers	
		mixed species stands with a shrub or Acacia	
		midstorey. Live in family groups of a single adult	
		male one or more adult females and offspring. Require	
		abundant tree hollows for refuge and nest sites.	
		Diet varies seasonally and consists of Acacia gum,	
		eucalypt sap, nectar, honeydew and manna, with	
		invertebrates and pollen providing protein.	
White-footed Dunnart	Vulnerable NSW BC	Dry sclerophyll forests, sedgeland or heathland-	Possibly occurring within or in close proximity to
Sminthospsis leucopus	Act	coastal dune vegetation, coastal forest, tussock	the site. A record occurs approx. 230 west of the
Smillinospsis teleopus		grassland and woodland and forest post disturbance	road.
		- open understorey layer. They shelter in bark nests	
		in hollows under standing or fallen timber, burrows	
		in the ground, piles of logging debris, large grass	
		clumps such as provided by Grass Trees	
		Xanthorrhoea spp.and Cycads Macrozamia spp.	
		and rock crevices	
Yellow-bellied Glider -	Vulnerable NSW BC Act	Forest with old growth elements. Large Eucalypt	Possibly occurring within or in close proximity to
Petaurus Australis		Hollows for denning- Inhabits mature or old growth	the site. Records occur immediately adjacent to the
		Blackbutt-Bloodwood forest with heath understorey	road.
		in coastal areas. Prefers mixed species stands with a	
		shrub or Acacia mid storey. Feed primarily on plant	
		and insect exudates, including nectar, sap,	
		honeydew and manna with pollen and insects	
		providing protein. Extract sap by incising (or biting	
i		into) the trunks and branches of favoured food	
		trees, often leaving a distinctive 'V'-shaped scar.	

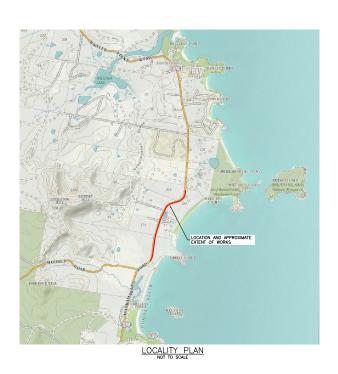


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seasonally variable food resources.



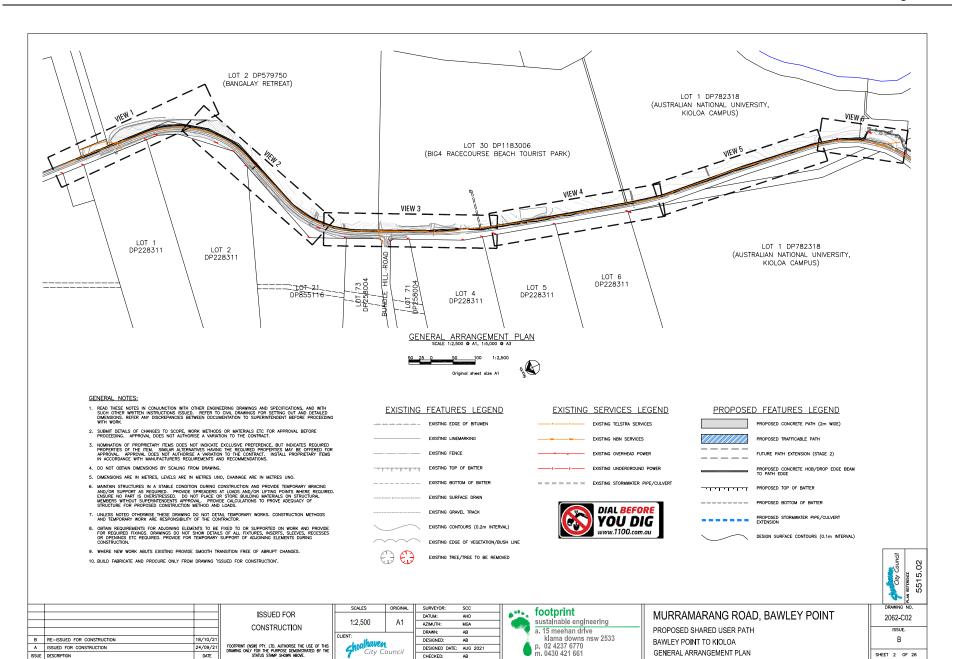
PROPOSED SHARED USER PATH MURRAMARANG ROAD, BAWLEY POINT BAWLEY POINT TO KIOLOA - STAGE 1



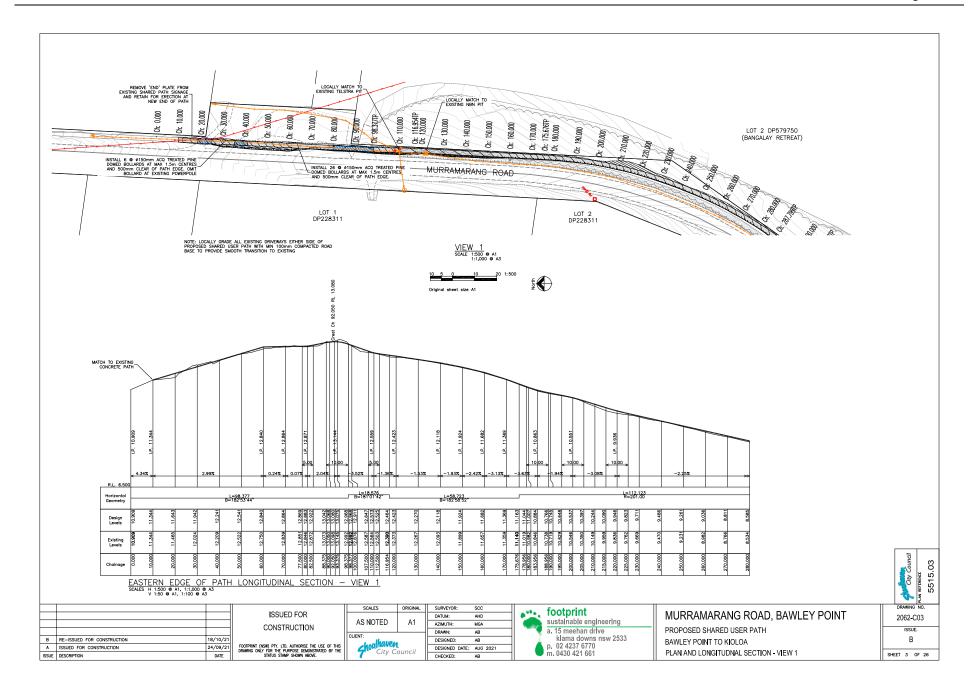
DRAWING No.	SCC PLAN REF. No.	DESCRIPTION
2062-C01	5515.01	TITLE SHEET
2062-C02	5515.02	GENERAL ARRANGEMENT PLAN
2062-C03	5515.03	PLAN AND LONGITUDINAL SECTION - VIEW 1
2062-C04	5515.04	PLAN AND LONGITUDINAL SECTION - VIEW 2
2062-C05	5515.05	PLAN AND LONGITUDINAL SECTION - VIEW 3
2062-C06	5515.06	PLAN AND LONGITUDINAL SECTION - VIEW 4
2062-C07	5515.07	PLAN AND LONGITUDINAL SECTION - VIEW 5
2062-C08	5515.08	PLAN AND LONGITUDINAL SECTION - VIEW 6
2062-C09	5515.09	PATH CROSS SECTIONS - SHEET 1 OF 13
2062-C10	5515.10	PATH CROSS SECTIONS - SHEET 2 OF 13
2062-C11	5515.11	PATH CROSS SECTIONS - SHEET 3 OF 13
2062-C12	5515.12	PATH CROSS SECTIONS - SHEET 4 OF 13
2062-C13	5515.13	PATH CROSS SECTIONS - SHEET 5 OF 13
2062-C14	5515.14	PATH CROSS SECTIONS - SHEET 6 OF 13
2062-C15	5515.15	PATH CROSS SECTIONS - SHEET 7 OF 13
2062-C16	5515.16	PATH CROSS SECTIONS - SHEET 8 OF 13
2062-C17	5515.17	PATH CROSS SECTIONS - SHEET 9 OF 13
2062-C18	5515.18	PATH CROSS SECTIONS - SHEET 10 OF 13
2062-C19	5515.19	PATH CROSS SECTIONS - SHEET 11 OF 13
2062-C20	5515.20	PATH CROSS SECTIONS - SHEET 12 OF 13
2062-C21	5515.21	PATH CROSS SECTIONS - SHEET 13 OF 13
2062-C22	5515.22	TYPICAL SECTIONS AND DETAILS
2062-C23	5515.23	DRAINAGE LONGITUDINAL SECTIONS
2062-C24	5515.24	DRAINAGE DETAILS
2062-C25	5515.25	EROSION AND SEDIMENT CONTROL PRINCIPLES PLAN
2062-C26	5515.26	SGD11 PLAN

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В	3	RE-ISSUED FOR CONSTRUCTION	18/10/21		choalhaven		DESIGNED:	AB		klama downs nsw 2533	BAWLEY POINT TO KIOLOA	B	
Α.	١	ISSUED FOR CONSTRUCTION	24/09/21				DESIGNED DATE: AUG 2021			p. 02 4237 6770			
ISS	SUE I	DESCRIPTION	DATE		7 City Co	ouncii	CHECKED:	AB	■ m. 0	m. 0430 421 661	TITLE SHEET	SHEET 1 OF 2	:6

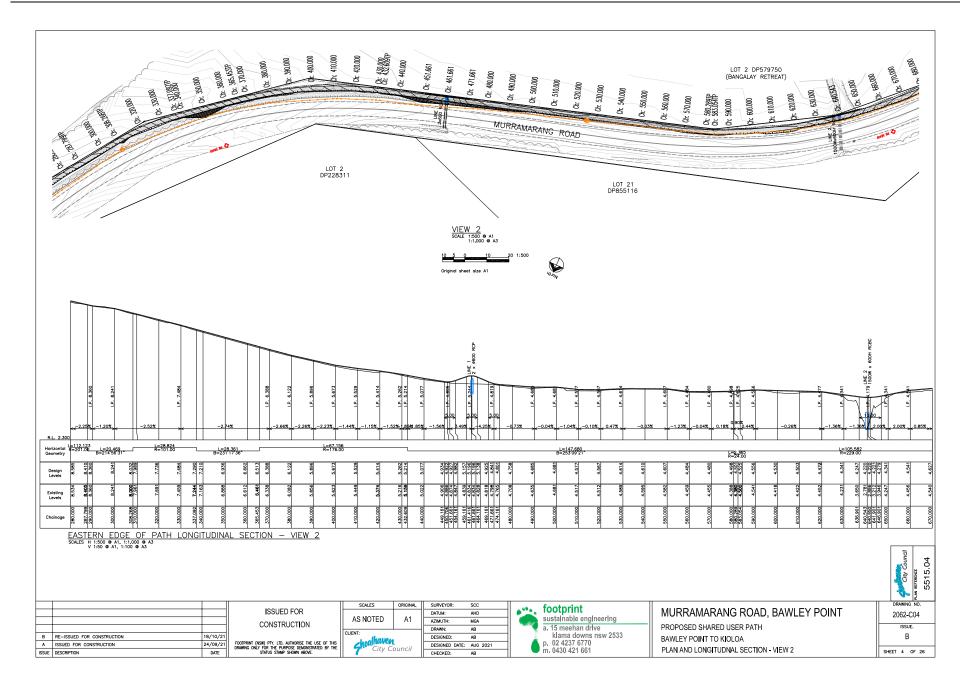




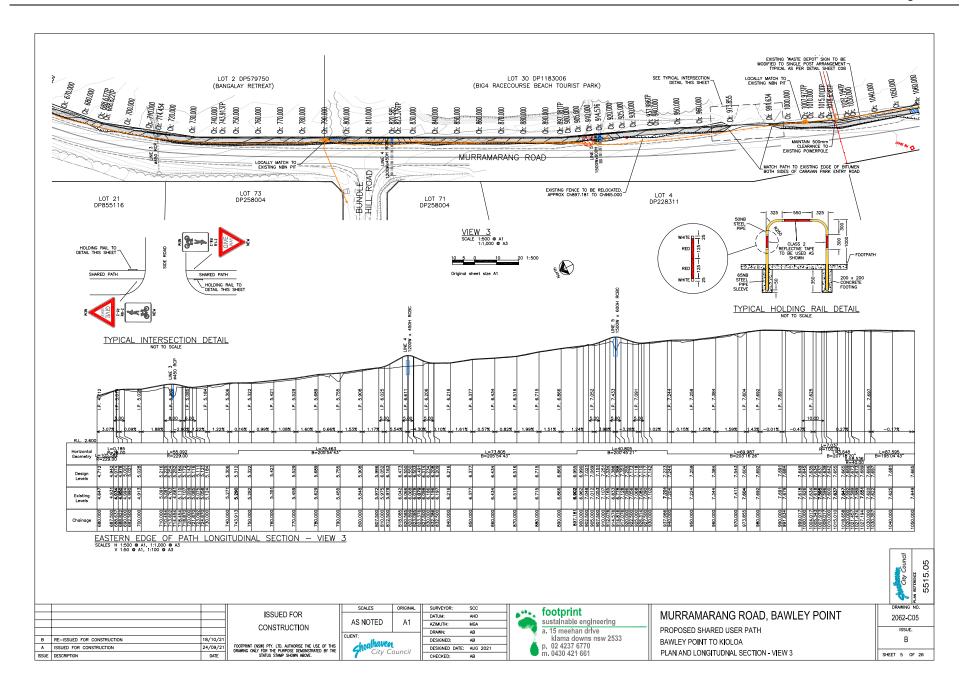




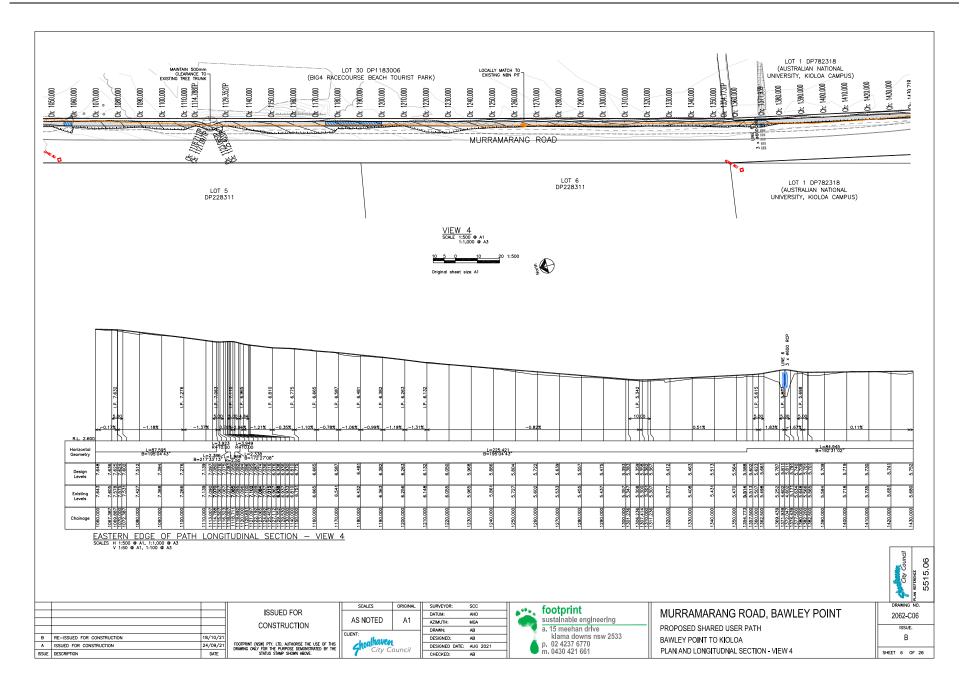




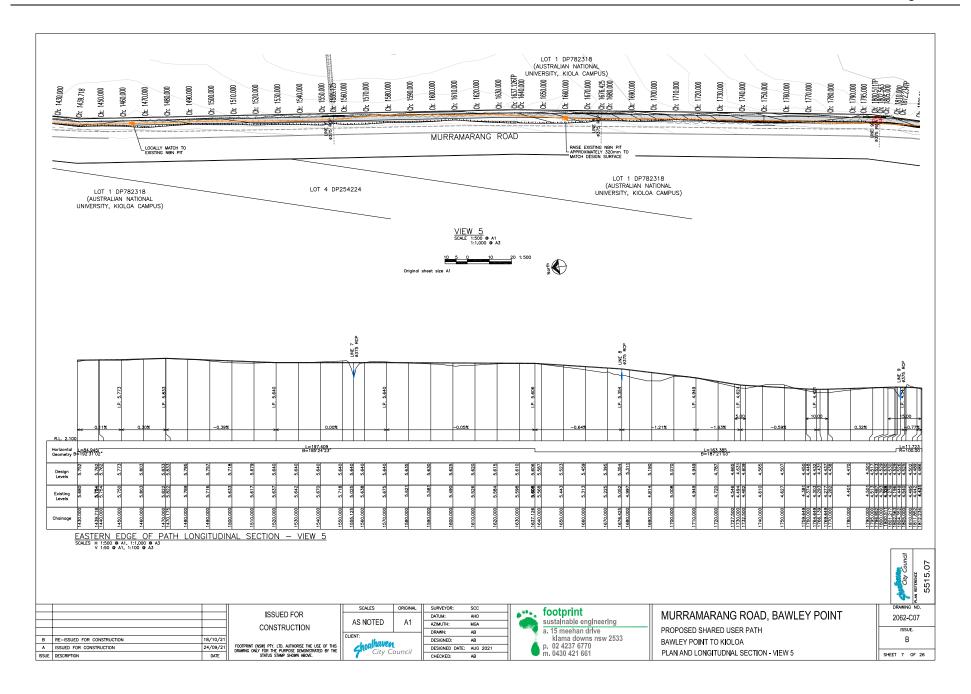




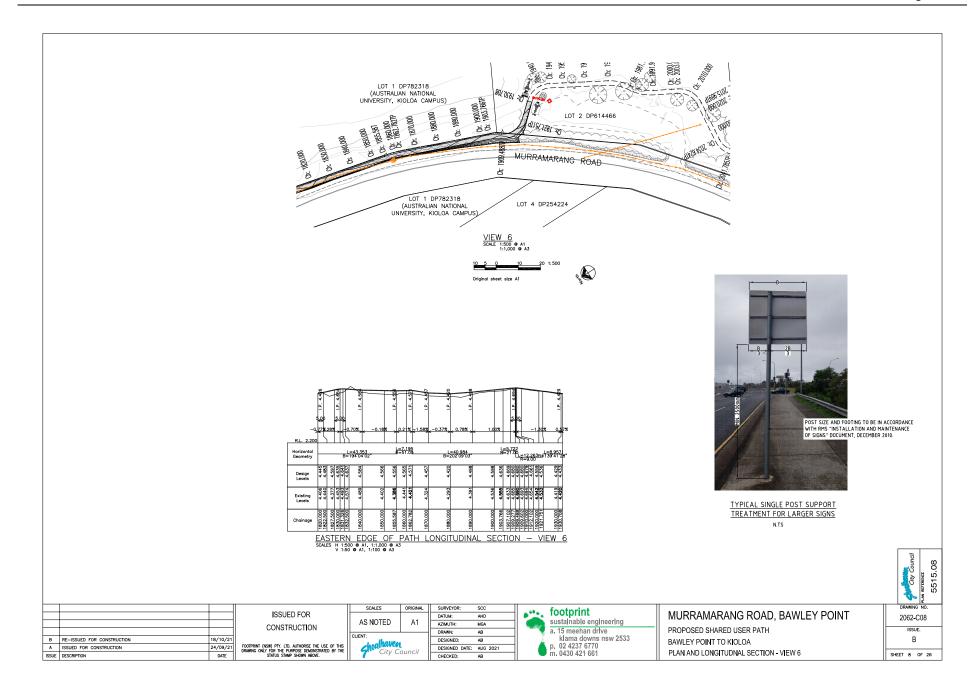




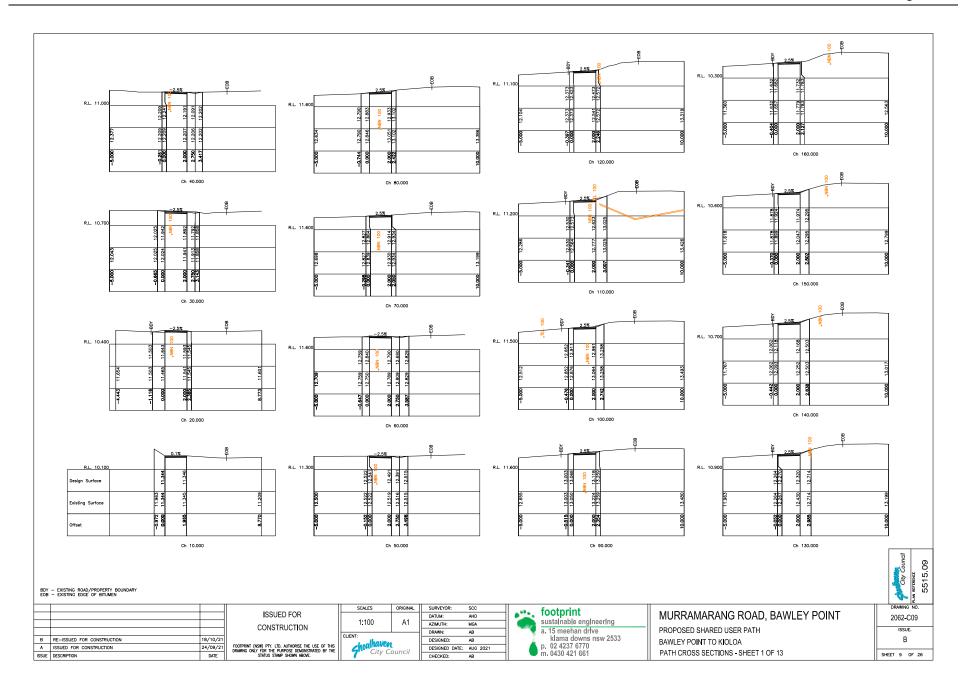




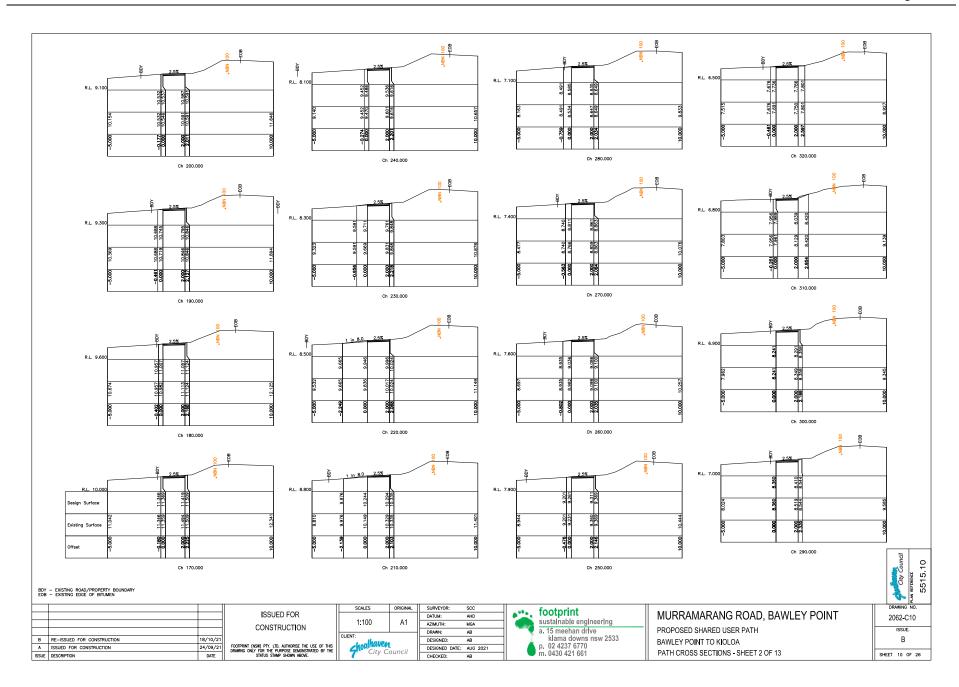




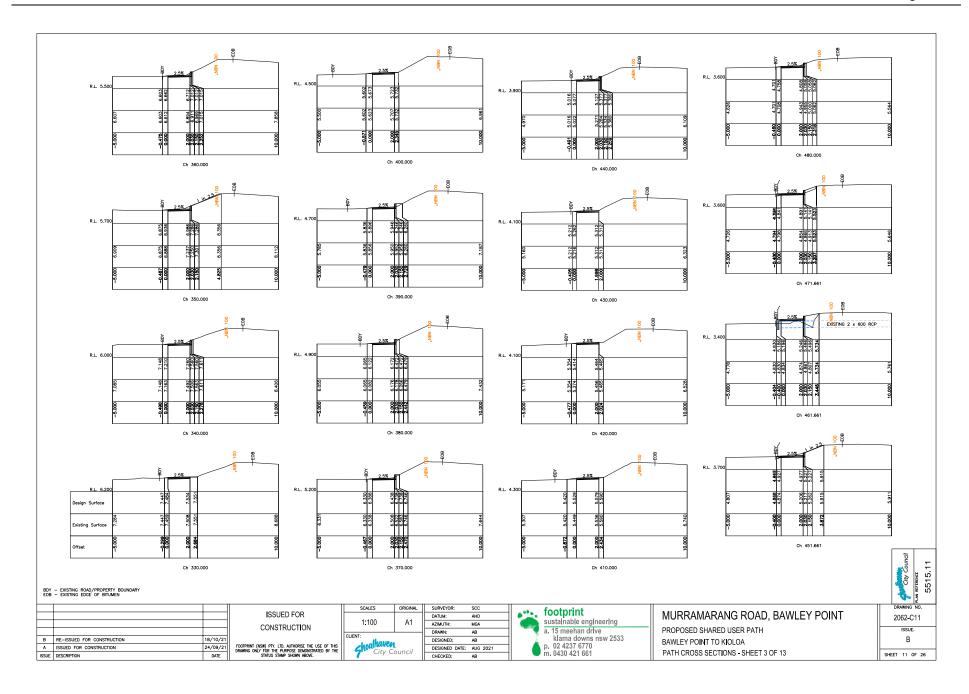




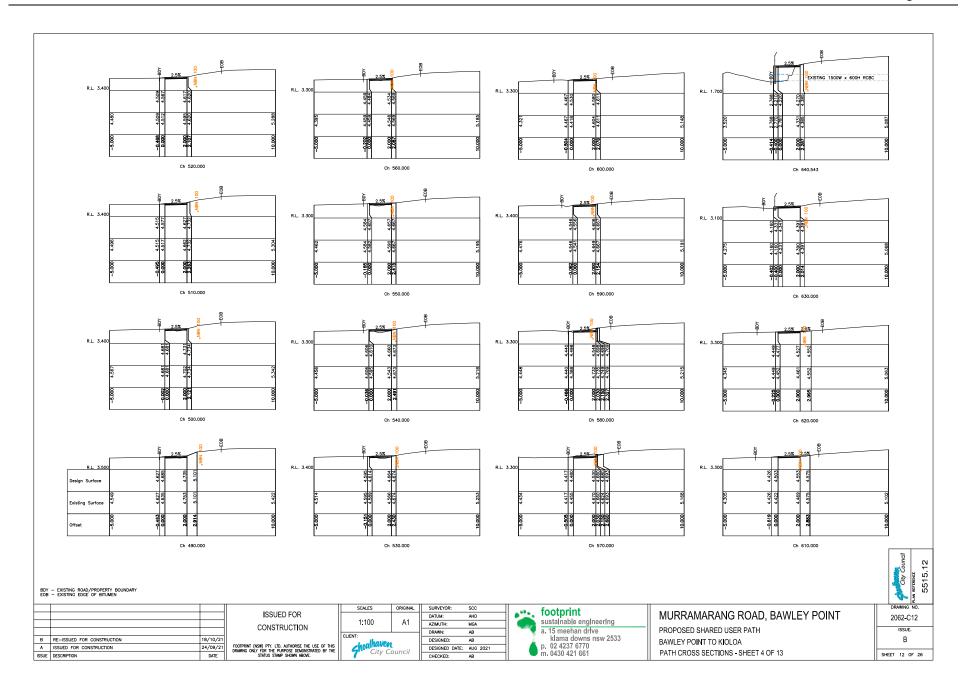




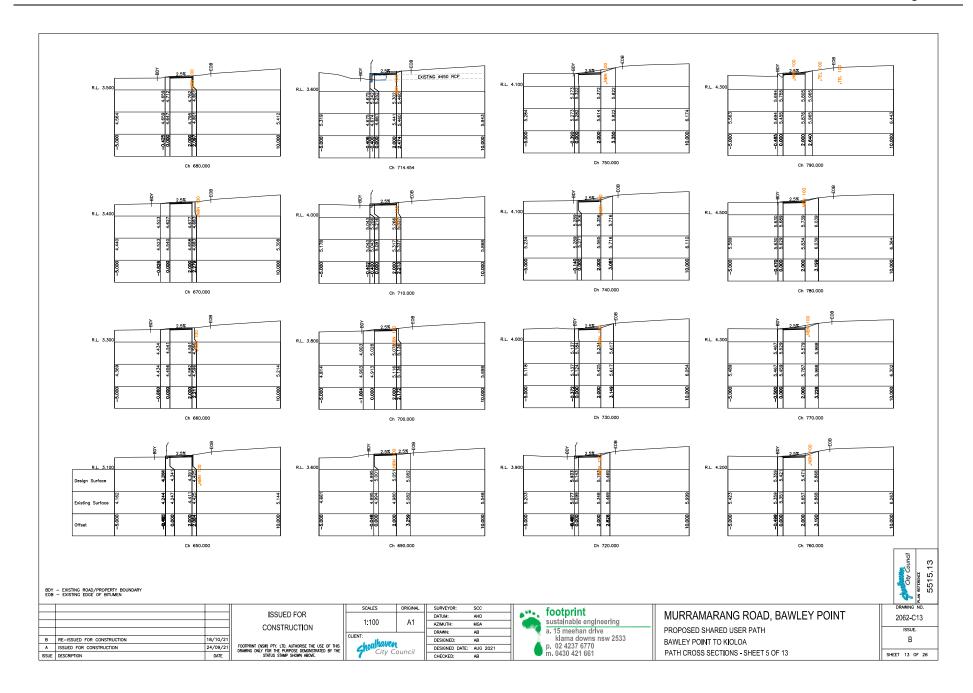




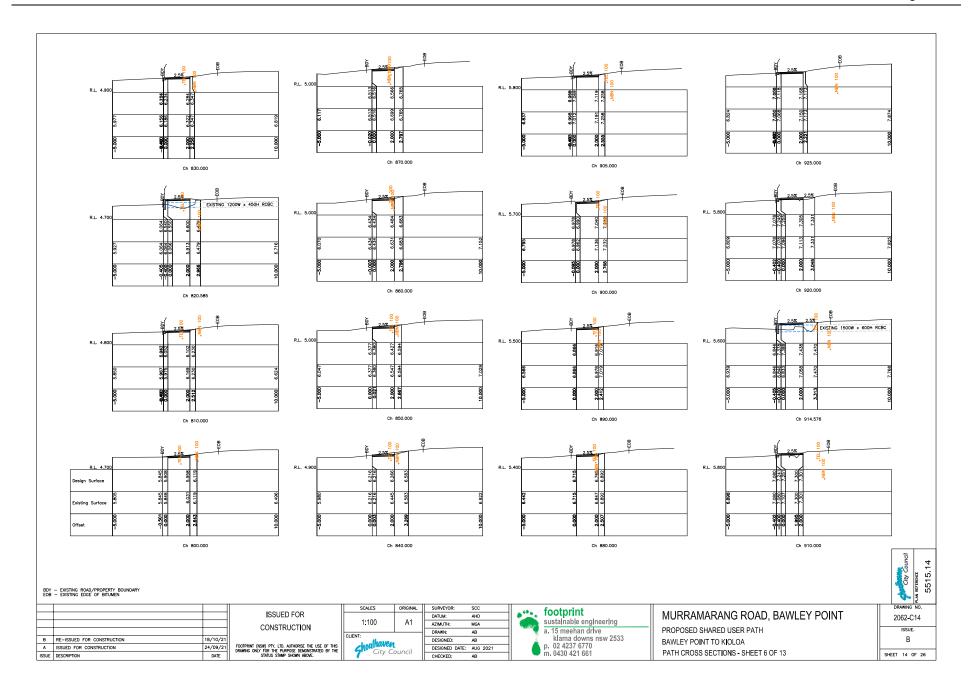




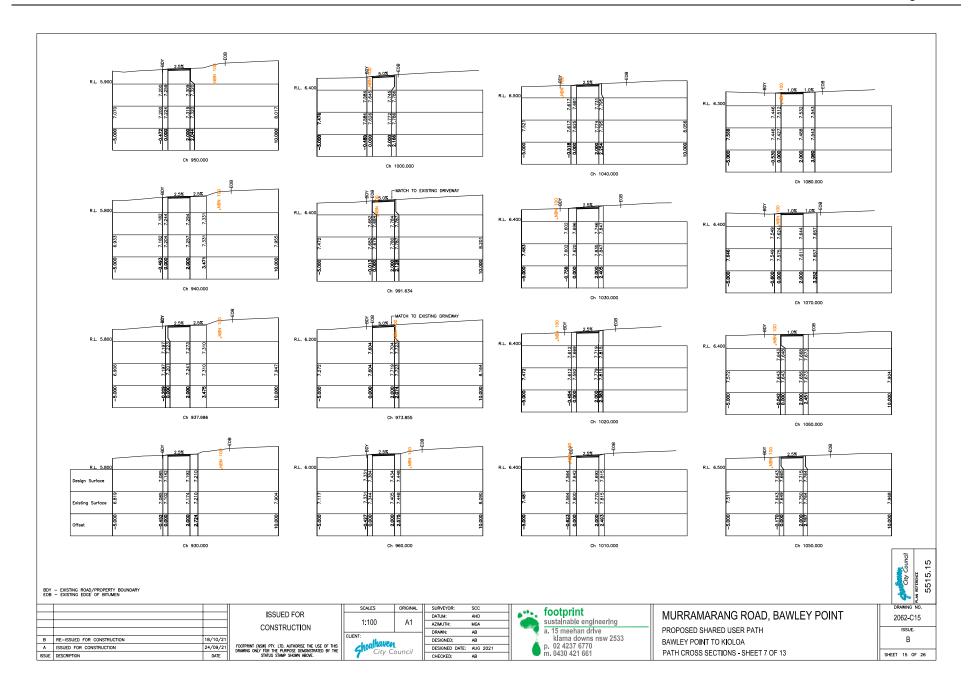




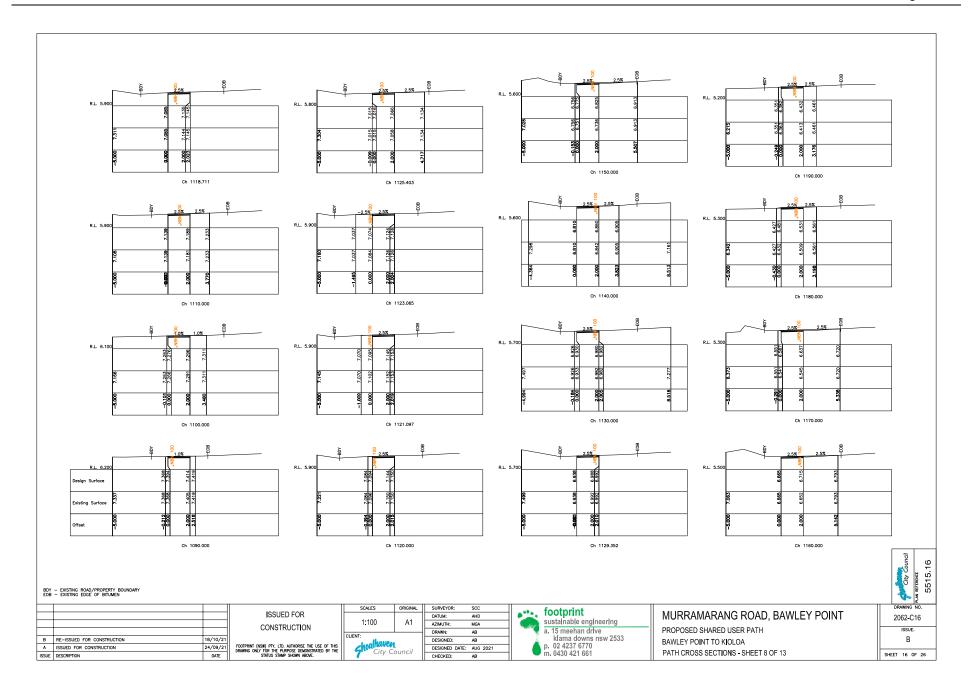




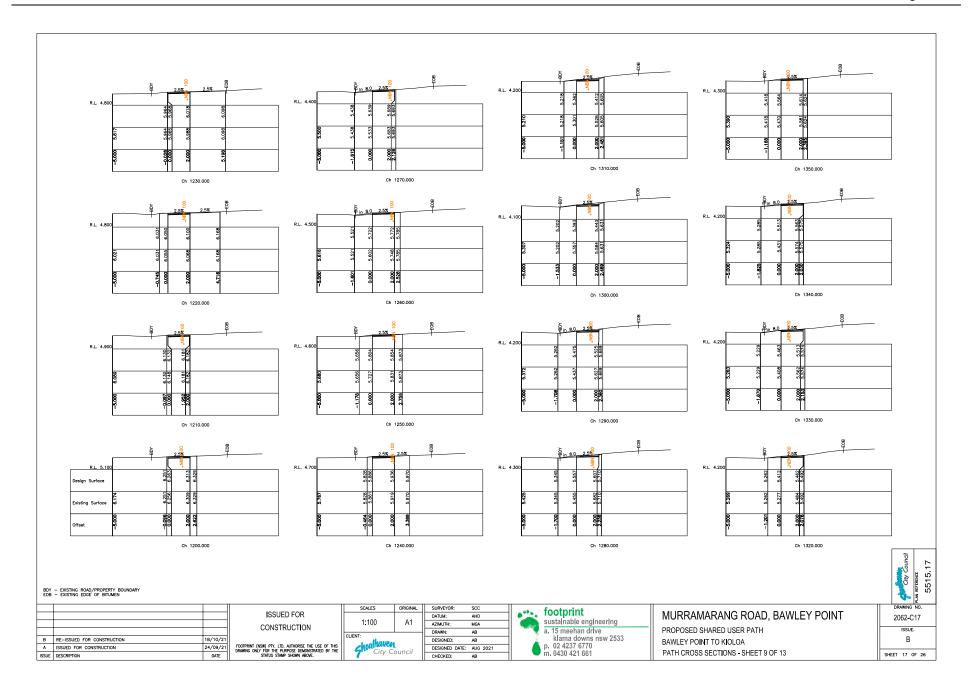




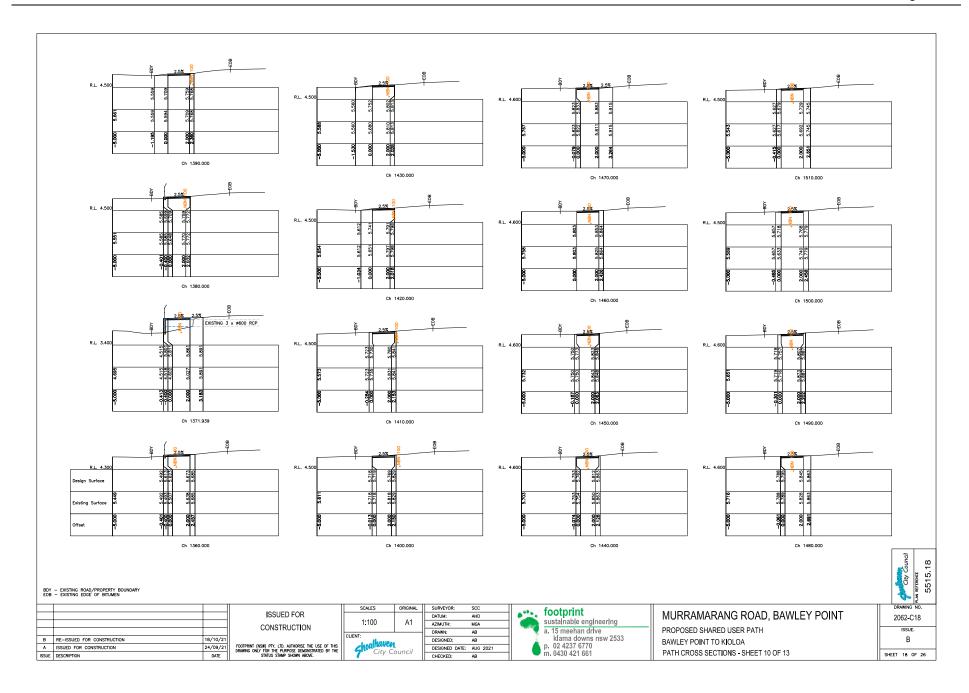




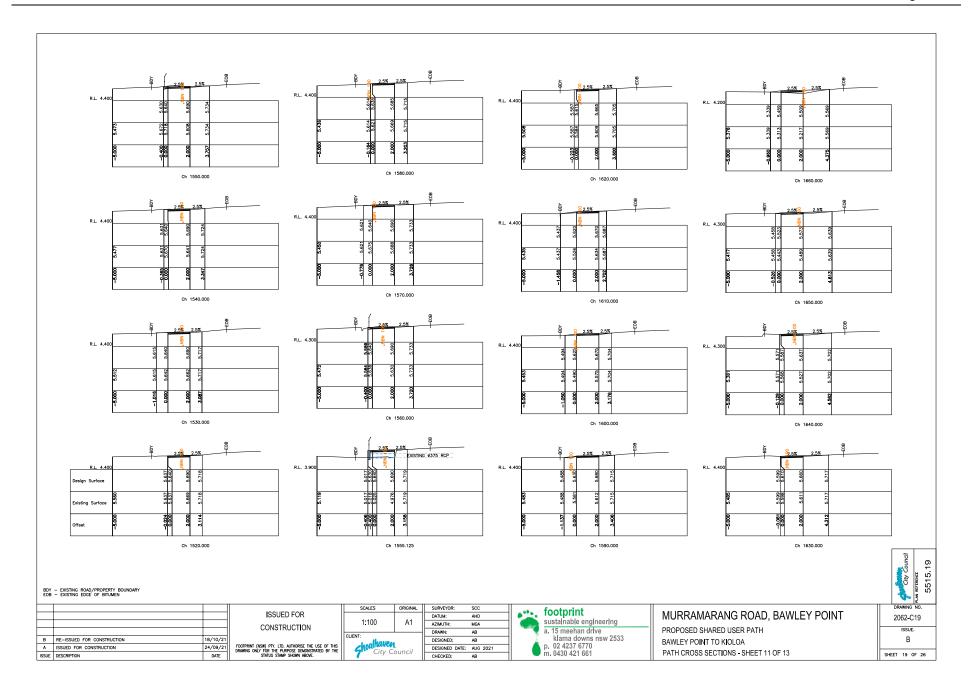




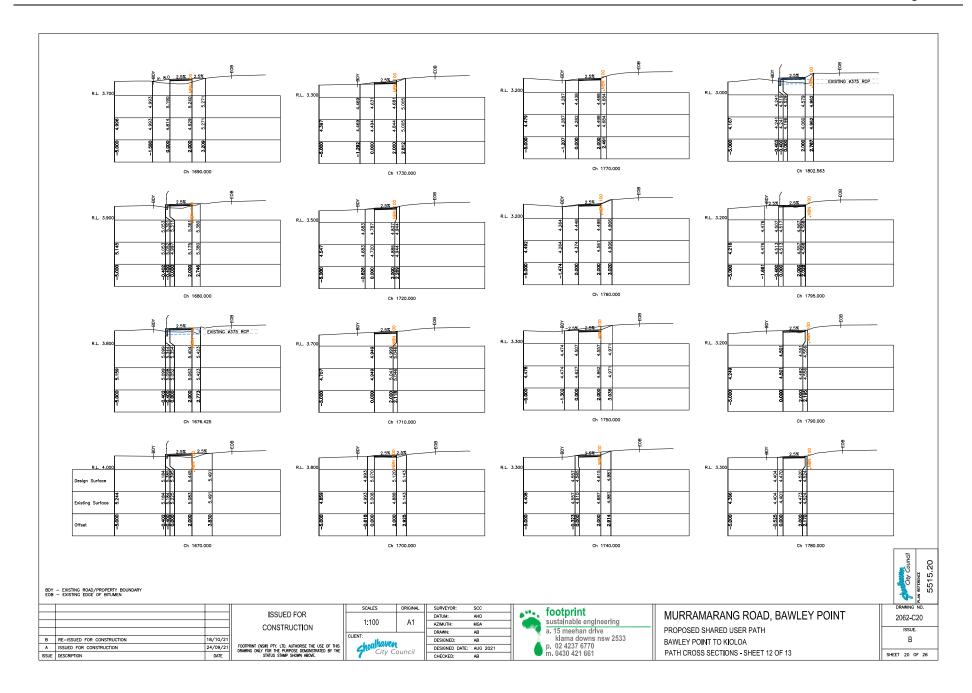




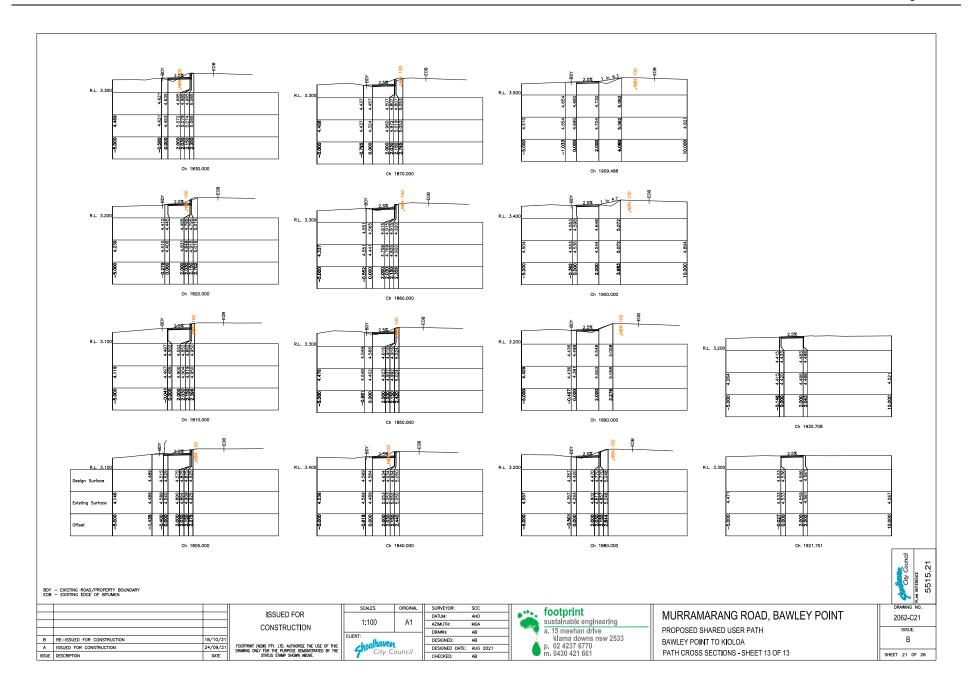




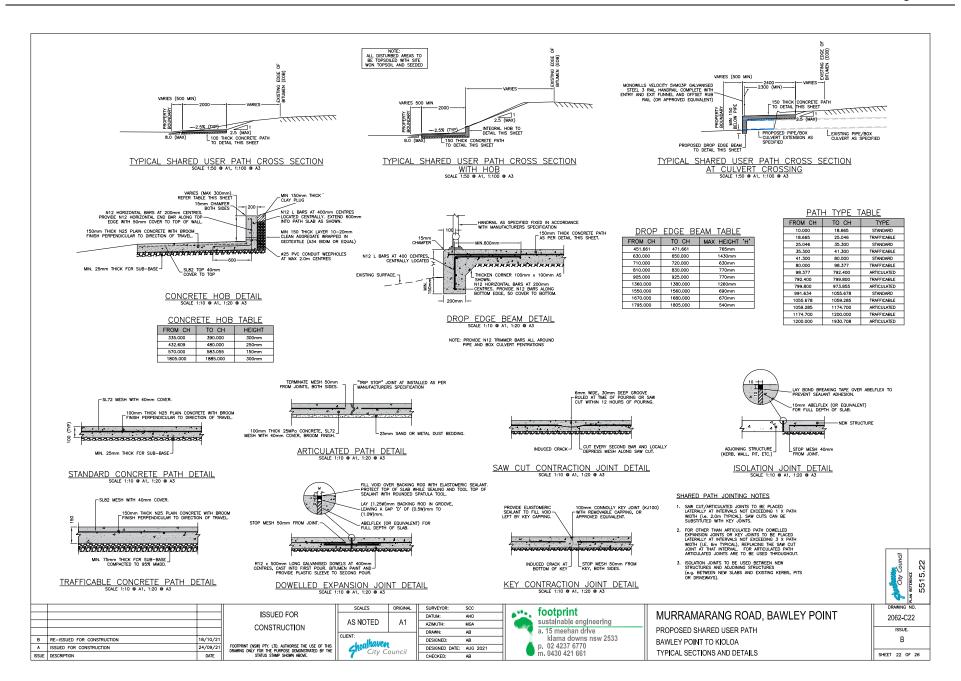




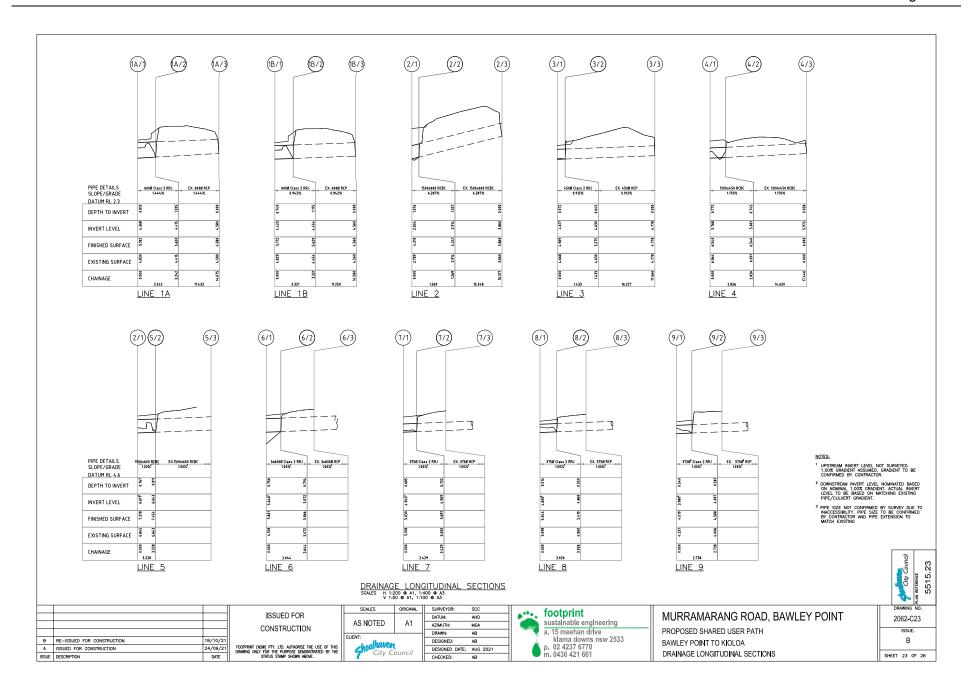




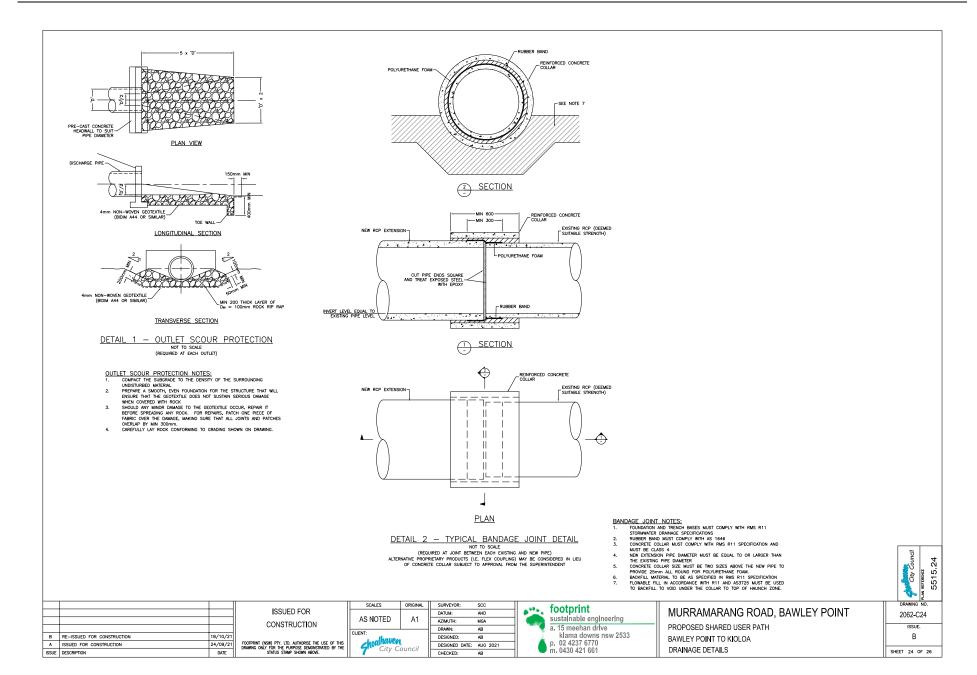














- GENERAL REQUIREMENTS

 1. THE FOLLOWING EROSON AND SEMMENT CONTROL PRINCIPLES PLAN (ESCP) DEMONSTRATES THE APPLICATION OF AN INDICATIVE SUITE OF MANAGEMENT MEASURES AND HAS BEEN DEVELOPED IN GENERAL ACCORDANCE WITH LANGOOM (2004) MANAGING URBAN STORMMATER: SOLIS AND CONSTRUCTION, OTHERWISE KNOWN AS "THE BUE BOOK".

- RECCT SAFFY FENONG WITH SIGNAGE CLEARLY INDICATING THAT THE SITE IS A CONSTRUCTION ZONE AND ACCESS IS RESTRICTED AS DEBUTED INCESSARY.

 RECCT CLEARLY VISUEL BEARRER FENONG AT LOCATIONS SHOWN OR IF NOT SHOWN AT THE DISCRETION OF THE SITE SUPERNITIONED TO ENGURE TRAFFIC IS CONTROLLED AND TO POPHIBIT UNNECESSARY SITE INSTALL STREAMED SITE ACCESS AN ACCORDANCE WITH SANDARD DRAWNOS SOB-14 AT EACH SITE ACCESS POINT TO PREVENT CONSTRUCTION EQUIPMENT FROM CARRYING SEDWENT OFF THE SITE ONTO SURROLLOND, ROADS.

 INSTALL SEDWENT AND RESONON CONTROL DEVICES IN ACCORDANCE WITH THE CONSTRUCTION DETAILS SPECIFIC IN THIS DRAWNOS SET AND/OR THE REQUIREMENTS OF THE "BULE BOOK".

- CONSTRUCTION

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 ALL DISTURBED AREAS SHALL BE REPORTED AND SOOM AS THE RELEVANT WORKS ARE COMPLETED.

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- STOCKPILES

 13. SPINE TOPSOL STOCKPLES SHALL BE LOCATED NO CLOSER THAN SIM FROM EXISTING VEGETATION,
 14. IF STOCKPLES ARE TO BE IN PALCE FOR LONGER THAN 10 DAYS THEN THEY SHALL BE STABILISED BY
 COVERNOR WITH MULCH OR WITH TEMPORARY VEGETATION,
 15. STOCKPLES AREL TO BE IN MOTORORY NO HOHSTER HAN 270 HOW AND SHALL HAVE BATTER SLORES NO
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- FENDING SHALL BE INSTALLED ALONG THE LENGTH OF THE COWNSLOPE SIDE ON ANY STOCKPILE.

 16. ALL SEDMEN BASIS AND TRAPS SHALL BE CLEANED WHEN THE STRUCTURES ARE A MAXIMAL OF 60X FULL OF SOUL MATERIALS (INCLUDING DURING THE MAINTENINCE FERBO), AND DEPOSED OF IN A MAINNER THAT PREVENTS FURTHER POLLUTION OF THE STE.

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 19. THE CONTRACTOR OF ONE THE ATTERNS FROM HAZARO ARDAY (ELA) MANGE LOGGER THAN FIVE METTERS FROM AREAS OF LIKELY CONCENTRATE OR HIGH VELOCITY FLOWS ESPECIALLY DRAINS, WATERWAY AND PAPED METALY. NEVERTHER OR HIGH VELOCITY FLOWS ESPECIALLY DRAINS, WATERWAY AND PAPED METALY. NEVERTHER OF HIGH VELOCITY FLOWS ESPECIALLY DRAINS, WATERWAY AND PAPED METALY. NEVERTHER OR HIGH VELOCITY FLOWS ESPECIALLY DRAINS, WATERWAY AND PAPED METALY. NEVERTHER OF HIGH VELOCITY FLOWS ESPECIALLY DRAINS, WATERWAY AND PAPED METALY. NEVERTHER OF HIGH VELOCITY FLOWS ESPECIALLY DRAINS.

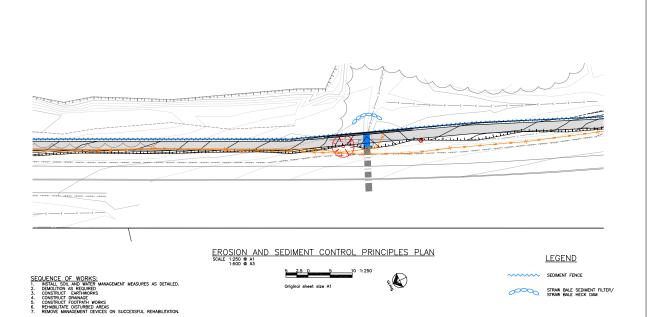
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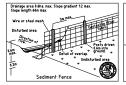
- IMMEDIATELY BEFORE FORECAST RAIN AND AFTER RAINFALL
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 THE RECEDENT OF THE CHECK SHEET SHOULD BE FORMARDED TO THE PROJECT MANAGER
 WEEKLY FOR THEIR INFORMATION. ALL CHECK SHEETS SHOULD BE COLLATED, KEPT ON-SITE AND
 MICE AMPLIABLE TO ANY AUTHORSES PERSON ON TRUSTED.

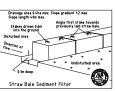
- REVECETATION 20. TOPSOIL SHALL BE RESPREAD TO A MINIMUM DEPTH OF 75mm TO ALL DISTURBED AREAS IN ACCORDANCE WITH 504-5
- ALL DISTURBED AREAS OUTSIDE THOSE AREAS REQUIRING SPECIFIC LANDSCAPE TREATMENTS (I.E WETLANDS, WATERCOURSES, PLANTING BEDS ETC) SHALL BE REVEGETATED WITH THE FOLLOWING GRASS SEED MIX AT THE NOMINATED APPLICATION RATES:

AUTUMN/WINTER	kg/Ha	SPRING/SUMMER	kg/Ha
RYE, CORN OR OATS	15	JAPANSE MILLET	24
WIMMERA RYEGRASS	10	WIMMERA RYEGRASS	8
WHITE CLOVER	5	RED CLOVER 5	
RED CLOVER	5	WHITE CLOVER	5
		COLICH	8

- 22. IF THE AREAS ARE SOMN IN THE AUTUM/WHITER PERIOD, IT MAY BE INCESSEARY TO DIRECTOR IN THE SPRING/SUMMER PERIOD WITH THAT MINUTURE CONTAINING A PERENNAL GRASS MATURE (e.g., COUL), ALSO AT SOWING AN APPROPRIATE FERTILISER SHALL BE APPLIED EVENLY AT A RATE OF 250kg/hb HAVING AN AN ANALYSIS OF 10 : 3.9 : 6.2 MITROCEN, PHOSPHORIC ADD, POTABAT COMPOUND.
- THE CONTRACTOR SHALL MAINTAIN GRASS COVER UNTIL ALL WORKS HAVE BEEN COMPLETED INCLUDING THE MAINTENANCE PERIOD, BY FREQUENT WATERING AND MOWING WHERE REQUIRED.









LAND USE	LIMITATIONS	COMMENTS	
CONSTRUCTION AREAS	DISTURBANCE TO BE NO FURTHER THAN FIVE (5) AND PREFERABLE TWO (2) METRES FROM THE EDGE OF ANY ESSENTIAL ENCINEERING ACTIVITY AS SHOWN ON THE PLAN	ALL SITE WORKERS WILL CLEARLY RECOGNISE THESE ZONES THAT, WHERE APPROPRIATE, ARE IDENTIFIED WITH BARRIER FENCING (UPSLOPE) AND SEDIMENT FENCING (DOWNSLOPE) OR SIMILAR MATERIALS	
ACCESS AREAS	LIMITED TO A MAXIMUM WIDTH OF TEN (10) METRES	THE SITE MANAGER WILL DETERMINE AND MARK THE LOCATION OF THESE ZONES ONSITE. ALL SITE WORKERS WILL CLEARLY RECOGNES THEIR BOUNDARIES THAT, WHERE APPROPRIATE, ARE MARKED WITH BARRIER MESH, SEDIMENT FENCING, OR SIMILAR MATERIALS.	

В	RE-ISSUED FOR CONSTRUCTION	18/10/21
Α	ISSUED FOR CONSTRUCTION	24/09/21
ISSUE	DESCRIPTION	DATE

ISSUED FOR CONSTRUCTION

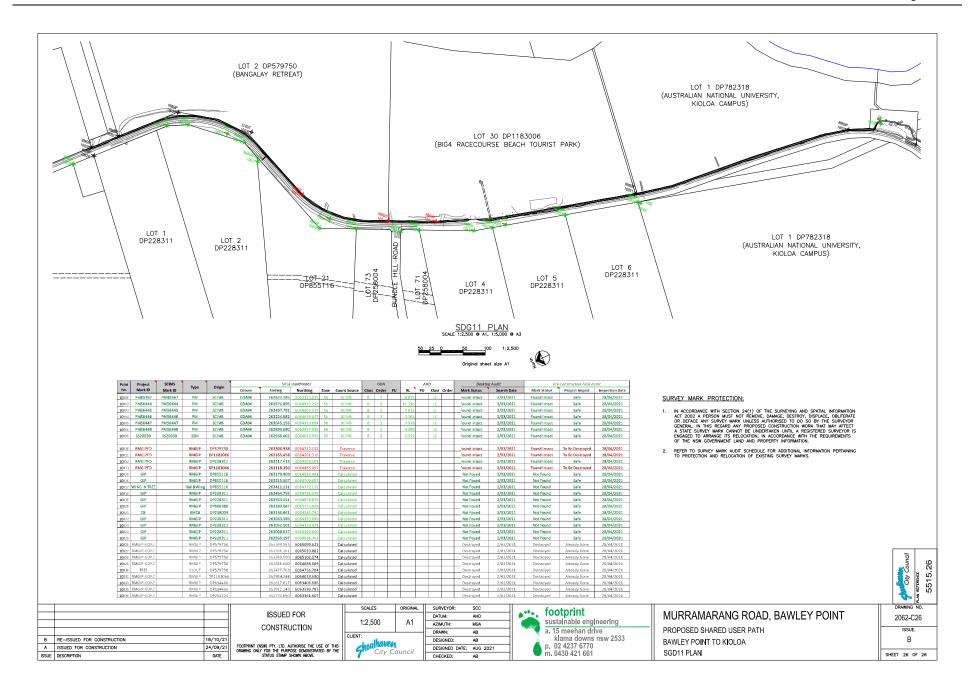
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		AZIMUTH:	MGA
CLIENT:		DRAWN:	AB
Thoalhaven City Council		DESIGNED:	AB
		DESIGNED DATE:	AUG 2021
		CHECKED:	AB

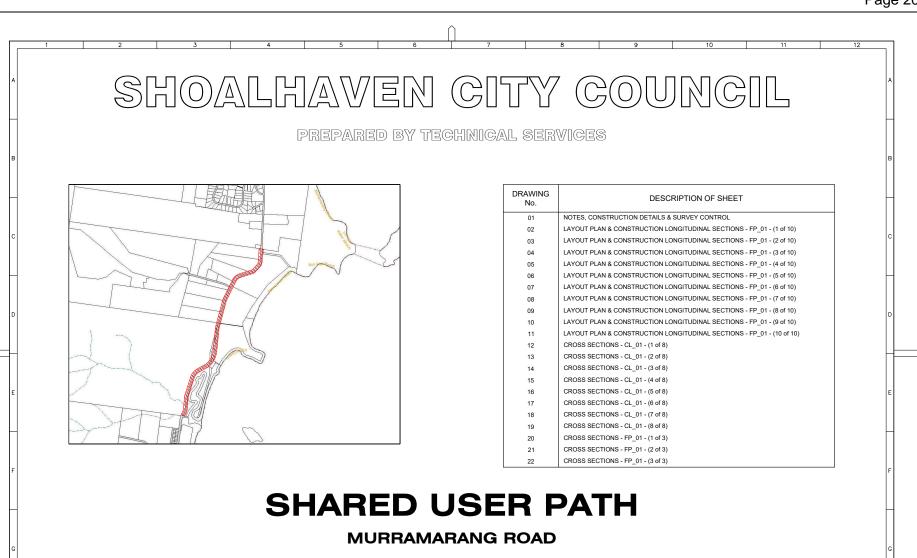


MURRAMARANG ROAD, BAWLEY POINT PROPOSED SHARED USER PATH BAWLEY POINT TO KIOLOA EROSION AND SEDIMENT CONTROL PRINCIPLES PLAN





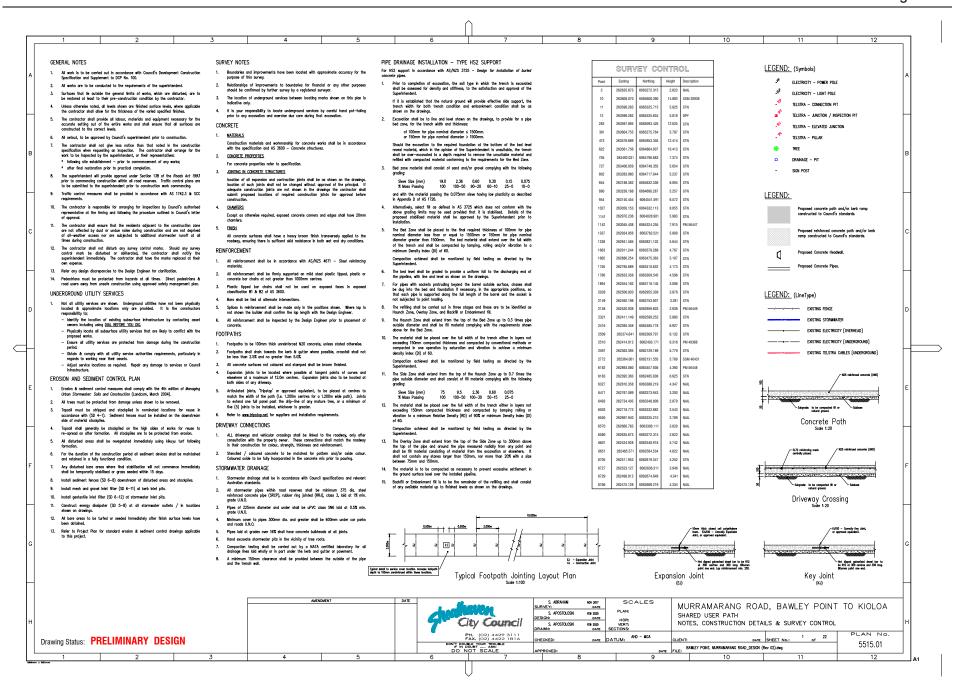




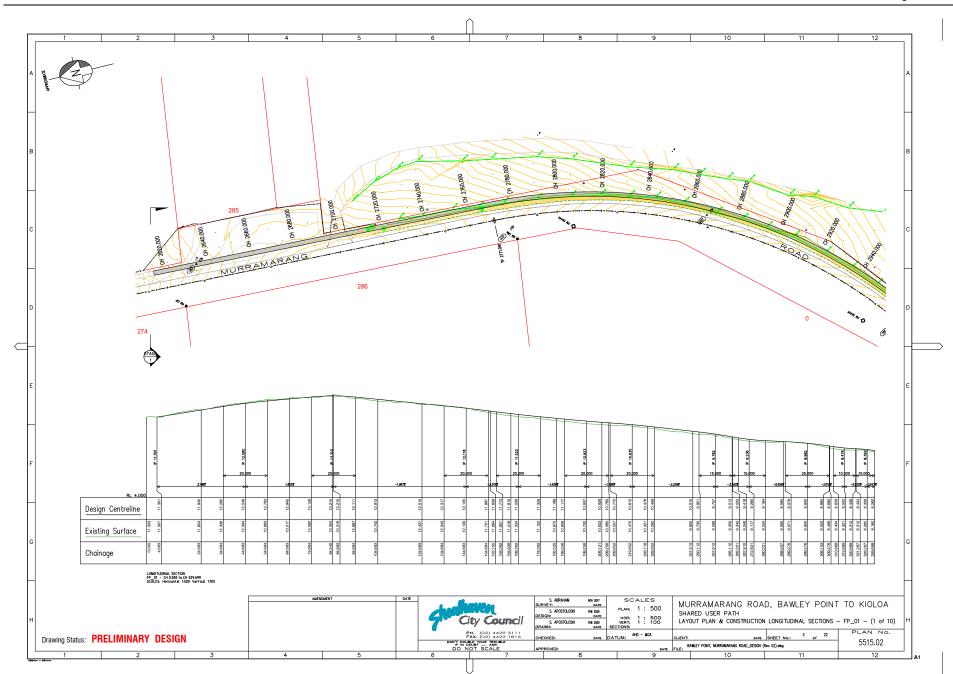
BAWLEY POINT TO KIOLOA

PLAN No. 5515 MANAGER | TECHNICAL SERVICES SECTION TOM DIMEC SHEET No.: -No. SHEETS: 22

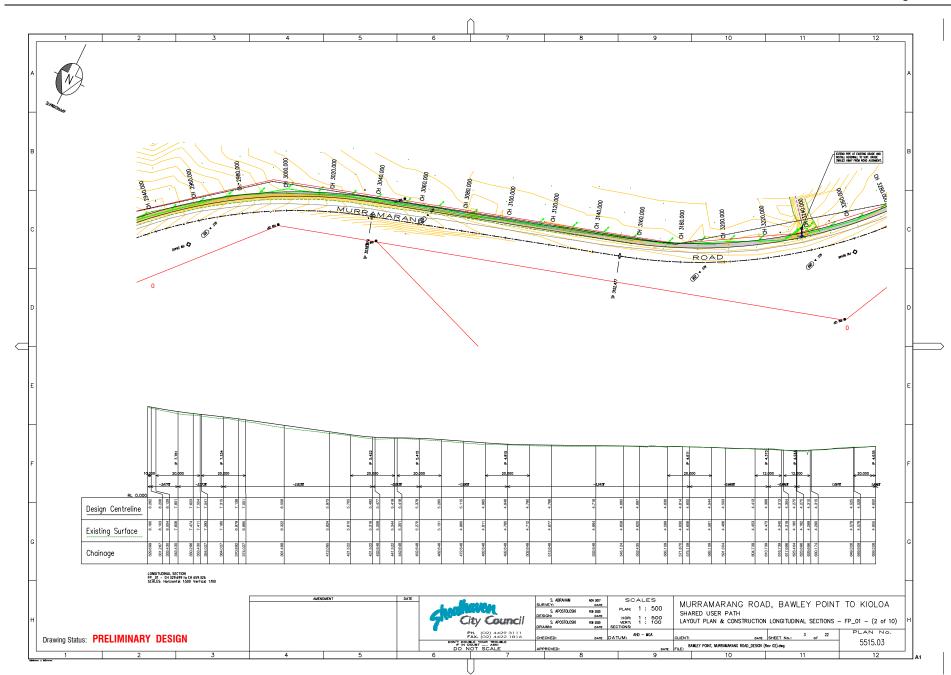




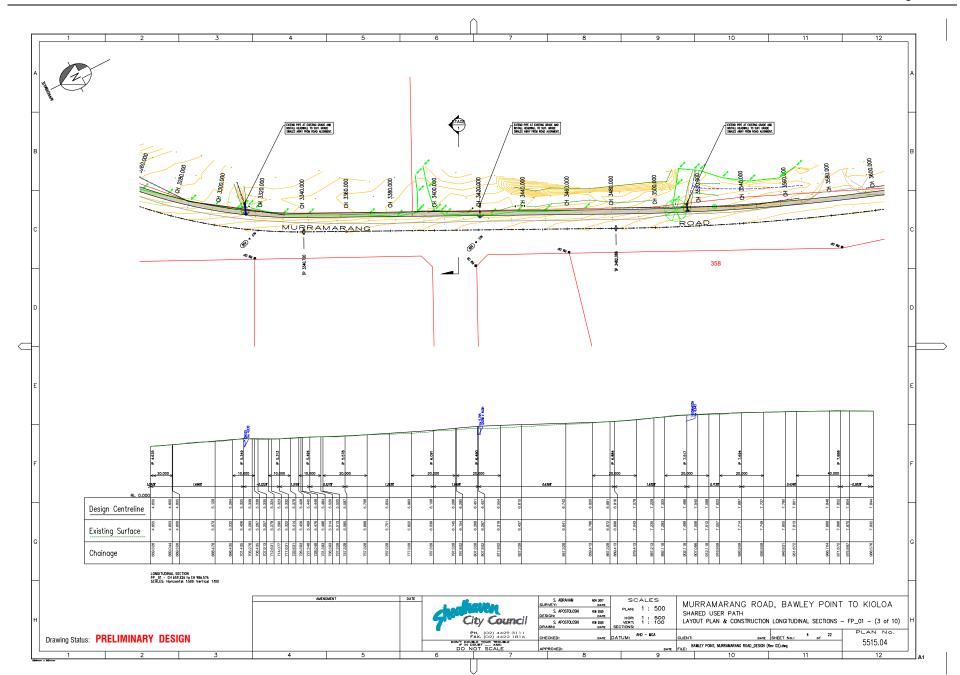




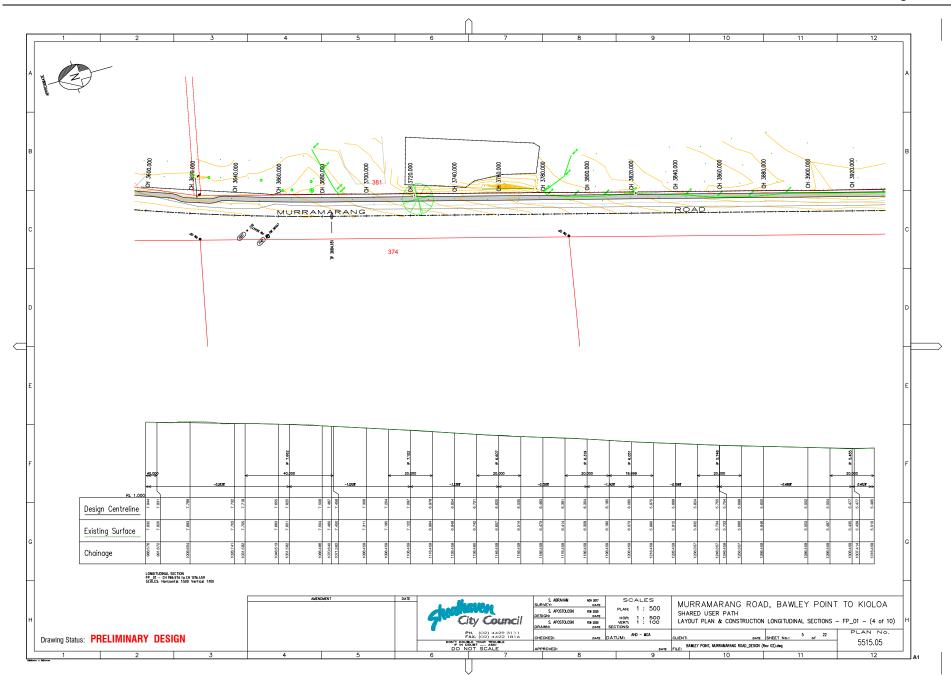




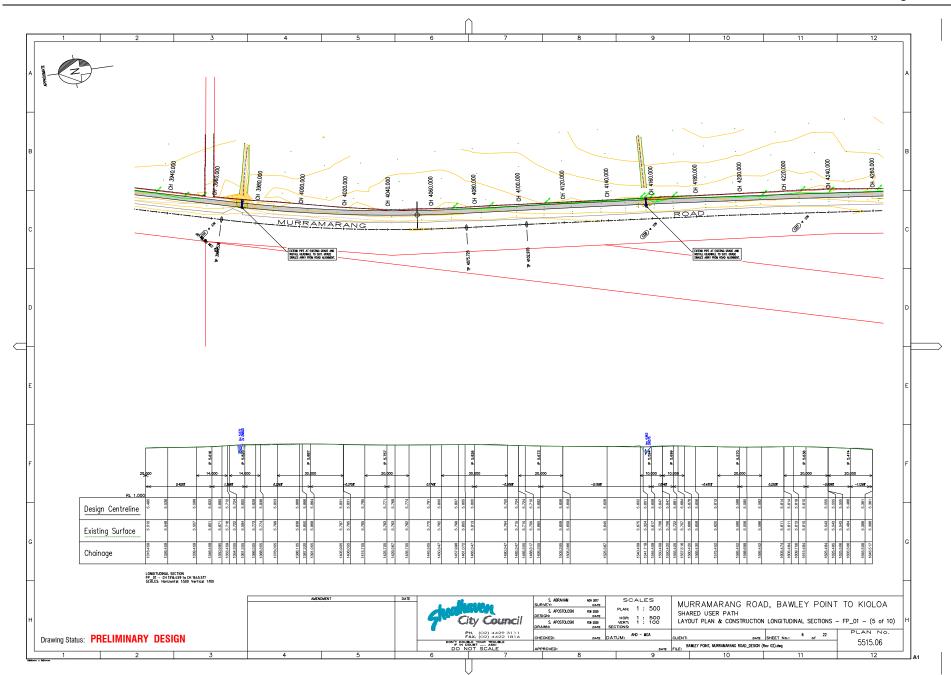




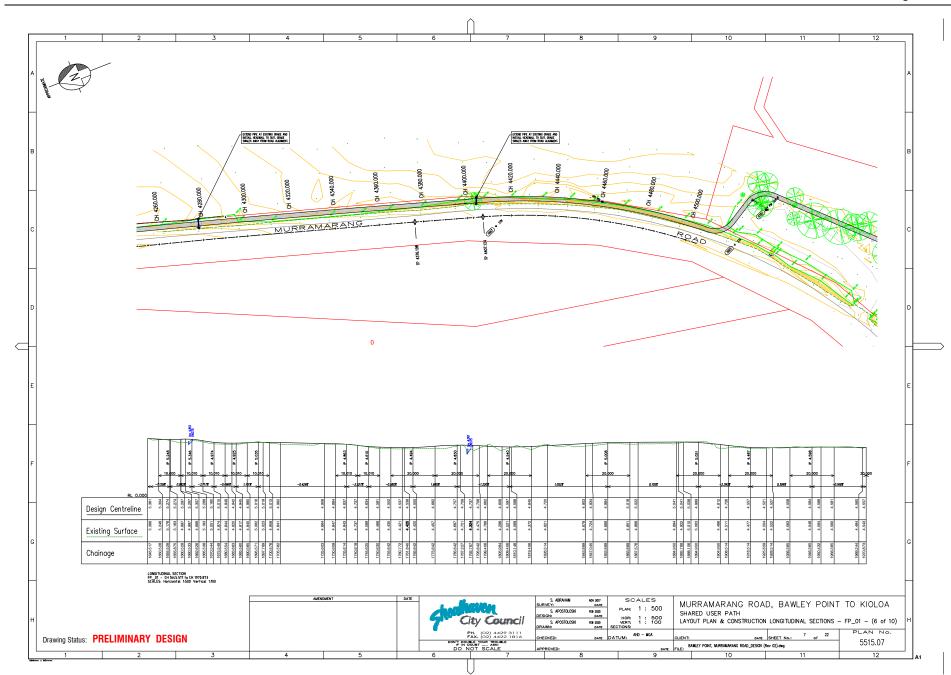




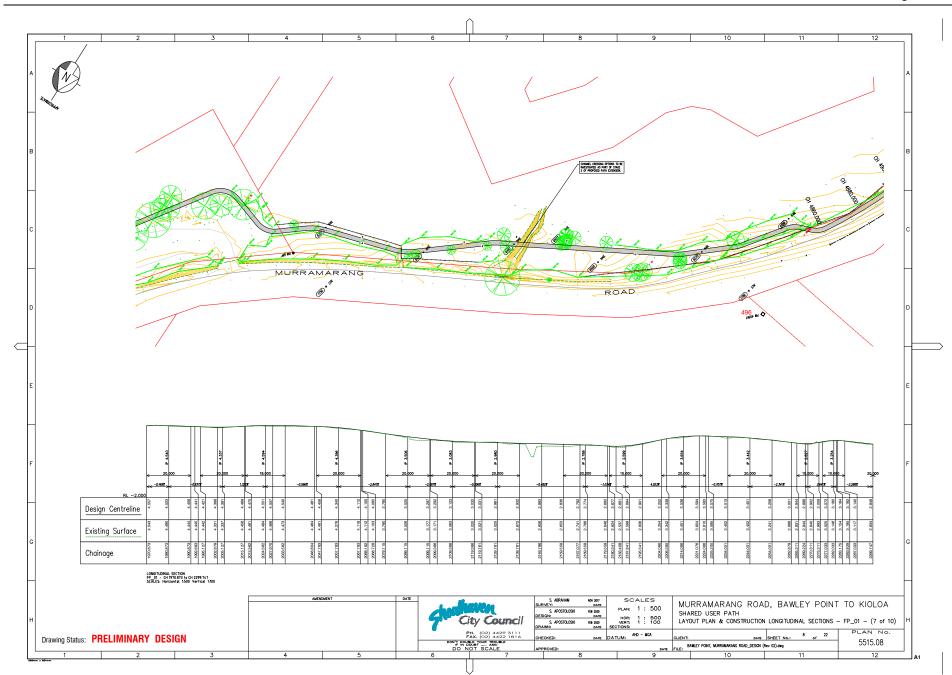




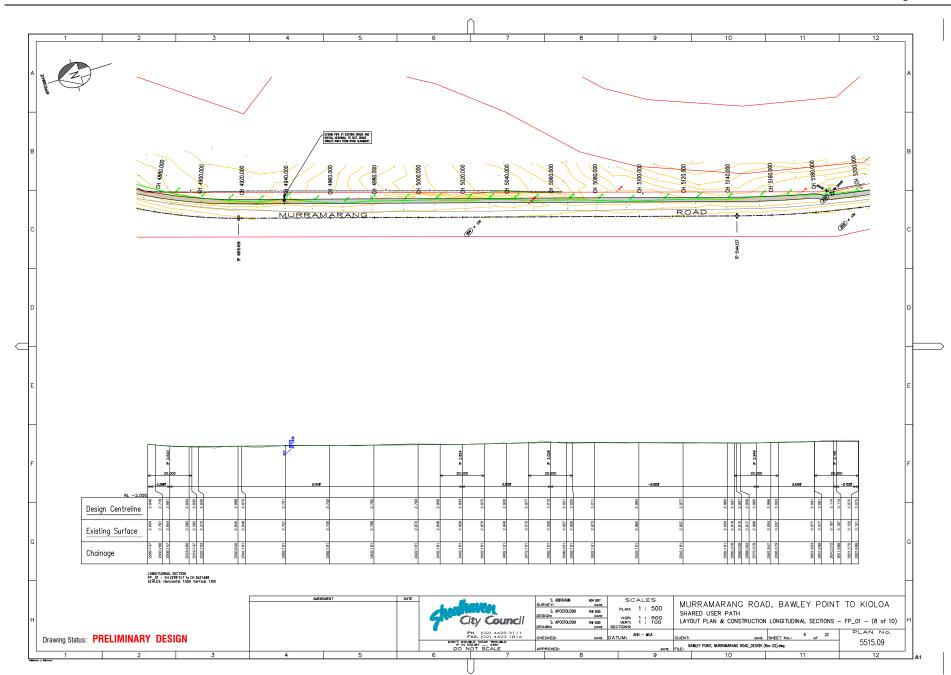




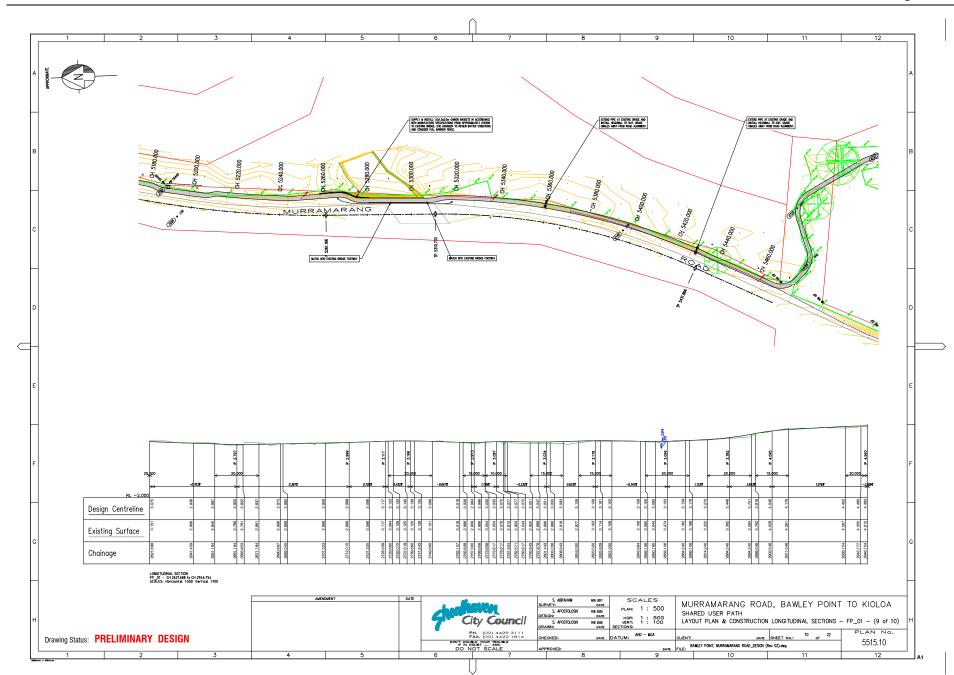




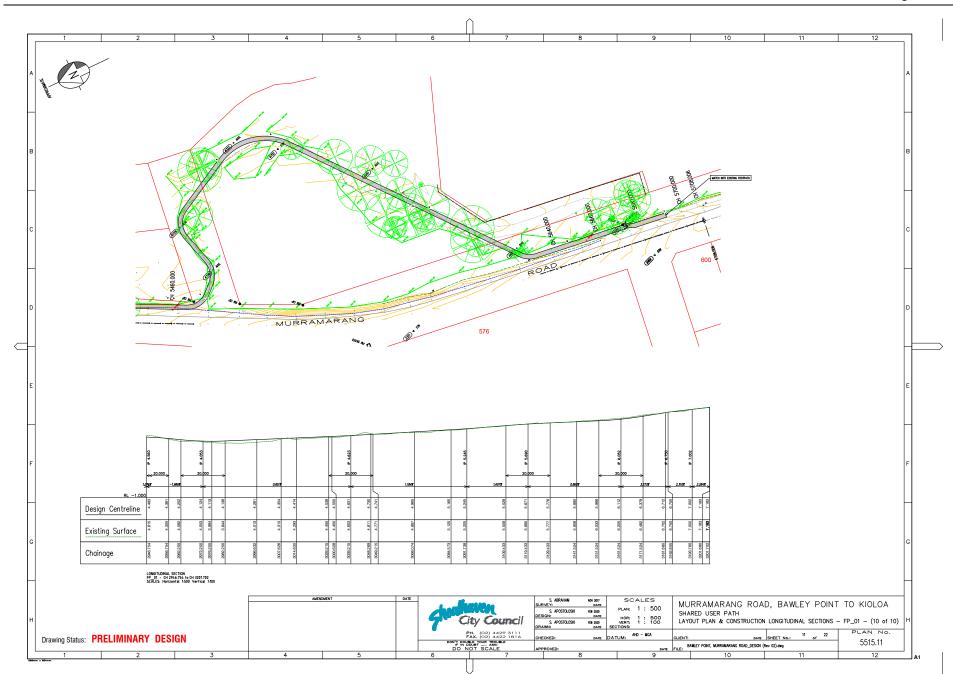




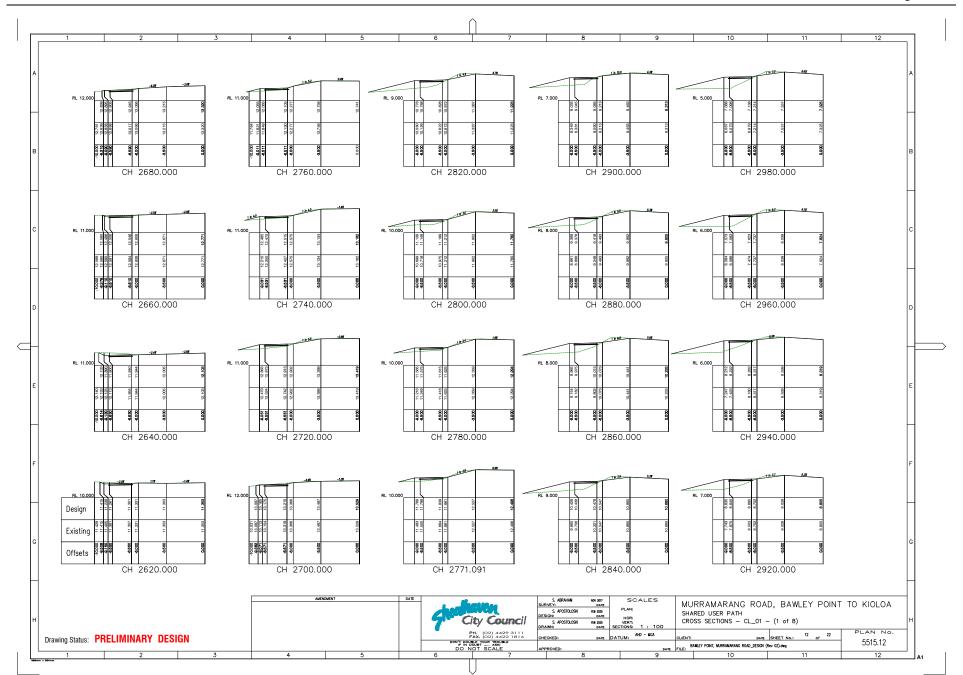






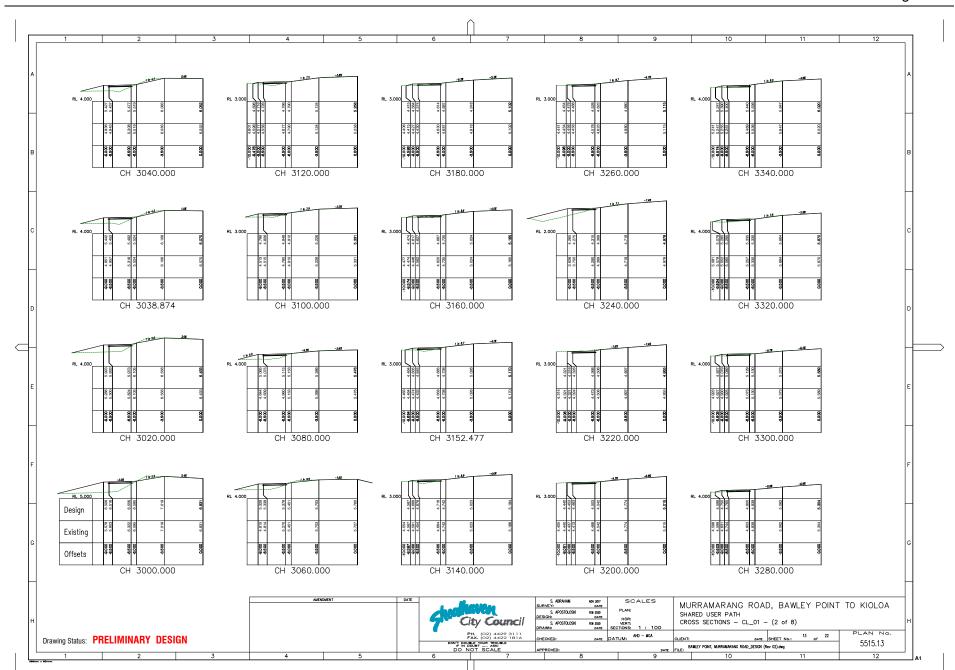






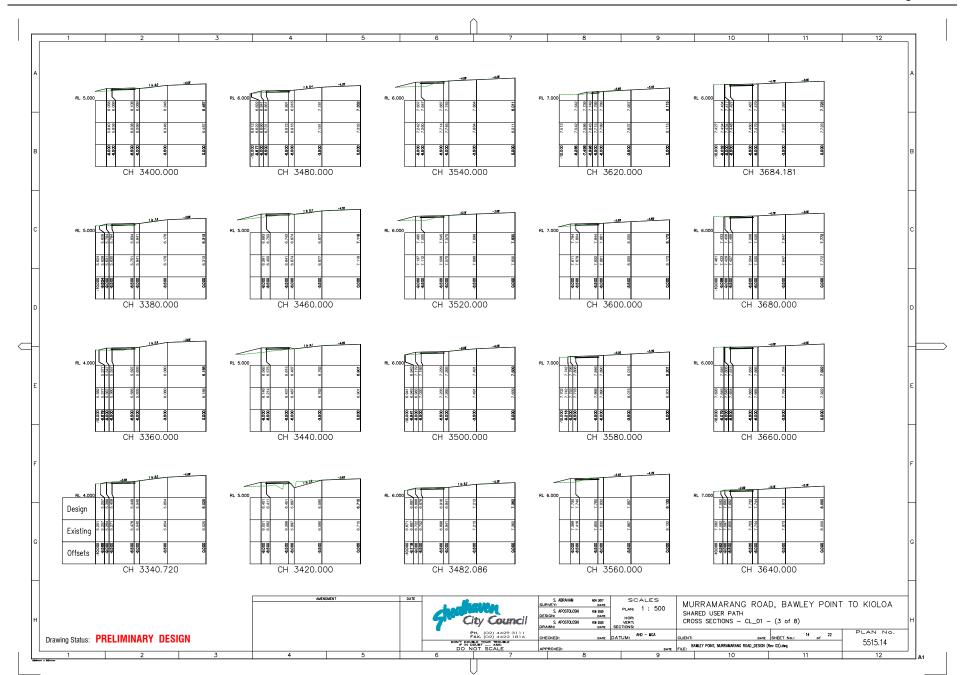






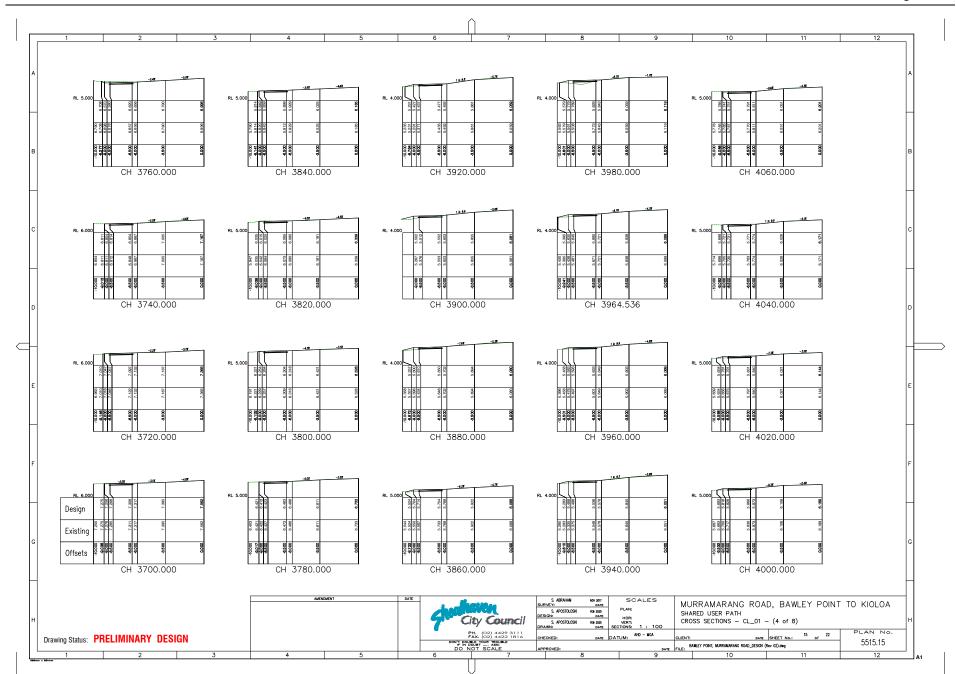






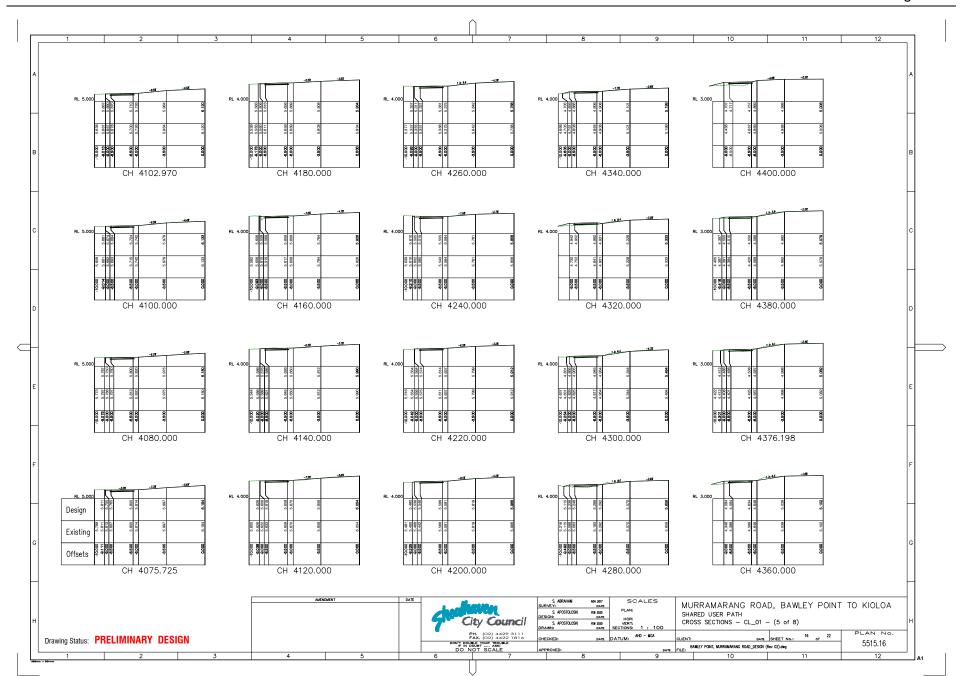






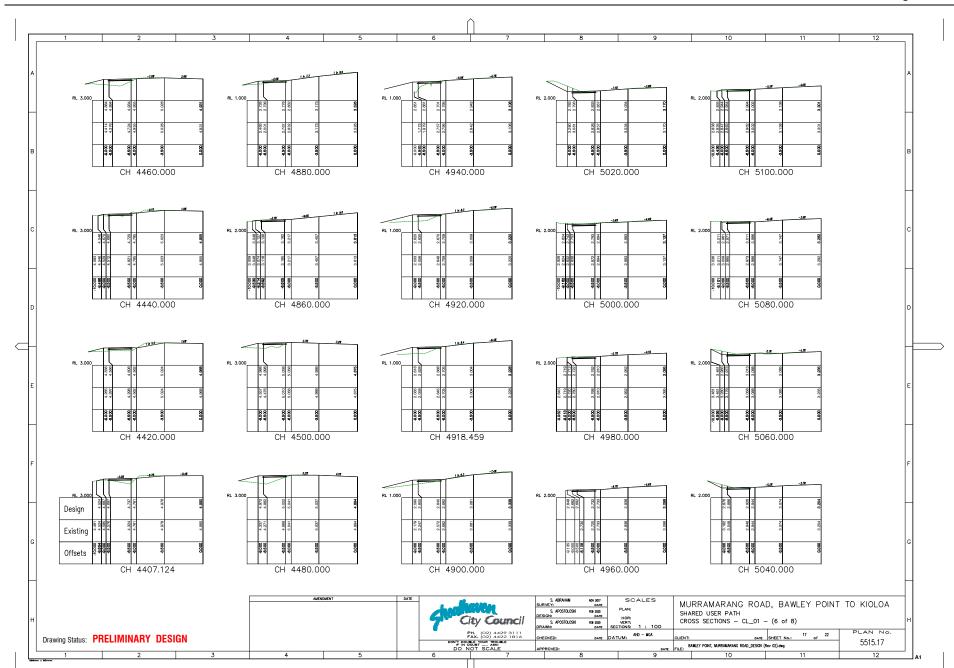




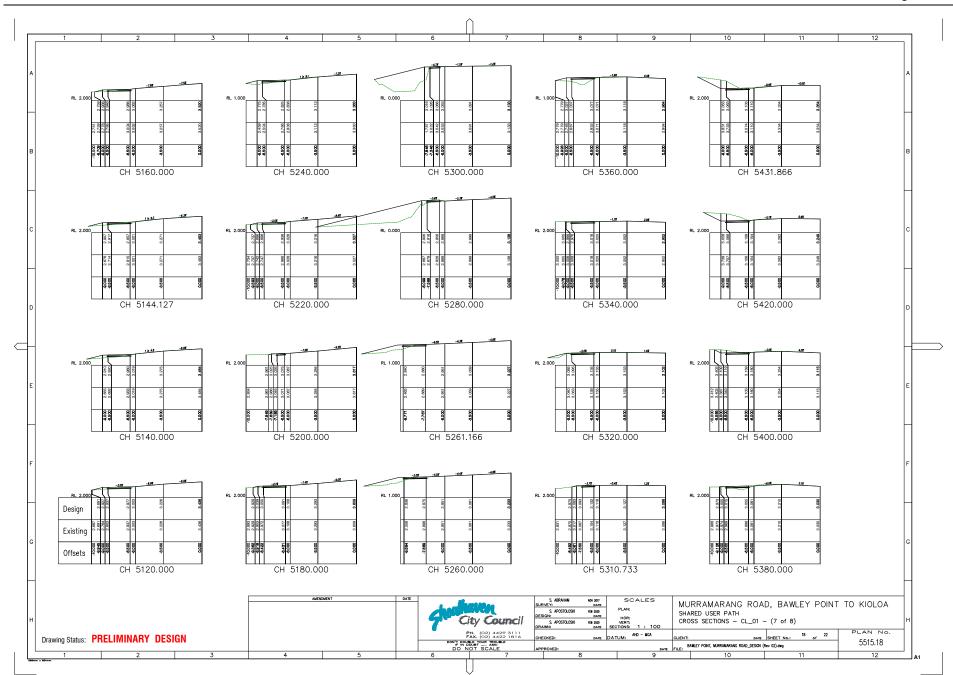




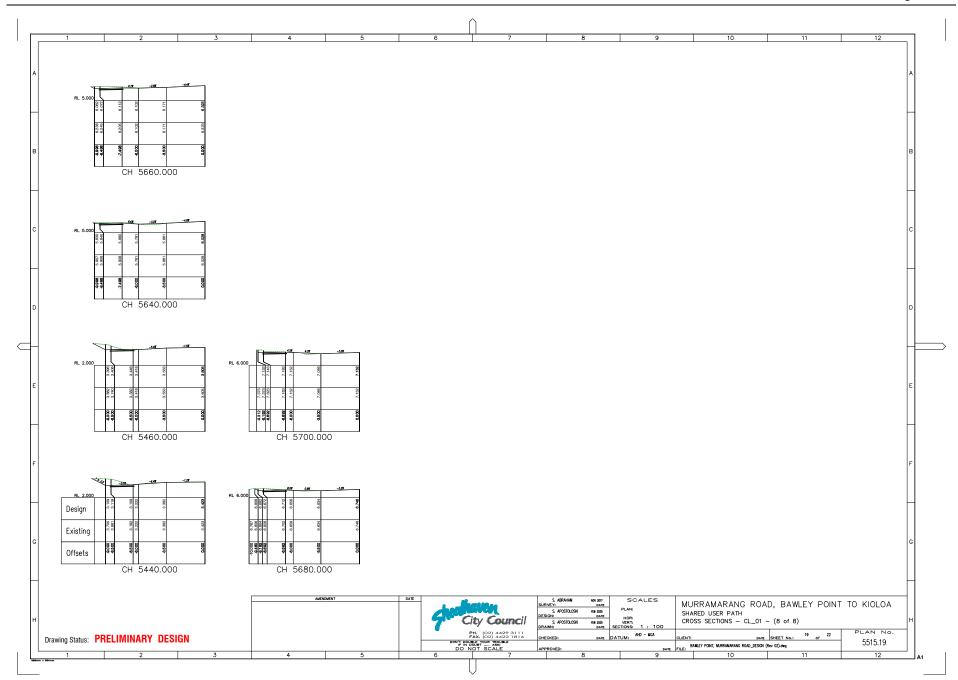






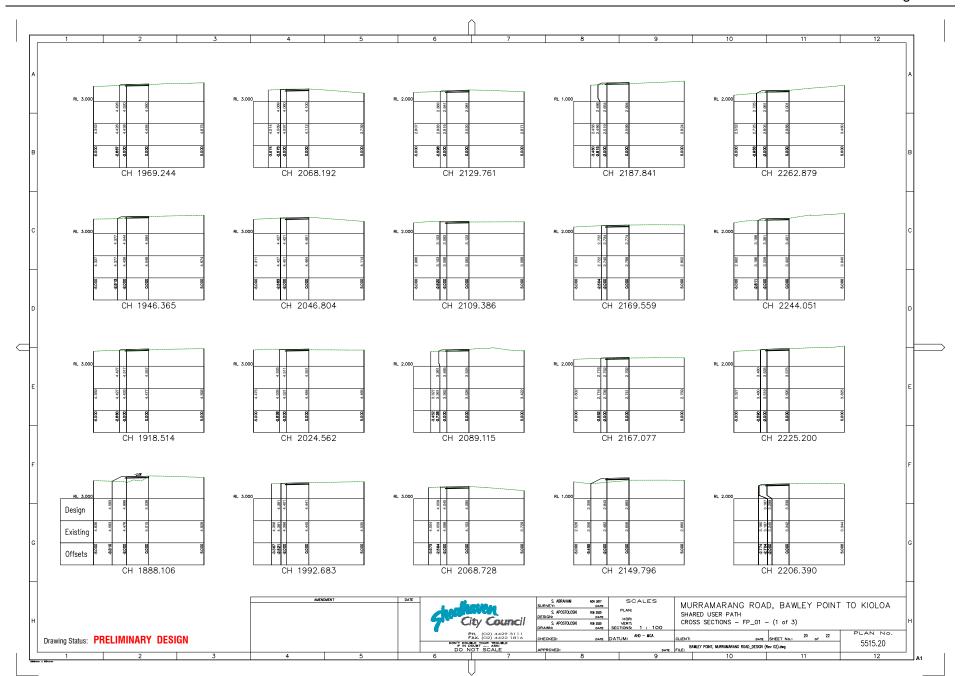






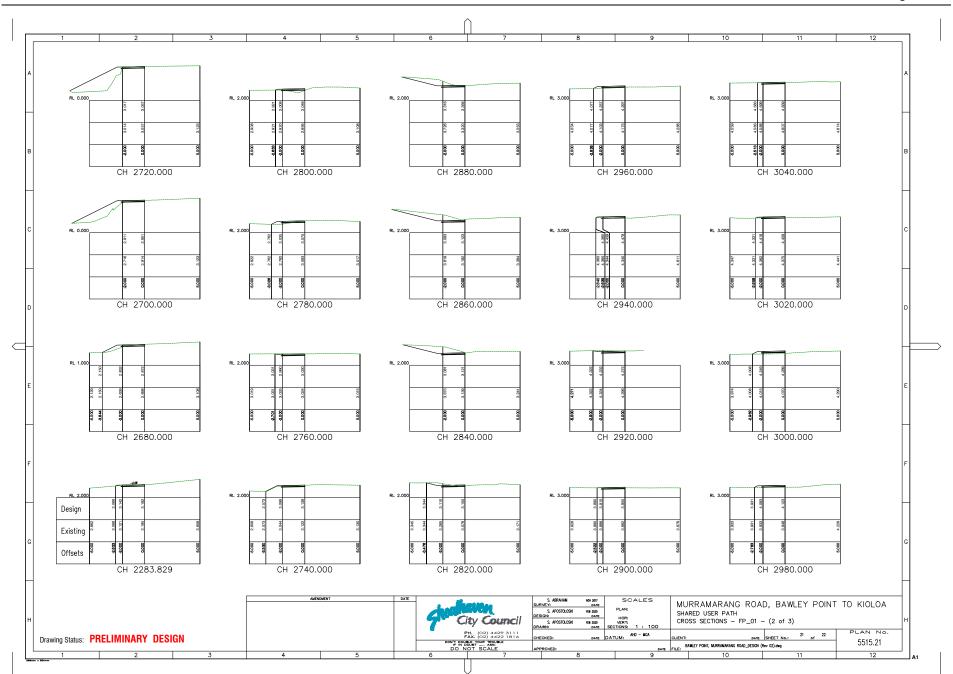




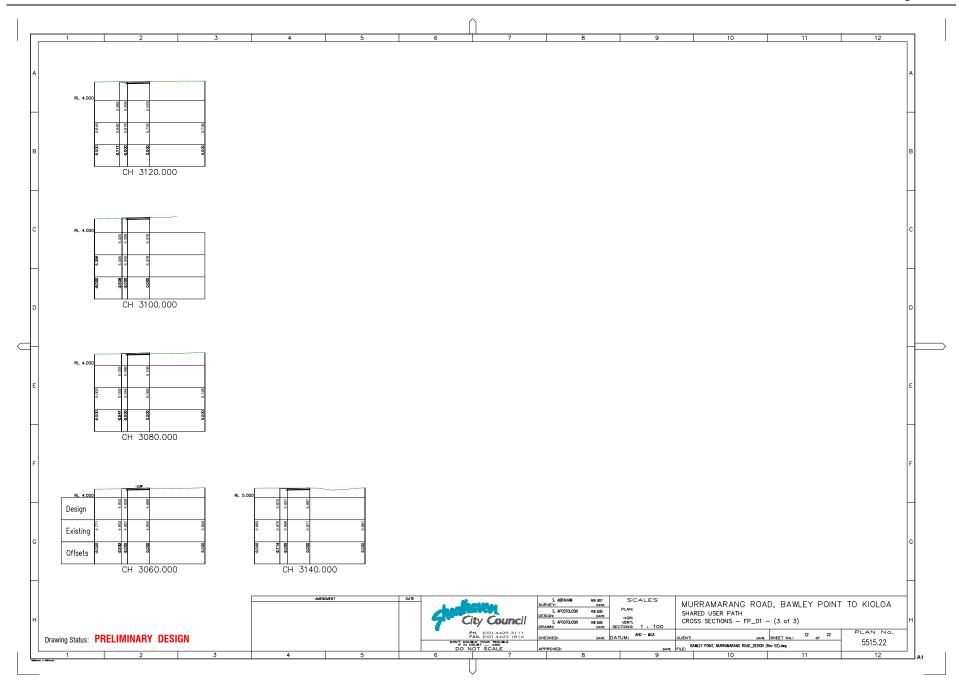














SYDNEY OFFICE Level 1, 83 - 89 Renwick Street, Redfern 2016 Tel (02) 8396 6565

SOUTH COAST OFFICE 49 Berry Street, Nowra NSW 2541 Tel (02) 4423 0566

WOLLONGONG OFFICE Suite 3, 128/134 Crown Street, Wollongong NSW 2500 Tel (02) 4423 0566

www.miengineers.com

PROPOSED PEDESTRIAN & CARPARKING MASTER PLAN

MOLLYMOOK BEACH - NORTH MOLLYMOOK BEACH NSW, 2539



DRAWING INDEX

DN220129 C001 COVER SHEET

DN220129 C002 MASTER PLAN - GENERAL ARRANGEMENT PLAN DN220129 C003 ORANGE STAGE - GENERAL ARRANGEMENT PLAN - OPTION 1

DNZ2012 2000 ORANGE STAGE - CPTION 1 SECTIONS
DNZ2012 2000 ORANGE STAGE - CPTION 1 SECTIONS
DNZ2012 2000 ORANGE STAGE - CENERAL ARRANGEMENT PLAN - OPTION 2
DNZ2012 2000 ORANGE STAGE - CPTION 2 SECTIONS
DNZ2012 2007 YELLOW STAGE - GENERAL ARRANGEMENT PLAN - OPTION 1
DNZ2012 2007 YELLOW STAGE - GENERAL ARRANGEMENT PLAN - OPTION 2
DNZ2012 2007 SELLOW STAGE - GENERAL ARRANGEMENT PLAN - OPTION 2

DN220129 C009 YELLOW STAGE - OPTION 1 & 2 SECTIONS
DN220129 C010 BLACK STAGE - GENERAL ARRANGEMENT PLAN

DN220129 C011 GREEN STAGE - GENERAL ARRANGEMENT PLAN DN220129 C012 GREEN STAGE SECTION DN220129 C013 BLUE STAGE - GENERAL ARRANGEMENT PLAN DN220129 C014 BLUE STAGE SECTIONS

DN220129 C015 PINK STAGE - GENERAL ARRANGEMENT PLAN - OPTION 1

DN220129 C016 PINK STAGE - GENERAL ARRANGEMENT PLAN - OPTION 2

LOCALITY PLAN

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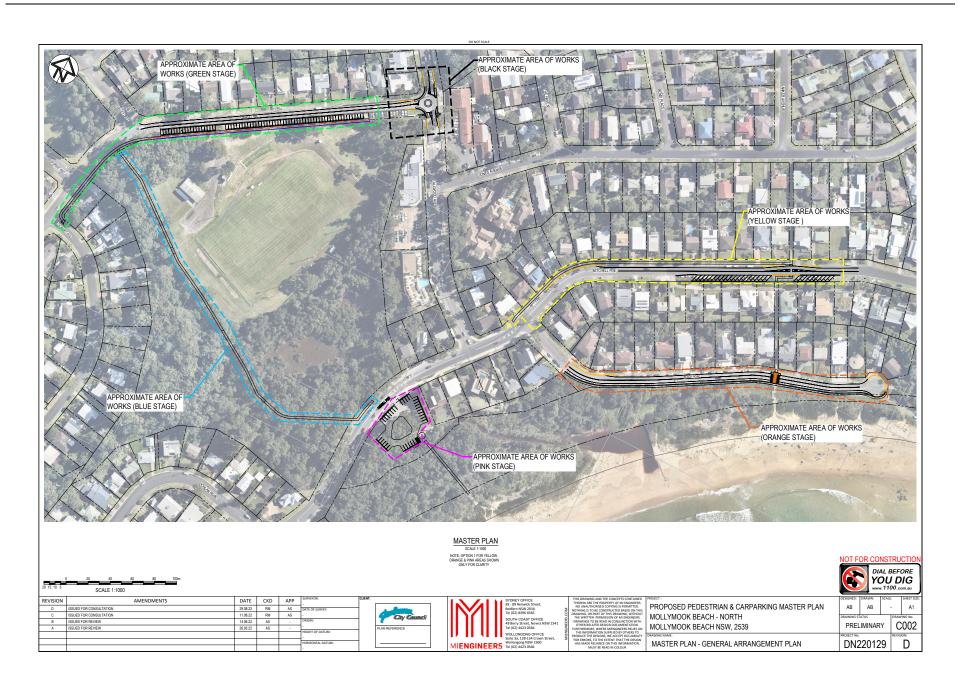




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PROJECT:
PROPOSED PEDESTRIAN & CARPARKING MASTER PLAN
MOLLYMOOK BEACH - NORTH
MOLLYMOOK BEACH NSW, 2539
DRAWING NAME:
COVER SHEET











0 8 16 24 32 40 8 8 4 2 SCALE 1:400



BOUNDARY
 PROPOSED PARKING RESTRICTIONS VIA R5-400
 "NO STOPPING" SIGNAGE AND YELLOW C3
 LINEMARKING

GENERAL NOTES:

- THE DESIGN IS NOT BASED ON SURVEY INFORMATION AND IS SUBJECT TO CONFIRMATION FOLLOWING RELEVANT SURVEY AND INVESTIGATIONS
- LINE MARKING AND SIGNAGE IS TO BE INSTALLED IN ACCORDANCE WITH AS1742.

PROPOSED ORANGE STAGE SCOPE - OPTION 1

PROPOSED ROAD WIDENING WITH KERB & GUTTER, PARALLEL PARKING & 1.2m CONCRETE PATHWAY

PROPOSED RAISED THRESHOLD TO AS1742.13

3 CONNECT TO EXISTING INFRASTRUCTURE AT EXTENT OF WORK

PROPOSED KERB EXTENSION & FOOTPATH TO CONNECT TO EXISTING PATH/STAIRS BETWEEN MITCHELL PARADE AND BEACH ROAD

5 LINEMARKING OF PARALLEL PARKING ON BEACH ROAD

EXISTING FEATURES

E1 EXISTING BEACH ROAD FOOTPATH

EXISTING STAIRS/PATH CONNECTING MITCHELL PARADE AND ROAD STREET

E3 EXISTING TIMBER STAIRS PROVIDING BEACH ACCESS

EXISTING ACCESS TRACK TO AMENITIES BUILDING

REVISION	AMENDMENTS	DATE	CKD	APP	SURVEYOR:	CLIENT:
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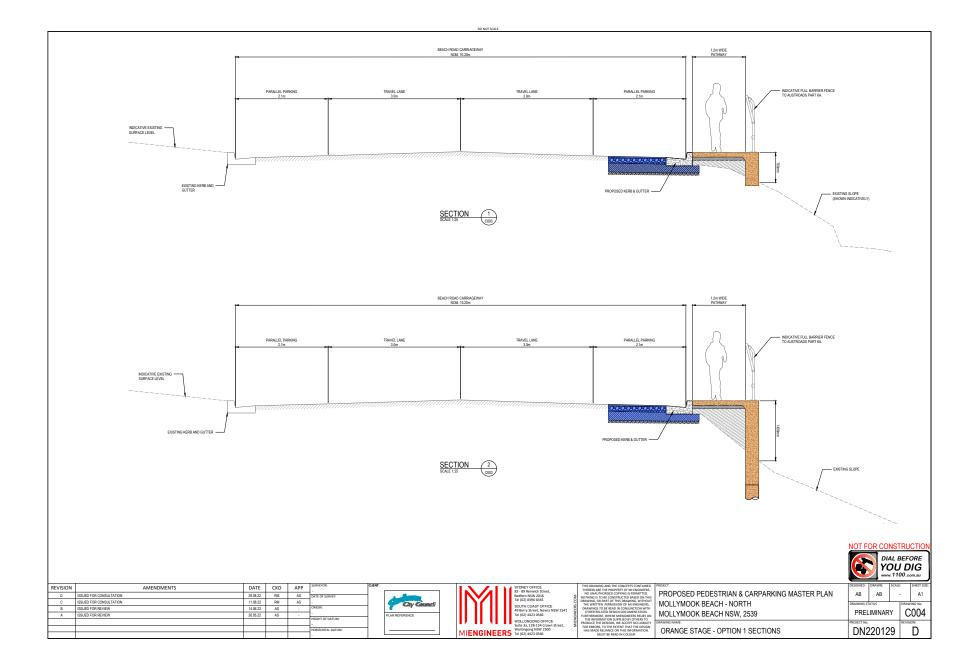




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GENERAL NOTES:

- THE DESIGN IS NOT BASED ON SURVEY INFORMATION AND IS SUBJECT TO CONFIRMATION FOLLOWING RELEVANT SURVEY AND INVESTIGATIONS
- LINE MARKING AND SIGNAGE IS TO BE INSTALLED IN ACCORDANCE WITH AS1742.

PROPOSED ORANGE STAGE SCOPE - OPTION 2

PROPOSED ROAD WIDENING WITH KERB & GUTTER, PARALLEL PARKING & 2m WIDE BOARDWALK

PROPOSED RAISED THRESHOLD TO AS1742.13

3 CONNECT TO EXISTING INFRASTRUCTURE AT EXTENT OF WORK

PROPOSED KERB EXTENSION & FOOTPATH TO CONNECT TO EXISTING PATH/STAIRS BETWEEN MITCHELL PARADE AND BEACH STREET

LINEMARKING OF PARALLEL PARKING ON BEACH STREET

EXISTING FEATURES

E1 EXISTING BEACH STREET FOOTPATH

EXISTING STAIRS/PATH CONNECTING MITCHELL PARADE AND BEACH STREET

E3 EXISTING TIMBER STAIRS PROVIDING BEACH ACCESS

EXISTING ACCESS TRACK TO AMENITIES BUILDING

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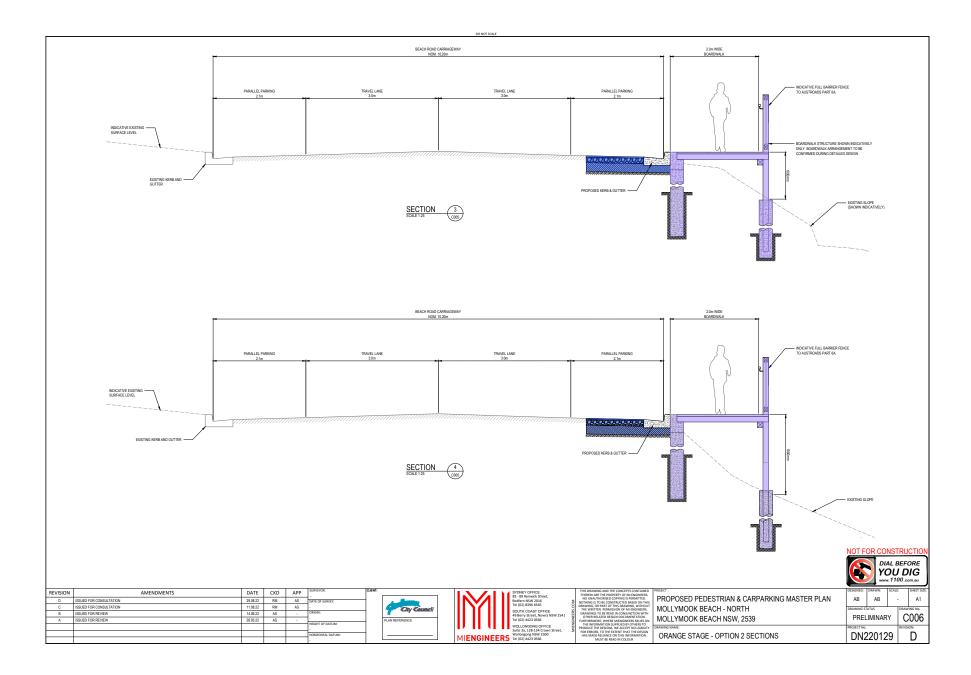
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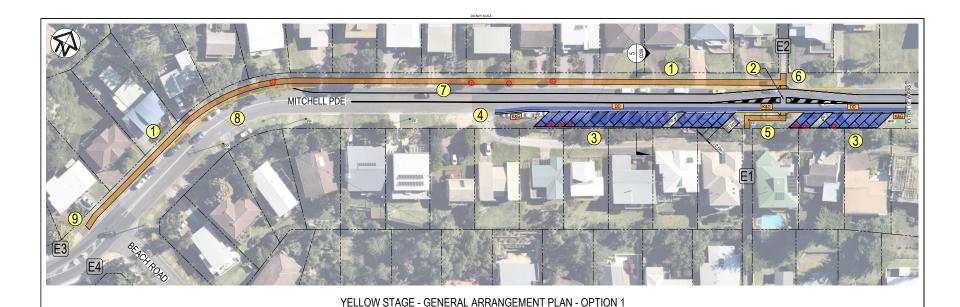
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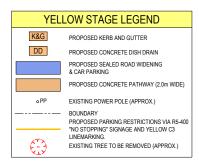
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GENERAL NOTES:

- THE DESIGN IS NOT BASED ON SURVEY INFORMATION AND IS SUBJECT TO CONFIRMATION FOLLOWING RELEVANT SURVEY AND INVESTIGATIONS
- 2. LINE MARKING AND SIGNAGE IS TO BE INSTALLED IN ACCORDANCE WITH AS1742.

PROPOSED YELLOW STAGE SCOPE - OPTION 1 PROPOSED 2m WIDE CONCRETE PATHWAY PROPOSED PEDESTRIAN REFUGE CROSSING WITH TRAFFIC ISLANDS PROPOSED 45° ANGLED PARKING WITH CONCRETE DISH DRAIN & MINOR PAVEMENT WORKS 4 CONNECTION TO EXISTING KERB AND GUTTER PROPOSED KERB RAMP AND PATH CONNECTION TO THE EXISTING PATH/STAIRS FOR ACCESS TO BEACH ROAD. PATH ALIGNMENT REQUIRES RELOCATION OF AN EXISTING POWER POLE PROPOSED KERB RAMP AND PATH CONNECTION TO THE EXISTING PATH/STAIRS FOR ACCESS TO JONES AVENUE. LINEMARKING OF PARALLEL PARKING ON THE NORTHERN SIDE OF MITCHELL PARADE NO PARKING ON THE EXISTING CURVE

CONNECTION TO THE EXISTING MITCHELL PARADE FOOTPATH

SCALE 1:400

	EXISTING FEATURES
E1	EXISTING STAIRS/PATH CONNECTING MITCHELL PARADE AND BEACH ROAD
E2	EXISTING STAIRS/PATH CONNECTING MITCHELL PARADE AND JONES AVENUE
E 3	EXISTING MITCHELL PARADE FOOTPATH
E4	EXISTING PEDESTRIAN REFUGE CROSSING

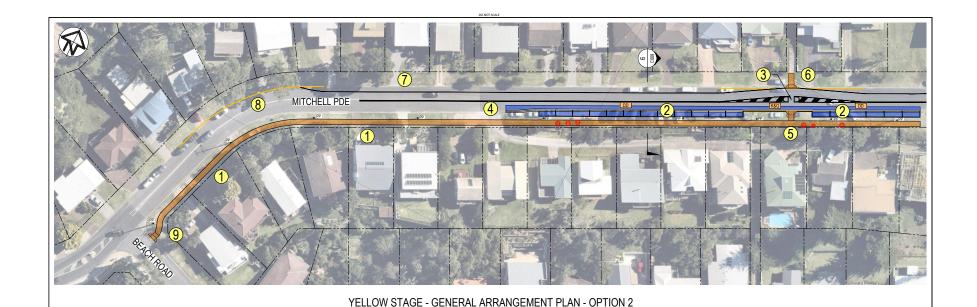
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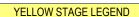




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K&G DD

PROPOSED KERB AND GUTTER

PROPOSED CONCRETE DISH DRAIN PROPOSED SEALED ROAD WIDENING

PROPOSED CONCRETE PATHWAY (2.0m WIDE)

EXISTING POWER POLE (APPROX.)

PROPOSED PARKING RESTRICTIONS VIA R5-400 "NO STOPPING" SIGNAGE AND YELLOW C3 LINEMARKING.

EXISTING TREE TO BE REMOVED (APPROX.)

- 1. THE DESIGN IS NOT BASED ON SURVEY INFORMATION AND IS SUBJECT TO CONFIRMATION FOLLOWING RELEVANT SURVEY
- 2. LINE MARKING AND SIGNAGE IS TO BE INSTALLED IN ACCORDANCE WITH AS1742.

PROPOSED YELLOW STAGE SCOPE - OPTION 2

PROPOSED 2m WIDE CONCRETE PATHWAY

PROPOSED PARALLEL PARKING WITH CONCRETE DISH DRAIN & MINOR PAVEMENT WORKS

PROPOSED PEDESTRIAN REFUGE CROSSING WITH TRAFFIC ISLANDS

CONNECTION TO EXISTING KERB AND GUTTER

PROPOSED KERB RAMP AND PATH CONNECTION TO THE EXISTING PATH/STAIRS FOR ACCESS TO BEACH ROAD.

PROPOSED KERB RAMP AND PATH CONNECTION TO THE EXISTING PATH/STAIRS FOR ACCESS TO JONES AVENUE.

LINEMARKING OF PARALLEL PARKING ON THE NORTHERN SIDE OF MITCHELL PARADE

NO PARKING ON THE EXISTING CURVE

NEW KERB RAMP AT THE INTERSECTION OF MITCHELL PARADE AND BEACH ROAD

EXISTING FEATURES

EXISTING STAIRS/PATH CONNECTING MITCHELL PARADE AND BEACH ROAD

EXISTING STAIRS/PATH CONNECTING MITCHELL PARADE AND JONES AVENUE

EXISTING MITCHELL PARADE FOOTPATH

EXISTING PEDESTRIAN REFUGE CROSSING

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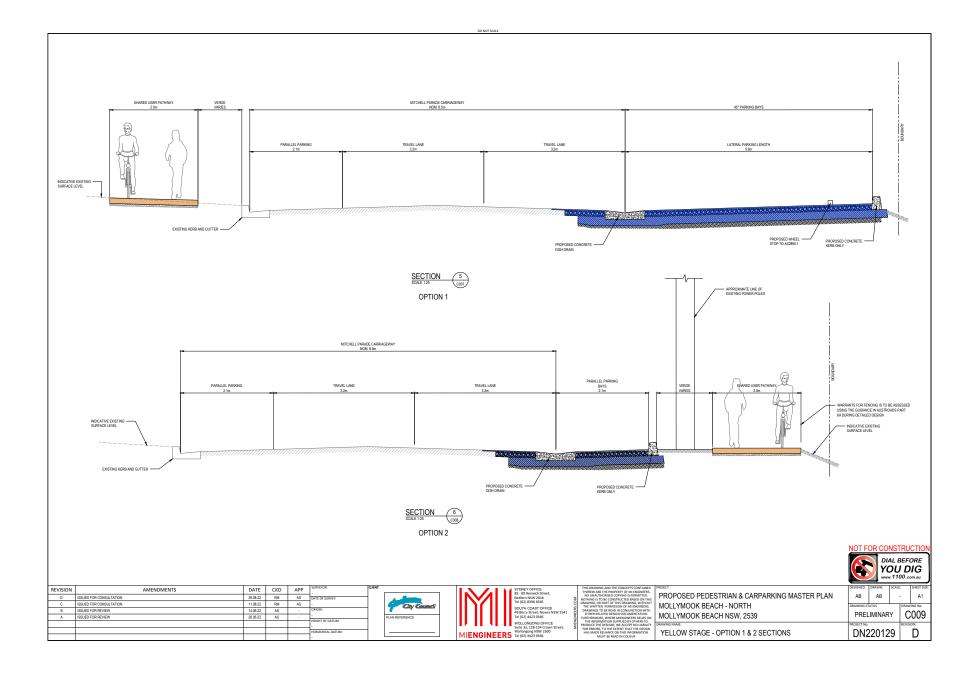
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GENERAL NOTES:

- THE DESIGN IS NOT BASED ON SURVEY INFORMATION AND IS SUBJECT TO CONFIRMATION FOLLOWING RELEVANT SURVEY AND INVESTIGATIONS
- LINE MARKING AND SIGNAGE IS TO BE INSTALLED IN ACCORDANCE WITH AS1742.
- ROUNDABOUT GEOMETRY IS SUBJECT TO CONFIRMATION OF DESIGN VEHICLES AND SWEEP PATHS DURING DETAILED

BLACK STAGE - GENERAL ARRANGEMENT PLAN SCALE 1:200

PROPOSED BLACK STAGE SCOPE

PROPOSED 7m DIAMETER CONCRETE ROUNDABOUT, INCLUSIVE OF 1m WIDE

NEW KERB RETURNS TO SUIT ROUNDABOUT GEOMETRY

PROPOSED CONCRETE SPLITTER ISLAND WITH PEDESTRIAN REFUGE CROSSING

LINE MARKED SPLITTER ISLAND TO SUIT ROUNDABOUT GEOMETRY

CONCRETE TRAFFIC ISLAND TO SUIT ROUNDABOUT GEOMETRY CONCRETE FOOTPATH AND KERB RAMP TO CONNECT TO EXISTING FOOTPATH ON CARROLL AVENUE.

CONCRETE KERB RAMP TO CONNECT TO EXISTING FOOTPATH ON TALLWOOD AVENUE

SCALE 1:200

EXISTING FEATURES

EXISTING FOOTPATH ON THE SOUTHERN SIDE OF CARROLL AVENUE

AND WESTERN SIDE OF TALLWOOD AVENUE EXISTING FOOTPATH ON THE EASTERN SIDE OF TALLWOOD AVENUE

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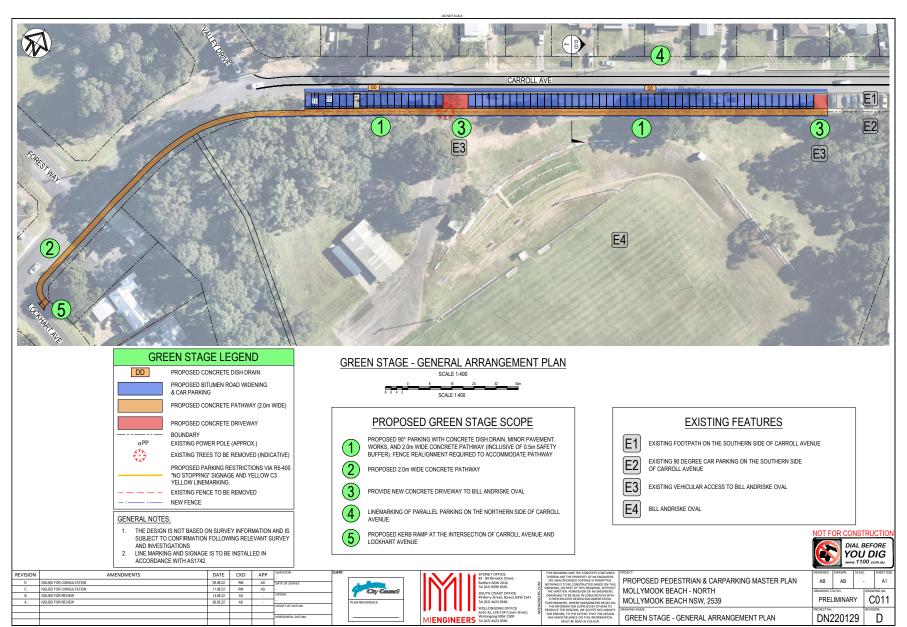




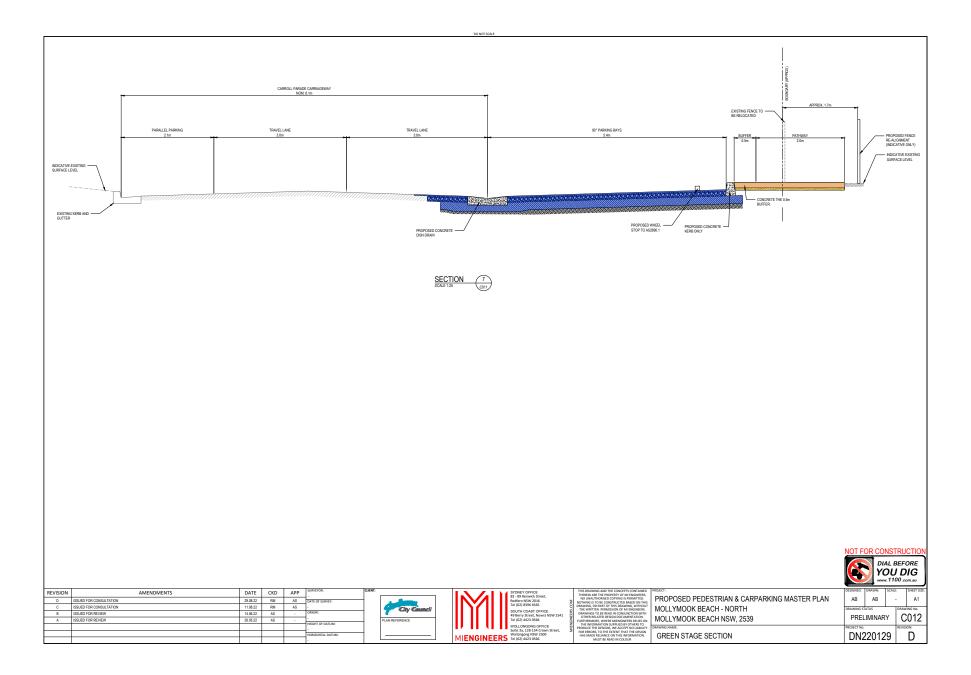
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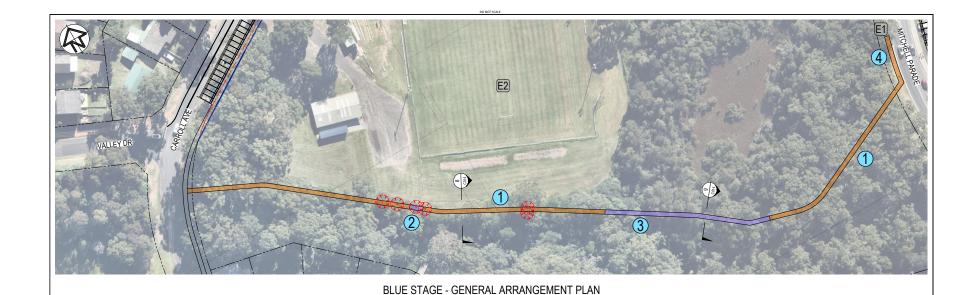














BOUNDARY

PROPOSED CONCRETE PATHWAY (2.0m WIDE)

PROPOSED BOARDWALK (2.0m WIDE)



EXISTING TREES TO BE REMOVED (APPROX.)

GENERAL NOTES:

- 1. THE DESIGN IS NOT BASED ON SURVEY INFORMATION AND IS SUBJECT TO CONFIRMATION FOLLOWING RELEVANT SURVEY AND INVESTIGATIONS
- SMALL SHRUBS AND TREE BRANCHES TO BE PRUNED TO ACHIEVE REQUIRED PATH CLEARANCES AND ENVELOPES. EXTENT TO BE CONFIRMED DURING DETAILED DESIGN.

PROPOSED BLUE STAGE SCOPE

SCALE 1:500



PROPOSED 2m WIDE CONCRETE PATHWAY



PROPOSED 2m WIDE BOARDWALK, APPROXIMATELY 6m LONG OVER EXISTING EMBANKMENT / WATERCOURSE



PROPOSED 2m WIDE BOARDWALK, APPROXIMATELY 75m LONG OVER EXISTING WATERCOURSE

PROPOSED 2m WIDE CONCRETE FOOTPATH ON BACK OF KERB ALIGNMENT TO CONNECT TO EXISTING FOOTPATH ON THE WESTERN SIDE OF MITCHELL

EXISTING FEATURES



EXISTING FOOTPATH ON THE WESTERN SIDE OF MITCHELL PARADE.



BILL ANDRISKE OVAL

REVISION	AMENDMENTS	DATE	CKD	APP	SURVEYOR:	CLIENT:
D	ISSUED FOR CONSULTATION	29.08.22	RM	AS	DATE OF SURVEY:	1
C	ISSUED FOR CONSULTATION	11.08.22	RM	AS	ļ.	
В	ISSUED FOR REVIEW	14.06.22	AS		ORIGIN:	1
A	ISSUED FOR REVIEW	26.05.22	AS			4
					HEIGHT OF DATUM:	
					HORIZONTAL DATUM:	1
					1	1





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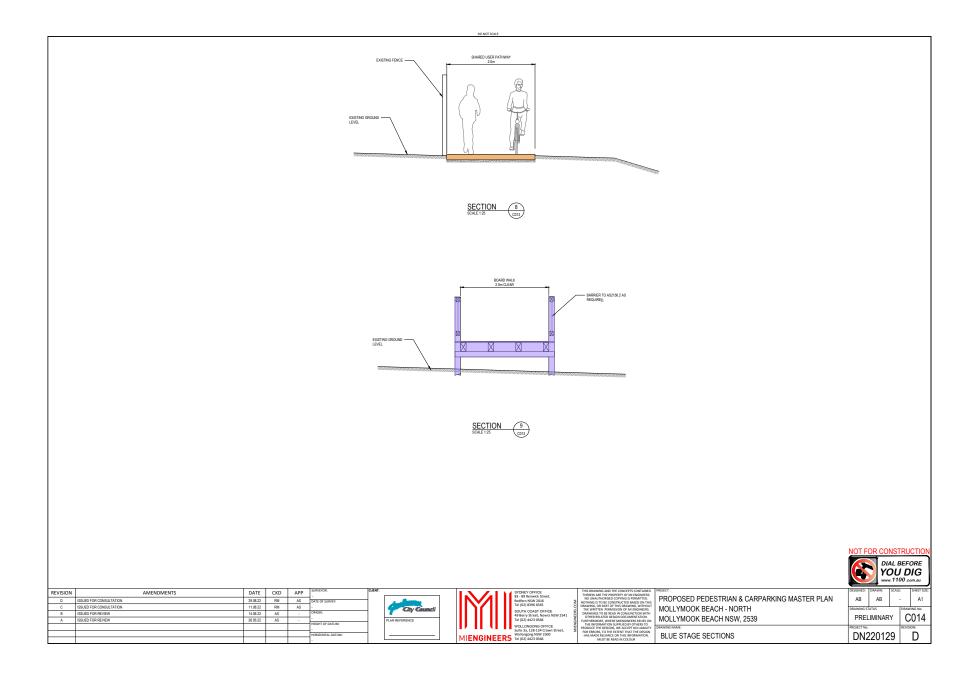
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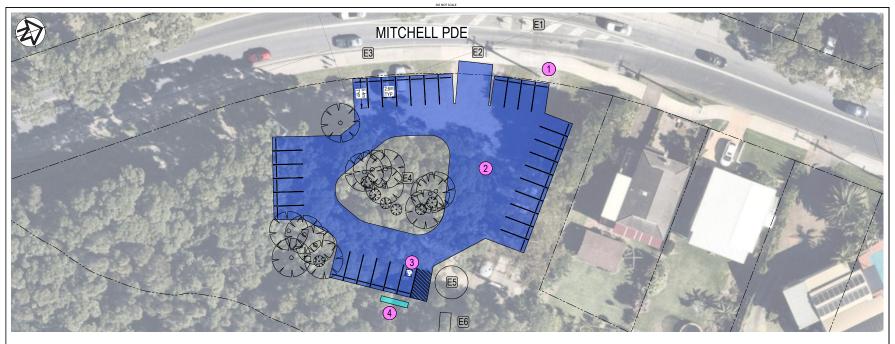
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PROPOSED SEALED CAR PARK

PROPOSED BIKE RACK

--- BOUNDARY

€3

EXISTING TREES TO BE RETAINED (INDICATIVE)

GENERAL NOTES:

- THE DESIGN IS NOT BASED ON SURVEY INFORMATION AND IS SUBJECT TO CONFIRMATION FOLLOWING RELEVANT SURVEY AND INVESTIGATIONS
- LINE MARKING AND SIGNAGE IS TO BE INSTALLED IN ACCORDANCE WITH AS1742.
- CAR PARKING IS TO BE LINEMARKED IN ACCORDANCE WITH AS2890.

PINK STAGE - GENERAL ARRANGEMENT PLAN - OPTION 1

SCALE 1:200

0 4 8 12 16 20m

4 3 2 1 SCALE 1:200

PROPOSED PINK STAGE SCOPE - OPTION 1

1 EXISTING DRIVEWAY ACCESS TO BE DECOMMISSIONED. REINSTATE KERB AND GUTTER TO MATCH EXISTING.

PROPOSED CAR PARK TO COMPLY WITH AS2890.1

PROPOSED ACCESSIBLE SPACE AND DEDICATED SHARED ZONE TO COMPLY WITH AS2890.6

4 PROPOSED BIKE RACK

EXISTING FEATURES

E1 EXISTING PEDESTRIAN REFUGE CROSSING

E2 EXISTING CAR PARK ACCESS DRIVEWAY AND FOOTPATH CROSSING

F3 EXISTING FOOTPATH

E4 EXISTING VEGETATION

E5 EXISTING UNDERGROUND TANK.

6 EXISTING FOOTBRIDGE / PATHWAY FOR BEACH ACCESS

REVISION	AMENDMENTS	DATE	CKD	APP	SURVEYOR:	CLIENT:
D	ISSUED FOR CONSULTATION	29.08.22	RM	AS	DATE OF SURVEY:	1
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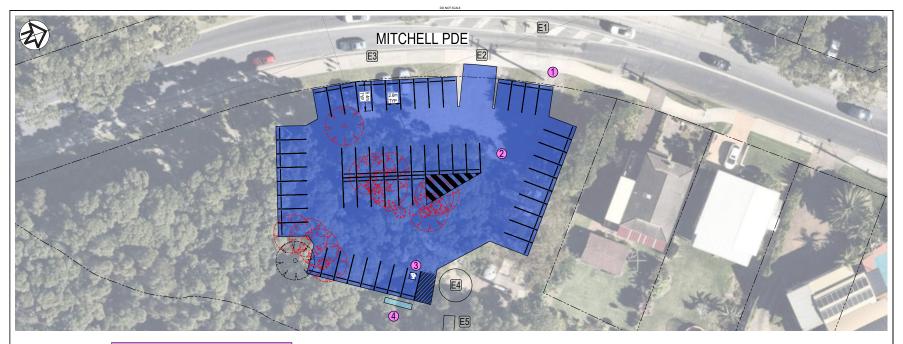


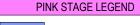


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BOUNDARY

PROPOSED SEALED CAR PARK

PROPOSED BIKE RACK

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EXISTING TREES TO BE REMOVED (INDICATIVE)

EXISTING TREES TO BE RETAINED (INDICATIVE)

- 1. THE DESIGN IS NOT BASED ON SURVEY INFORMATION AND IS SUBJECT TO CONFIRMATION FOLLOWING RELEVANT SURVEY AND INVESTIGATIONS
- LINE MARKING AND SIGNAGE IS TO BE INSTALLED IN ACCORDANCE WITH AS1742.
 CAR PARKING IS TO BE LINEMARKED IN ACCORDANCE WITH

PINK STAGE - GENERAL ARRANGEMENT PLAN - OPTION 2



PROPOSED PINK STAGE SCOPE - OPTION 2

- EXISTING DRIVEWAY ACCESS TO BE DECOMMISSIONED. REINSTATE KERB AND GUTTER TO MATCH EXISTING.
- PROPOSED CAR PARK TO COMPLY WITH AS2890.1
- PROPOSED ACCESSIBLE SPACE AND DEDICATED SHARED ZONE TO
- PROPOSED BIKE RACK

EXISTING FEATURES

EXISTING PEDESTRIAN REFUGE CROSSING

EXISTING CAR PARK ACCESS DRIVEWAY AND FOOTPATH CROSSING

E3 EXISTING FOOTPATH

E4 EXISTING UNDERGROUND TANK.

EXISTING FOOTBRIDGE / PATHWAY FOR BEACH ACCESS

REVISION	AMENDMENTS	DATE	CKD	APP	SURVEYOR:	CLIENT:
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PROPOSED PEDESTRIAN & CARPARKING MAST	ER PLAN
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MOLLYMOOK BEACH NSW, 2539	
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PINK STAGE - GENERAL ARRANGEMENT PLAN	- OPTION 2



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Results of Consultation North Mollymook Pedestrian & Carparking Masterplan:

Orange Stage: Beach Road

The Orange Stage had proposed two options as part of the Masterplan. Common across both options was the proposed widening of the road to the east, in order to achieve parallel parking on both sides of the road, addressing drainage concerns with kerb and gutter and providing for a dedicated pathway. Linemarking improvements and an unmarked raised threshold connecting the stairway leading from Mitchell Parade and onto the beach was also proposed.

Option 1 of the Orange Stage considered a 1.2m wide concrete footpath along the southern side of Beach Road. Alternatively, Option 2 considered a 2m wide raised boardwalk, which would function as a shared user path.

From the consultation period, Council received 70 submissions regarding the Orange Stage.

The majority of submissions opposed to Option 1 cited limitations in the usability of a 1.2m footpath when compared to a 2m wide shared user path.

From the results of the consultation, it can be demonstrated that Option 2 has greater support from the community than Option 1. Therefore, it would be recommended to proceed with Option 2, should funding be allocated.

Some of the key suggestions made by the community with respect to Option 2, include the following:

- Consider safe wheelchair access onto the beach from the northern end of Beach Road
- · Consider dedicated, on-street disabled parking
- Consider timed parking restrictions at this location to ensure steady turnover of vehicles and limit excessive long-term stays
- Additional public toilets provided in the area
- Additional public seating provided along the length of Beach Road
- · Additional bike racks provided in the area
- Improved design of the safety handrail along the boardwalk, in order to make it more aesthetic
- Improved environmental considerations to bank stabilisation / vegetation affected during construction of the boardwalk
- Establish additional walkway points along the boardwalk to access the beach
- Replace the unmarked threshold with a raised pedestrian crossing
- Consider a dedicated bike lane on the boardwalk, separated from general pedestrian traffic
- Consider widening the parallel parking from 2.1m to 2.4m on both sides

Yellow Stage: Mitchell Parade

The Yellow Stage had proposed two options as part of the Masterplan. Common across both options was the proposed widening of the road along the eastern side and formalising for proposed parking. Drainage issues would be addressed with kerb and gutter, and linemarking improvements proposed to assist with road safety. A pedestrian refuge was also proposed on Mitchell Parade to improve pedestrian safety and connecting the walkway leading from Jones Avenue and to Beach Road.

Option 1 of the Yellow Stage considered a 2m wide shared user path along the north-western side of Mitchell Parade. This would also enable 26 45-degree parking spaces to be formalised



on the opposite side of Mitchell Parade. Alternatively, Option 2 considered the 2m shared user path along the south-eastern side, along the same side as the proposed parking. In order to accommodate the pathway, the parking in this Option was modified to enable 18 parallel parking spaces to be formalised.

From the consultation period, Council received 71 submissions with respect to the Yellow Stage.

Yellow Stage - Option 1	Number of Submissions	Percentage of Submissions
N		150/
No	32	45%
Yes, as is	35	49%
Yes, with amends	4	6%
Yellow Stage – Option 2	Number of Submissions	Percentage of Submissions
Yellow Stage - Option 2 No	Number of Submissions 29	Percentage of Submissions 41%

It can be observed that the split between submissions for Options 1 and 2 is very close. However, a marginal lead in favour of Option 2 can be demonstrated from the above data. Furthermore, recommendations with respect to Option 2 have been made by both the Ulladulla and Districts Community Forum and the Inclusion and Access Advisory Board. Therefore, it is recommended to proceed with Option 2, should funding be allocated.

Additional feedback received by the community to be considered alongside the Masterplan include the following:

- Address the sink hole / poor drainage at the stairway leading to Beach Road, which is currently undermining the structure
- Consider timed parking at this location to ensure steady turnover of vehicles and limit excessive long-term stays
- Ensure compliant grades for the proposed shared user path
- Consider an additional section of 'No Stopping' on the corner bend of Mitchell Parade opposite the proposed section in the Masterplan, thereby restricting parking on both sides of the road at this location
- Consider additional landscaping / street planting as part of the proposal
- Extend the proposed shared user path further to the north-east to the intersection of Bannister Head Road
- Request to improve the stairway between Mitchell Parade and Jones Avenue for greater accessibility (including handrail)
- · Request to replace the pedestrian refuge with a raised pedestrian crossing

Black Stage: Intersection of Tallwood Avenue and Carroll Avenue

The Black Stage had proposed a 7m diameter roundabout at the intersection of Tallwood Avenue and Carroll Avenue to improve road safety and driver manoeuvrability. Associated linemarking, concrete splitter islands and footpath links would be provided. As part of the design, there would be a minor loss of parking in proximity to the roundabout.



From the consultation period, Council received 70 submissions with respect to the Black Stage.

Black Stage	Number of Submissions	Percentage of Submissions
No	21	30%
Yes, as is	45	64%
Yes, with amends	4	6%

From this, it can be observed that the majority of submissions are in favour of this proposal.

However, concerns were received regarding the proximity of the roundabout to the entrance of the North Mollymook shopping centre, which could create additional complications. Other concerns included potential noise generation due to the roundabout and the further need to address drainage as part of the design. Additional suggestions recommended an investigation towards a roundabout at the intersection of Tallwood Avenue and Mitchell Parade as an alternative.

Green Stage: Carroll Avenue

The Green Stage had proposed parking and pedestrian improvements to Carroll Avenue. In consultation with the Bill Andriske Oval Management Committee, this proposal considered the adjustment of the ovals fence line by approximately 1.7m into the site. Doing so enabled the continuation of the existing shared user path towards the east, connecting from Tallwood Avenue and continuing to Lockhart Avenue in the west. Alongside this, road widening was proposed which would enable the formalisation of 69 90-degree parking spaces along Carroll Avenue. These parking spaces would be complemented with kerb and a concrete dish drain to capture stormwater and improve drainage along this road. Minor linemarking improvements to delineate parking areas and travel lanes were also considered. Access to the oval has also been considered, with entry driveways formalised with concrete.

From the consultation period, Council received 71 submissions with respect to the Green Stage.

Green Stage	Number of Submissions	Percentage of Submissions
No	11	16%
Yes, as is	52	73%
Yes, with amends	8	11%

From this, it can be observed that the majority of submissions are in favour of this proposal.

Additional feedback received by the community to be considered alongside this stage of the Masterplan include the following:

- Consider dedicated, on-street disabled parking
- Consider an off-street parking area internal to the Bill Andriske Oval as an alternative
 / supplement to on-street parking



- · Consider additional landscaping / street planting
- Consider additional infrastructure in association with further improvements to Mitchell Parade for greater connectivity
- Request to assess the revised boundary fence to the Bill Andriske Oval in order to not cut off existing accessways

Blue Stage: Pedestrian Link from Carroll Avenue to Mitchell Parade through Bill Andriske Oval

The Blue Stage had proposed formalising the existing, informal track through the Bill Andriske Oval to connect Carroll Avenue with Mitchell Parade. This was proposed to be a 2m wide shared user path and would be constructed as a combination of concrete pathway and raised boardwalk in sections to avoid instances of flooding during major storm events. As part of the initial proposal, the existing alignment of the informal track was to be retained. This resulted in the removal of trees to accommodate the formalised path

From the consultation period, Council received 70 submissions with respect to the Blue Stage.

Blue Stage	Number of Submissions	Percentage of Submissions
No	10	14%
Yes, as is	47	67%
Yes, with amends	13	19%

From this, it can be observed that the majority of submissions are in favour of this proposal. However, a number of submissions had conditional support for the proposal so long as the overall environmental impact was kept to a minimum. Recommendations included adjusting the alignment of the path to avoid impacting trees and keeping the path as a natural track with regular maintenance, rather than formalising it.

Additional feedback received by the community to be considered alongside this stage of the Masterplan include the following:

- Potential safety concerns at night due to lack of lighting request to provide streetlighting
- Potential for the generation of litter / rubbish along this path due to increased use request to provide bins
- Request to incorporate changes that link with nearby off-leash dog area
- Request to consider additional improvements along Mitchell Parade in association with this proposal

Pink Stage: Off-Street Parking for Mitchell Parade

The Pink Stage had proposed two options as part of the Masterplan. Option 1 provided for an off-street parking layout that worked within the existing footprint of the site and limited the amount of vegetation clearance. This resulted in 33 spaces being formalised, along with 1 accessible space and provision of additional bike racks. Alternatively, Option 2 considered maximising the parking capacity within this site, which required the removal of vegetation and several trees. This resulted in 56 parking spaces being formalised, along with 1 accessible space and provision of additional bike racks.

From the consultation period, Council received 70 submissions with respect to the Pink Stage.



Pink Stage - Option 1	Number of Submissions	Percentage of Submissions
No	21	30%
Yes, as is	44	63%
Yes, with amends	5	7%
Pink Stage - Option 2	Number of Submissions	Percentage of Submissions
No	40	57%
No Yes, as is	40 24	57% 34%

From this, it can be observed that the Option 1 is preferred over Option 2. Feedback received from the community emphasised the importance of retaining the existing vegetation for this proposal, irrespective of the additional number of parking spaces that could be obtained.

Additional feedback received by the community to be considered alongside the Masterplan include the following:

- Provide additional disabled parking spaces (minimum of three)
- Relocate disabled spaces to be closer to the shared user path along Mitchell Parade and ensuring compliant grades
- Consider an alternative surfacing material (other than sealing) the carpark
- Request to provide a shower area, change room and toilet block within this area
- Request for additional bike racks
- Request for additional speed control measures along Mitchell Parade in proximity to this area

Overall Ranking between the Stages:

As part of the GetInvolved consultation, feedback was requested from the community to list the stages in the Masterplan in order of highest priority (from #1 to 6, with #1 being the highest). This would determine the overall ranking of the proposed stages within the Masterplan and which of them should be addressed first as a priority.

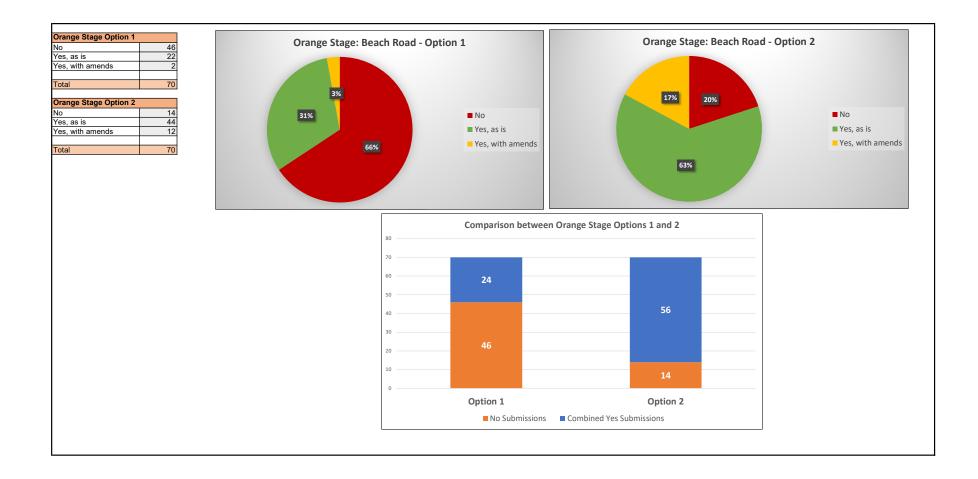
From the consultation period, Council received 68 submissions that provided a ranking of the six proposed stages. Based on this data, the average score was then calculated to determine which of the six stages had the highest rank.

From this, it is observed that the project that was ranked highest in priority was the Orange Stage: Beach Road.

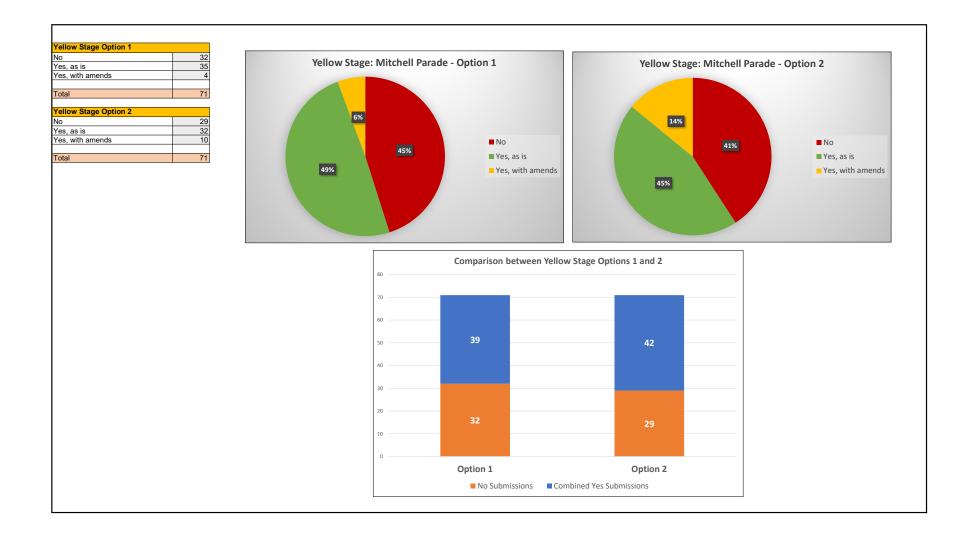


Stage of the Masterplan	Average Ranking (1 being the highest)	Order of Highest Priority to Lowest Priority
Orange Stage: Beach Road	2.12	1
Yellow Stage: Mitchell Parade	3.1	2
Pink Stage: Off-Street Parking for Mitchell Parade	3.81	3
Green Stage: Carroll Avenue	3.87	4
Black Stage: Intersection of Tallwood Avenue and Carroll Avenue	3.96	5
Blue Stage: Pedestrian Link from Carroll Avenue to Mitchell Parade through Bill Andriske Oval	4.15	6

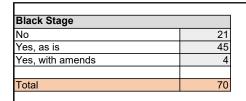


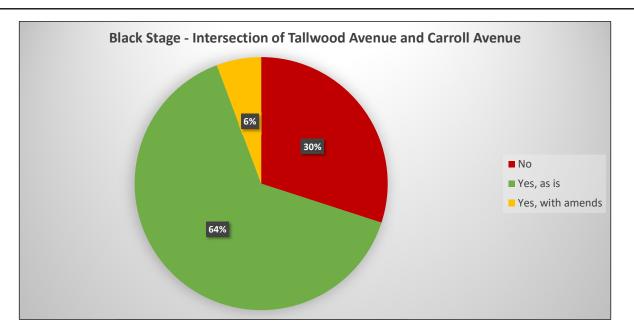




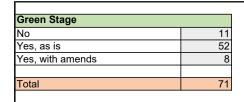


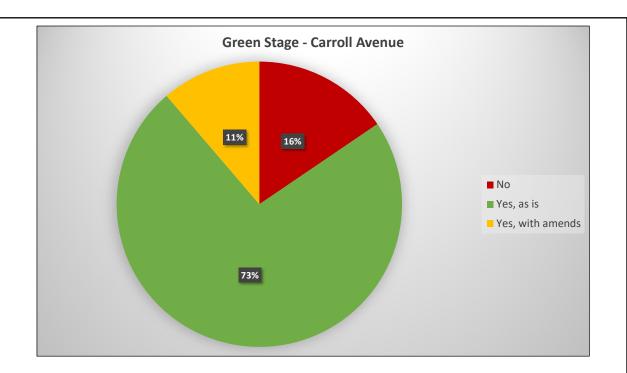




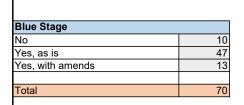


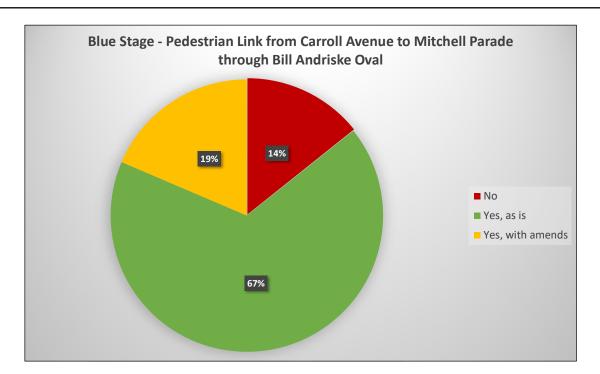




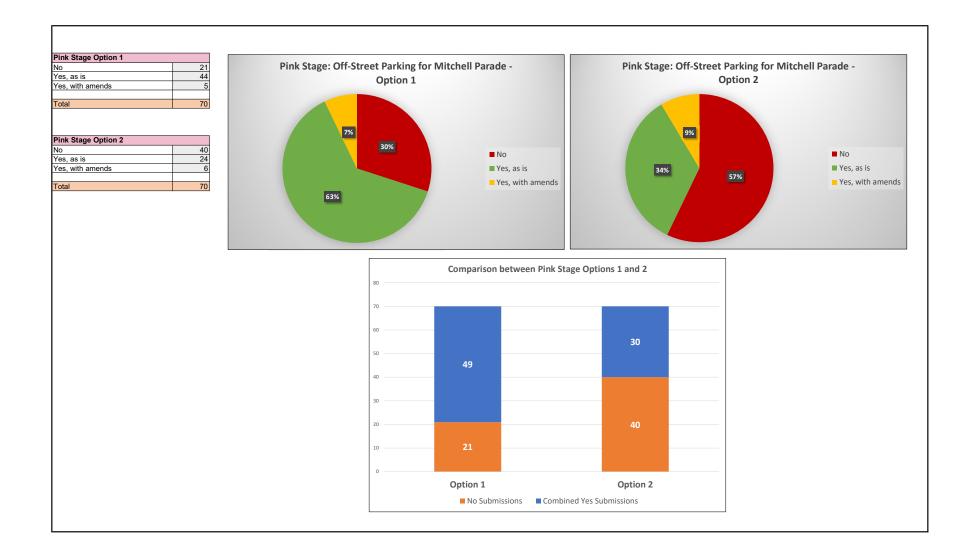




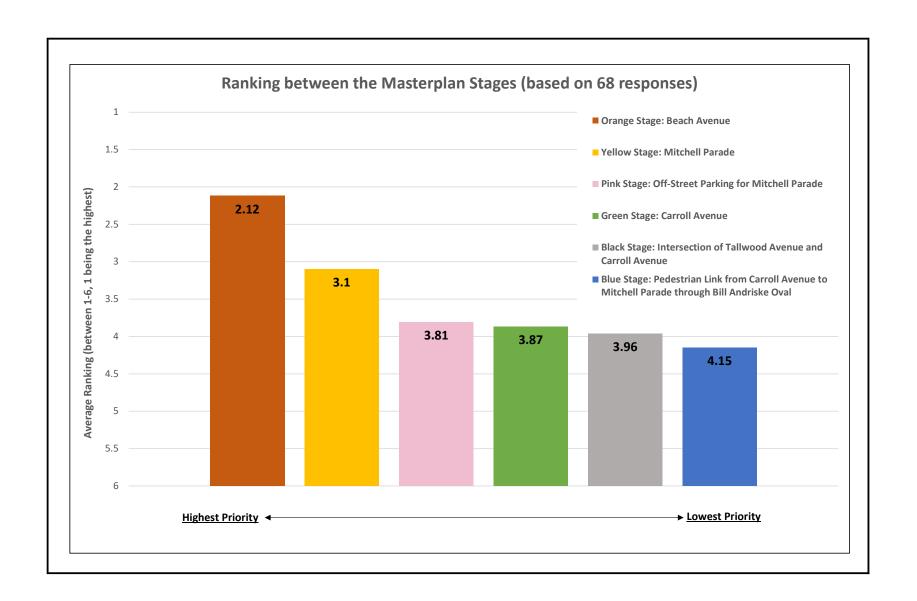














Funding Deed



Western Distributor, MEMS Currowan Creek Fish Passage Project

Agency/Division DPI-Fisheries

Grantee Shoalhaven City Council





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Schadula R - Paparting Paguiraments	10



Details

Department	Name	The Crown in right of the State of New South Wales acting through Regional NSW (ABN 19 948 325 463)
	Agency/ Division	NSW Department of Primary Industries–Fisheries
	Address	1243 Bruxner Highway, Wollongbar NSW 2477
Department Authorised	Name	Evan Knoll
Officer (refer to clause 20 - Notices)	Position	Senior Fisheries Manager
(rejer to chause 25 Hotices)	Address	1243 Bruxner Highway, Wollongbar NSW 2477
	Telephone	0418 204 207
	Mobile	0418 204 207
	E-mail	evan.knoll@dpi.nsw.gov.au
Grantee ('You')	Name	Shoalhaven City Council
	Address	P.O. Box 42 Nowra NSW 2541
	ABN	59 855 182 344
Your Authorised Officer	Name	Paul Keech
(refer to clause 20 - Notices)	Position	Director – City Services
	Address	Bridge Rd (Po Box 42) Nowra NSW 2541
	Telephone	02 4429 3362
	Mobile	
	E-mail	Paul.Keech@shoalhaven.nsw.gov.au
Program	Marine Estate I	Management Strategy (MEMS) – Reconnecting fish habitats
Project		istributor, Currowan Creek Fish Passage Project. The Project r the Program. Details of the Project are set out in Schedule
Site (where the Project will be carried out)		istributor piped culvert, adjacent to 190 Western Distributor adjacent Lot 1 DP 707475).
Grant	A maximum tot instalments.	tal amount of \$500,000 (GST exclusive) payable in
Commencement Date (of this Deed)	The date on wh	nich this Deed is executed by the last party.
(refer to clause 2 - Term)		
Email address for invoices	scott.nichols@	dpi.nsw.gov.au



Additional Insurance P	olicies (refer to clause 15 – Insurance)	
Types of Insurances	Minimum Sum Insured	Tick if Required
Professional Indemnity	\$ 1 million in respect of any one claim	
Special Conditions	 You must not commence works on the phaving the Scope of Works approved by the relevant permits in place. You must ensure that all contractual arrayou enter into in connection with the Projecapplicable laws and regulations (including penvironmental, work health and safety, buil approvals). You must immediately notify the Departithat could impact on the timely delivery of the same approach that could impact on the timely delivery of the same approach in the same approach and the same approach are same approaches. 	Department and singements which ct comply with all lanning, lding and regulatory ment of any delays

Background

The NSW Department of Primary Industries - Fisheries (DPI Fisheries) is managing the fish passage component of the NSW Marine Estate Management Strategy (MEMS), targeting the remediation of priority fish passage barriers in coastal NSW.

The Western Distributor crossing of Currowan Creek is a piped culvert, located approximately 20 km north-west of Batemans Bay, in the mid reaches of the Clyde River catchment. The crossing is a low level concrete piped culvert that channels creek flow through four x 600 mm diameter pipes.

Currowan Creek crossing is identified as a medium- high priority barrier for fish passage. An Options Report completed in 2006 recommended the preferred remediation action for this site as *replacement with bridge* as the culvert creates a velocity barrier to fish passage when attempting to move upstream. Replacement of the piped culvert with a bridge would provide fish passage to over 20 km of upstream habitat and build upon previous fish passage works undertaken 16 km downstream at The River Road, Currowan Creek.

DPI Fisheries are funding Shoalhaven City Council to replace the piped culvert with an InQuik bridge and contribute to the project costs including engagement of a project management contractor.



Terms and Conditions

Definitions and Term

1. Interpretation and Definitions

1.1. Interpretation

Unless the context requires otherwise, in this Deed:

- (a) the terms set out in the left hand column of the Details have the meaning ascribed to them in the right hand column of the Details;
- (b) where any time limit pursuant to this Deed falls on a day which is not a Business Day then the time limit will be deemed to have expired on the next Business Day;
- (c) a reference to a statute, regulation, ordinance or by-law will be deemed to include a reference to all statutes, regulations, ordinances or by-laws amending, consolidating or replacing same from time to time;
- (d) specific examples do not limit the meaning of general words introduced by "including" or "for example" or similar expressions;
- (e) references to persons include bodies corporate, government agencies and vice versa;
- (f) references to the parties include references to respective directors, officers, employees and agents of the parties;
- (g) nothing in this Deed is to be interpreted against a party solely on the grounds that the party put forward this Deed or any part of it; and
- (h) where an expression is defined, any other grammatical form of that expression has a corresponding meaning.

1.2. Definitions

Activity means the activity(s) described in Schedule A – Project Plan, which aim to fulfil one or more of the Objectives of the Project.

Activity Period means the period specified in **Schedule A – Project Plan** during which the Activity must be completed.

Business Day means any day other than a Saturday, Sunday or public holiday in New South Wales.

Capital Equipment means any item of tangible property, purchased, leased, created or otherwise brought into existence wholly, or in part, with the use of the Grant, which has at that time a value of over \$5,000 inclusive of GST, but does not include Project Material.

Claim means any cost, expense, loss, damage, claim, action, proceeding or other liability (whether in contract, tort or otherwise), however arising and includes legal costs on a full indemnity basis.

Confidential Information of a party means all trade secrets, financial information and other commercially or scientifically valuable information of whatever description and in whatever form (whether written or oral, visible or invisible) which:

- (a) is by its nature confidential
- (b) a party has designated as confidential;



- (c) is capable of protection at common law or equity as confidential information; or
- (d) is derived or produced partly from information described in paragraph (a), (b) or (c) above,

but does not include information that:

- (a) is in the public domain; or
- (b) a party receiving the information independently knows or develops other than as a result of a breach of this Deed or any other obligation of confidentiality owed by or to any other person.

Correctly Rendered Invoice means an invoice that:

- (a) sets out your contact details including ABN
- (b) specifies the amount to be paid, and whether or not this includes GST;
- (c) identifies this Deed and any Activities to which the payment applies; and
- (d) is sent to the email address specified in the Details or otherwise notified by the Department.

Deed means this funding deed document and includes the Details, Terms and Conditions, **Schedule A – Project Plan** and any other schedules, annexures or other documents cross-referenced in this deed.

GST Law means A New Tax System (Goods and Services Tax) Act 1999.

Instalments means those parts of the Grant which the Department pays to you in the amounts and on the dates set out in **Schedule A**.

Intellectual Property or IP includes:

- (a) all rights in relation to copyright, inventions, plant varieties, trademarks, designs, patents;
 and
- (b) all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields including trade secrets and know-how,

but does not include moral rights as defined in the Copyright Act 1968 (Cth).

Notice means any approvals, consents, instructions, orders, directions, statements, requests and certificates, or other communication one party gives to another party in writing under this Deed

Objectives means the objectives of the Activities described in **Schedule A – Project Plan**, which are the agreed results you must achieve and ensure your subcontractors achieve.

Personal Information has the same meaning as in the *Privacy and Personal Information Protection Act 1998 (NSW)*.

Project Material means any data, reports, online content or other material created as part of or in performance of the Project, which you provide to the Department.

2. Term

- 2.1. This Deed will commence on the Commencement Date.
- 2.2. Unless terminated earlier, this Deed will end once you have completed the Project to the Department's satisfaction and the Department has paid all instalments due.



What you must do

3. Your general obligations

3.1. You must:

- (a) ensure the Grant or any Instalment is used only for the approved Project;
- (b) ensure each Activity is completed within the Activity Period in accordance with this Deed;
- (c) comply with the reporting requirements set out in Schedule B;
- (d) comply with all Commonwealth, State and Local government laws that are relevant to the Project, this Deed, or your registration as an entity;
- (e) comply with all policies, guidelines and reasonable directions the Department provides to you; and
- (f) comply with the Program Guidelines.

4. No overlap with other funding

4.1. You agree that there must be no overlap between the Activities funded under this Deed and activities covered by any other funding arrangements you have entered into, or that you may enter subsequently.

4.2. You agree to:

- (a) notify the Department immediately of any existing or proposed funding arrangement that concerns the Project, the Activities or any related matters (**Related Funding**); and
- (b) cooperate with the Department and the provider of the Related Funding to ensure that there is a clear distinction between the Activities funded by this Deed and the activities you are required to carry out under the Related Funding deed.

5. Variation

- 5.1. If you wish to vary the Project, including any Activity or other matter set out in **Schedule A** such as:
 - (a) changes to the nature of the Project or the scope of works, Site or revised priorities for the Project: or
 - (b) changes to the timeframe for delivery of the Project, including extensions to completion of Activities,

you must first make a written request to the Department and provide such information as is reasonably required by the Department.

- 5.2. Following your request for a variation under **clause 5.1**, the Department will consider whether to approve your request and make a decision in its sole discretion. No variation is approved unless and until the Department approves the variation in writing.
- 5.3. You must advise the Department immediately:
 - (a) if you are unable to proceed with the Project;
 - (b) if the Project has been inactive for a period of 20 Business Days or more;
 - (c) (where you own or lease the Site) if you propose to sell or lease any part of the Site; and



(d) (where you do not own or lease the Site) if you are notified or become aware of a proposal to sell or lease any part of the Site.

About the Grant

6. Paying the Grant

- 6.1. The Department will pay the Instalments as set out in Schedule A on condition that:
 - (a) the Department receives a Correctly Rendered Invoice from you that clearly identifies the Instalment you are claiming;
 - (b) you have provided the Department with the evidence of compliance required under clause 8 and the Schedule(s) showing that you have performed the Activities at the times set out in the Schedules; and
 - (c) the Activities have been performed to the satisfaction of the Department.
- 6.2. Notwithstanding **clause 6.1**, if the Department pays you an Instalment, this does not constitute an admission that the performance of the Project is in conformity with this Deed and no payment will be deemed to release you from your obligations under this Deed.

7. Withholding, Suspension, Changes to Instalments and Repayment

- 7.1. The Department may change the amount of the Instalment by issuing you with a Notice setting out the details of the changes.
- 7.2. If you are not complying with this Deed the Department may withhold or suspend payment of an Instalment until you comply with your obligations to the Department's satisfaction.
- 7.3. If the Department withholds or suspends an Instalment you must continue to perform your obligations under this Deed.
- 7.4. You must repay within 28 days of a demand being sent:
 - (a) any Instalment spent in breach of this Deed;
 - (b) all unspent Instalments;
 - (c) any overpayment
 - (d) any interest earned on any Instalment required to be repaid.
- 7.5. Where you have failed to comply with this Deed, the Department will calculate the amount of repayment you must make in proportion with the extent to which you have failed to complete the Activities of the Project.
- 7.6. The Department may set off the amount of any overpayment or claim for repayment against any future Instalment due.
- 7.7. Any repayment the Department claims from you under this clause 7 will be a debt due and owing by you to the Department.

8. GS1

8.1. Unless otherwise indicated, all consideration for any supply under this Deed is exclusive of any GST imposed in relation to the supply.



8.2. If:

- (a) despite any other provision of this Deed, GST is imposed on a supply you make to the Department under this Deed; and
- (b) the Department is or will be entitled to receive an input tax credit (as defined in the GST Law) in relation to that supply,
- (c) the Department will pay you an additional amount equal to the GST imposed on that supply, at the time and in the manner payment is otherwise payable under this Deed in relation to that supply.
- 8.3. If you are not registered under the GST Law you will not be entitled to receive any additional amount as provided under this **clause 8**.
- 8.4. If for any reason the Department pays you an amount under this clause 8 which is more than the GST imposed on the supply, you must repay the excess to the Department on demand or the Department may set off the excess against any other amounts due to you.

Material and Information

9. Reporting Requirements

- 9.1. You agree to provide the Department with written progress reports at the times and containing the information specified in **Schedule B** Reporting Requirements ("Progress Reports").
- 9.2. You must also provide any other information the Department reasonably requires from time to time concerning the Project.
- 9.3. If any Progress Report contains information confidential to you, you should mark the relevant parts of the Progress Report accordingly.
- 9.4. You must provide financial statements of income and expenditure in respect of the Grant ('the Statements') to the Department within 60 Business Days after:
 - (a) completion of the Activity or any termination of this Deed, whichever is the earliest; and
 - (b) the completion of each Financial Year in which a Grant is made.
- 9.5. The Statements must include a definitive statement as to whether:
 - (a) the financial information for the Project represents the financial transactions fairly and is based on proper accounts and records; and
 - (b) the Grant was expended for the Project and in accordance with this Deed.
- 9.6. You must keep financial accounts and records relating to the Project so as to enable:
 - (a) all receipts and payments related to the Project to be identified in your accounts and reported in accordance with this Deed;
 - (b) unless notified by the Department, the preparation of financial statements in accordance with Australian Accounting Standards; and
 - (c) generation of an income and expenditure statement for each financial year of the Project with the budget, including:



- a schedule of the Capital Equipment acquired, sold, written-off or otherwise disposed of during each financial year; and
- a comparison of the income and expenditure in each financial year against the budget; and
- iii. the audit of those records in accordance with Australian Auditing Standards.
- 9.7. You agree to participate in any survey or feedback regarding the Project or Program, if requested by the Department.

10. Intellectual Property

- 10.1. Intellectual Property in all Project Material vests in you.
- 10.2. You grant the Department a non-exclusive, irrevocable, royalty-free licence (including the right to sub-license) to use the Project Material for any purposes.

11. Confidential Information

11.1. Each party must maintain the confidentiality of all Confidential Information it receives from the other party (subject to clause 13.2) unless otherwise agreed in writing.

12. Privacy

12.1. You will:

- (a) ensure that Personal Information that is provided by the Department or collected by you under or in connection with this Deed is used only for the purposes of this Deed and is protected against loss, unauthorised access, use, modification and disclosure, or against other misuse:
- (b) not disclose any Personal Information without the written consent of:
 - i. the individual to whom the Personal Information relates; or
 - ii. the Department,

unless otherwise required or authorised by law;

- (c) comply with the Information Protection Principles applying to NSW public sector agencies under the *Privacy and Personal Information Protection Act 1998* (NSW) when doing any act or engaging in any practice in relation to Personal Information as if you were an agency directly subject to that Act; and
- (d) include equivalent requirements regarding Personal Information (including this clause 12) in any subcontract entered into for the provision of any of the Activities under this Deed.

13. Public Announcements and Acknowledgement

13.1. You must:

- (a) seek the consent of the Department prior to any public announcement about the Project;
- (b) acknowledge the support of the Department, as directed by the Department from time to time:
 - i. in any public statements about the Project;
 - ii. on the home page of any web site established in connection with the Project;
 - iii. on any equipment or other facility funded wholly or in part by the Department;



- (c) You must acknowledge the Department's support of the Project and comply with the applicable NSW Government Guidelines.
- 13.2. You agree that the Department may disclose information about the Project and the Grant in any media, such as media releases, social media, case studies, promotional material and in response to media enquiries.

14. Disclosure of Information

14.1. You acknowledge that under Part 6.5 of the NSW Government Grants Administration Guide, the Department is required to publish detailed information about the Grant on the NSW Government Grants and Funding Finder at nsw.gov.au/grants-and-funding, except to the extent such information would identify individuals or otherwise conflict with the law.

Dealing with Risk

15. Insurance

- 15.1. You must maintain, during the term of this Deed:
 - (a) a broadform public liability policy of insurance to the value of at least \$10 million in respect of each claim and in the aggregate as to the number of occurrences in the policy period;
 - (b) workers' compensation insurance as required by all relevant laws of Australia relating to workers compensation; and
 - (c) any additional insurance policies specified by the Department.
- 15.2. You must not do, permit or suffer any act, matter or thing or omission whereby any of the policies referred to in this clause may be vitiated, rendered void or voidable.
- 15.3. On request by the Department, you must provide a copy of valid and current certificates of currency for each or any of the policies described above.
- 15.4. Without limitation to **clause 15.1**, each party warrants that it has and will maintain appropriate insurance to cover any liability it may incur in relation to this Deed.

16. Indemnities

- 16.1. You must indemnify and keep indemnified the Department, the Crown in right of the State of New South Wales and their officers, employees and agents from and against any loss (paid or payable including legal costs and expenses on a solicitor/own client basis) or liability incurred or suffered by, or made against, any of those indemnified arising directly or indirectly from any Claim by any person as a result of or in connection with:
 - (a) the Grant or the use of any outcomes from the Project;
 - (b) your breach of this Deed;
 - (c) any unlawful or negligent act or omission by you, your employees or your subcontractors in connection with this Deed;
 - (d) any illness, injury or death of any person you, your employees or your subcontractors cause or contribute to, in connection with this Deed;



- (e) any loss or damage to real or personal property you, your employees or your subcontractors cause or contribute to, in connection with this Deed; or
- (f) any act or omission by you, your employees or your subcontractors in connection with this Deed that is in infringement of any Intellectual Property, or privacy rights of the Department or any third party.
- 16.2. Your liability to indemnify the Department under this clause will be reduced proportionately to the extent that the Department's negligent or unlawful acts or omissions, or those of its officers, employees or agents contributed to the relevant loss or liability.
- 16.3. Your liability to indemnify the Department under this clause does not exclude or reduce the liability of, or benefit to, a party that may arise by operation of the common law, statute or the other terms of this Deed.

Terminating the Deed

17. Termination

- 17.1. Where a party has breached this Deed:
 - (a) the other party may give a Notice to that party requiring it to rectify that breach within 30 days of receiving that Notice; and
 - (b) if the party which received the Notice fails to rectify that breach in time, the other party may terminate this Deed immediately by giving a further Notice.
- 17.2. The Department may terminate this Deed by Notice, with effect on the date stated in the Notice, if:
 - (a) you have provided misleading or incorrect information in your application for funding or in this Deed;
 - (b) you breach any of the following provisions: clause 3.1 (Your General Obligations); clause 15 (Insurance), clause 11 (Confidential Information) and clause 21.10 (Assignment);
 - (c) the Department considers the Project no longer viable;
 - (d) the Department considers that there has been a material change in circumstances in your financial position, your structure or your identity; or
 - (e) you become insolvent, if you are the subject of a debtors or creditors petition under the Bankruptcy Act 1966, or if you resolve to go into administration or liquidation or have a summons for your winding up presented to a Court or enter into any scheme of arrangement with your creditors.
- 17.3. This **clause 17** does not exclude or reduce the rights of a party to terminate the Deed arising by operation of the common law or statute or the other terms of this Deed.

18. Consequences of termination

- 18.1. On termination or expiry of this Deed:
 - (a) accrued rights and obligations are not affected; and
 - (b) the Department will pay any Instalments due (after taking into account any Instalments already made prior to that date).



Other Legal Matters

19. Dispute Resolution

- 19.1. If a dispute arises in relation to this Deed ("a Dispute"), a party must comply with this clause 19 before starting arbitration or court proceedings except proceedings for urgent interlocutory relief.
- 19.2. A party claiming that a dispute has arisen must notify the other party giving details of the dispute (Dispute Notice) in accordance with the requirements of clause 20 (Notices).
- 19.3. Following receipt of a Dispute Notice, each party must refer the Dispute to a senior representative, who:
 - (a) does not have prior direct involvement in the Dispute; and
 - (b) has authority to negotiate and settle the Dispute.
- 19.4. If the Dispute is not resolved within 10 Business Days, from the date the Dispute Notice is received by the party to whom the Dispute Notice is given, the party which gave the Dispute Notice must refer the Dispute for mediation by the <u>Australian Disputes Centre</u> (ADC) for resolution in accordance with the mediation rules of the ADC.
- 19.5. If the Dispute is not resolved within 40 Business Days after referral to mediation either party may initiate proceedings in court.
- 19.6. Each party must pay its own costs of complying with this clause and split the costs of the mediator evenly.

20. Notices

- 20.1. Unless otherwise stated in this Deed, all Notices to be given under this Deed must be in writing, and hand-delivered or emailed to the Authorised Officer specified in the Details.
- 20.2. The receiving party will be deemed to have received the Notice as follows:
 - (a) if hand delivered, on the day on which it is delivered or left at the relevant address;
 - - i. when the sender receives an automated message confirming delivery; or
 - four hours after the time sent (as recorded on the device from which the sender sent the email) unless the sender receives an automated message that the email has not been delivered.
 - (c) if sent by email after 5pm on a Business Day or on a day that is not a Business Day, then it will be deemed to be received on the next Business Day.
- 20.3. Any such mode of service will be in all respects valid notwithstanding that the party on whom service is affected may be in liquidation, bankruptcy or wound up and notwithstanding any other matter or event whatsoever.



21. General

21.1. Survival:

The following clauses survive termination or expiry of this Deed: clause 9 (Reporting Requirements), clause 10 (Intellectual Property), clause 11 (Confidential Information), clause 12 (Privacy), clause 1515 (Insurance), clause 16 (Indemnities), clause 17 (Termination), clause 21.3 (Keeping of records), this clause 21.1 and any other clause which by its nature is intended to survive this Deed.

- 21.2. Subcontractors: You remain fully responsible for the performance of the Project if you subcontract the performance of any part of the Project.
- 21.3. Keeping of records and rights of access to such records You:
 - (a) must keep complete and accurate records and books of account with respect to your performance of the Activities (the "Records"), and must retain such Records for a minimum of seven (7) years after expiry or termination of this Deed;
 - (b) authorise the Department and any State or Commonwealth Government department or agency (the "Auditors") that has provided moneys to the Department for the purposes of the Project to which the Activities relate, to examine and inspect, at reasonable times and on reasonable Notice, any Project Material you hold, and allow any such Records to be copied; and
 - (c) must provide all reasonable assistance in order for the Auditors to properly carry out the inspections and audits referred to in this clause.
- 21.4. Conflict of Interest: You must not carry on or be involved in any capacity in an activity or business, which may conflict with, or adversely affect, your ability to carry out your obligations under this Deed, and you will immediately notify the Department in writing if such a conflict or risk of such a conflict arises.
- 21.5. **Entire Deed**: This Deed states all the express terms agreed by the parties as to the matters referred to in this Deed. It supersedes all prior contracts, obligations, representations, conduct and understandings between the parties relating to the subject matter of this Deed.
- 21.6. Severability: If any clause (or part of any clause) in this Deed is illegal or unenforceable in any relevant jurisdiction, it may be severed for the purposes of that jurisdiction without affecting the enforceability of other clauses of this deed.
- 21.7. **Inconsistency**: If there is any inconsistency between provisions in this Deed then the order of precedence will be:
 - (a) the Details; then
 - (b) the Special Conditions; then
 - (c) these Terms and Conditions; then
 - (d) any Schedules or attached Annexures.
- 21.8. **Negation of employment, partnership or agency:** This Deed does not create a relationship of agency, partnership, and/or employment between the parties. You must not represent



- yourself as being an employee or agent of the Department or as otherwise able to bind or represent the Department.
- 21.9. Waiver: If a party fails to exercise any of its rights under this Deed, or delays exercising those rights, that failure or delay will not operate as a waiver of those rights or any future rights or in any respect estop a party from relying on the terms of this Deed to their full force and effect.
 - Any waiver by a party of a breach of this Deed must be in writing and will not be construed as a waiver of any further breach of the same or any other provision.
- 21.10. **Assignment**: You must not assign or novate your obligations or interests under this Deed, without the prior written consent of the Department.
- 21.11.Counterparts: This Deed may be signed in any number of counterparts which taken together will constitute one instrument.
- 21.12. Electronic execution: Each party agrees that the other may execute this Deed electronically as provided for in the *Electronic Transactions Act 2000*.
- 21.13. **Governing Law:** The laws of New South Wales govern this Deed and the parties submit to the non-exclusive jurisdiction of the courts in that State.



Executed as a deed

Department				
Signed, sealed and delivered for and on behalf of the Crown in right of the State of New South Wales acting through the Department by its authorised signatory but not so as to incur personal liability:				
Signature of Authorised Signatory	Signature of Witness			
Name of Authorised Signatory	Name of Witness			
Position of Authorised Signatory	Address of Witness			
	Date			
You (Authorised Signatory, Council)				
By entering into this Deed the signatory warrants that this Deed on behalf of Shoalhaven City Council. Signed, Sealed and delivered for on and on behalf of section 127 of the <i>Corporations Act 2001</i> by:	, ,			
Signature of authorised signatory				
Signature of authorized signatury	Signature of Witness			
Name of authorised signatory	Signature of Witness Name of Witness			



Schedule A – Project Plan

Description of Activities	Evidence of completion	Instalment (excluding GST)	Your Contribution (excluding GST) (If applicable)	Activity Period	When to send invoice
Execution of funding deed	Co-signing agreement	\$200,000		March 2023	Co-signing agreement
Engage Project Management Resource to project manage the replacement The Western Distributor crossing of Currowan Creek to improve fish passage	PMO engaged	\$50,000			PMO engaged
Project Management Resource undertakes: Project tendering Design management Preliminary environmental assessments (Geotech, land surveys, community consultation) REF, permits and approvals (Part 7 DPI Fisheries, Native Title) (inkind contribution by SCC)	Preliminary assessments complete	\$150,000	\$12,000		Preliminary assessments complete
Bridge construction: Erosion and sediment controls Construction of temporary bypass Removal of old structure Piling for bridge abutments Road works to link into bridge abutments Installation of bridge abutments and scour protection Deck placement and opening of road Removal of temporary crossing Site remediation	Initiation of construction activities	\$100,000		June – November 2023	Award of tender
		Upper limit \$500,000			



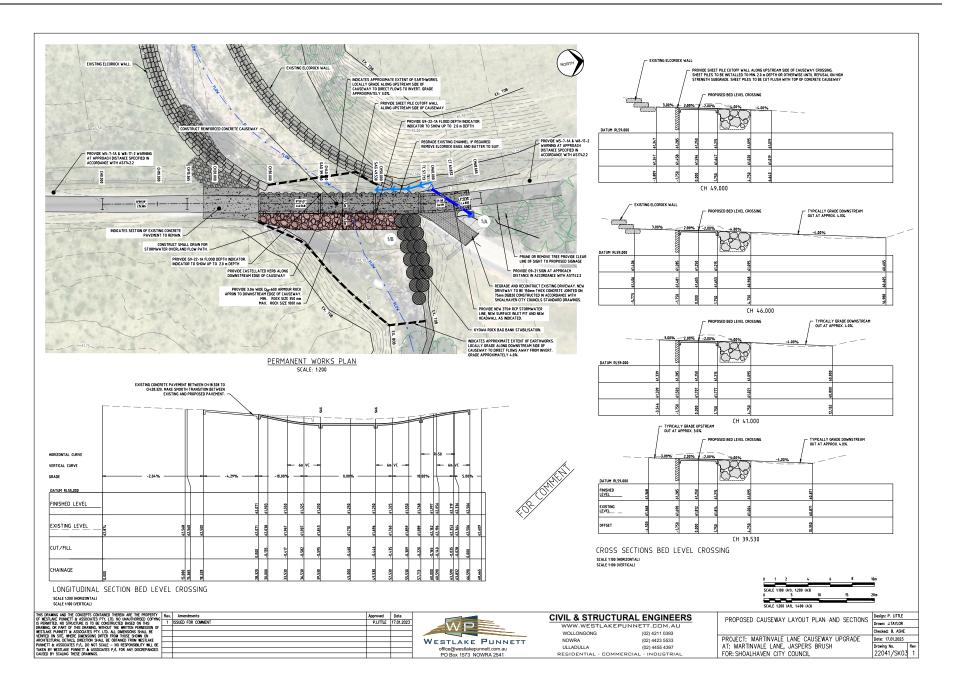
Description o	of Activities	Evidence of completion	Instalment (excluding GST)	Your Contribution (excluding GST) (If applicable)	Activity Period	When to send invoice
Objectives of the Project		Removal of Currowan Creek piped culve	ert and replacemen	t with InQuik bridg	ge to restore fish p	assage
Invoicing Requirements (if required)		Address Invoice to Department of Region	nal NSW. Send invo	pice to <u>scott.nicho</u>	ls@dpi.nsw.gov.au	1



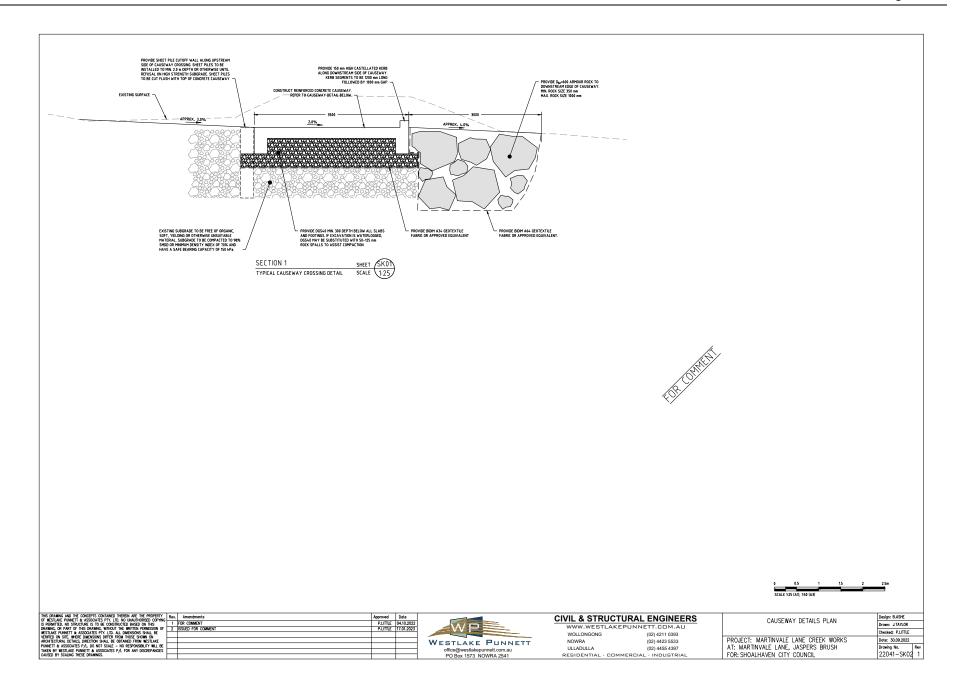
Schedule B – Reporting Requirements (refer to clause 3.1(c))

- 1. You must provide to the Department monthly Activity Progress Reports (email or word document) on the status of all on-going and completed activities for the period to which the report relates, consisting of:
 - (a) a brief description of the activities' objective/s;
 - (b) all activities undertaken during the reporting period;
 - (c) the status of results achieved to date from the project; and
 - (d) the amount of the funding from the Grant and what has been expended on the activity
- The Department may meet with you each quarter, at the Department's discretion, to discuss progress on the Project.
- 3. The Department may undertake site visits to ascertain progress of the activities on providing reasonable notice to you.











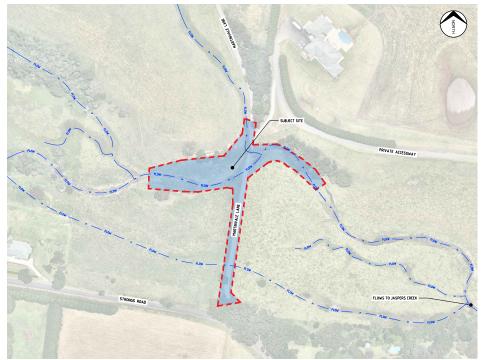




MARTINVALE LANE CAUSEWAY UPGRADE

MARTINVALE LANE, JASPERS BRUSH, 2535

DRAWING NO.	DRAWING DESCRIPTION	REV.]
22041/C01	COVER SHEET AND LOCALITY PLAN	3	
22041/C02	GENERAL NOTES	3	
22041/C03	GENERAL ARRANGEMENT PLAN	3	
22041/C04	ROAD CHAINAGE PLAN AND LONG SECTION	3 3 3 3	
22041/C05	ROAD CROSS-SECTIONS	3	
22041/C06	ROAD CROSS-SECTIONS	3	l v
22041/C07	MAIN CHANNEL CHAINAGE PLAN AND LONG SECTION	3	WORKS
22041/C08	MAIN CHANNEL CROSS-SECTIONS	3	≩
22041/C09	MAIN CHANNEL CROSS-SECTIONS	3 3 3	⊢
22041/C10	MINOR CHANNEL CHAINAGE PLAN AND LONG SECTION	3	≦
22041/C11	MINOR CHANNEL CROSS-SECTIONS	3	l≨
22041/C12	TYPICAL SECTIONS (NOT ISSUED IN SET)	-	PERMANENT
22041/C13	DETAILS (NOT ISSUED IN SET)	-	=
22041/014	SEDIMENT EROSION CONTROL PLAN (NOT ISSUED IN SET)	-	
22041/C15	SEDIMENT EROSION CONTROL DETAILS (NOT ISSUED IN SET)	-	
22041/C16	TEMPORARY DIVERSION AND STAGING PLANS	3	
22041/C17	TEMPORARY DIVERSION DETAILS (NOT ISSUED IN SET)	-	
22041/C18	INTERIM WORKS PLAN	3	
22041/C19	INTERIM WORKS CHAINAGE PLAN	1	
22041/C20	WALL01, WALL02 AND CHANNEL01	1	ls
22041/C21	ROADO1 CROSS-SECTIONS	1	WORKS
22041/C22	ROADO1 CROSS-SECTIONS	1	
22041/C23	WALL01 CROSS-SECTIONS	1	NTERIM
22041/C24	WALL01 CROSS-SECTIONS	1	#
22041/C25	WALL02 CROSS-SECTIONS	1	E
22041/C26	STRUCTURAL PLAN	1	
22041/C27	STRUCTURAL DETAILS	1	



LOCALITY PLAN 1:1000

THIS DRAWING AND THE CONCEPTS CONTAINED THEREIN ARE THE PROPERTY OF WESTLAKE PUNNETT & ASSOCIATES PTY, LTD, NO UNAUTHORISED COPYING	Rev.	г
IS PERMITTED. NO STRUCTURE IS TO BE CONSTRUCTED BASED ON THIS	1	ISS
DRAWING, OR PART OF THIS DRAWING, WITHOUT THE WRITTEN PERWISSION OF	2	ISS
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ARCHITECTURAL DETAILS, DIRECTION SHALL BE OBTAINED FROM WESTLAKE		Г
PUNNETT & ASSOCIATES P/L. DO NOT SCALE - NO RESPONSIBILITY WILL BE		Г
TAKEN BY WESTLAKE PUNNETT & ASSOCIATES P/L FOR ANY DISCREPANCIES		Г
CAUSED BY SCALING THESE DRAWINGS.		Г

v.	Amendments	Approved	Date	
	ISSUED FOR MEETING	S. PUNNETT		
	ISSUED FOR CONSULTATION	S. PUNNETT		
	ISSUED FOR FINAL CONCEPT	P. LITTLE	08.07.2022	
_				



CIVIL & STRUCTURA	L ENGINEERS
WWW.WESTLAKEPUN	NETT.COM.AU
WOLLONGONG	(02) 4211 0393
NOWRA	(02) 4423 5533
ULLADULLA	(02) 4455 4397
DECIDENTIAL - COMMEDO	IAL - INDUCTORAL

COVER SHEET AND LOCALITY PLAN	Design: P. LITTLE		
COVER SHEET AND LOCALITY FLAN	Drawn: P. LITTLE		
	Checked: B. ASHE		
ROJECT: MARTINVALE LANE CAUSEWAY UPGRADE	Date: 08.07.2022		
T: MARTINVALE LANE, JASPERS BRUSH	Drawing No.	Rev	
DR: SHOALHAVEN CITY COUNCIL	22041/C01	3	



- GENERAL

 1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO COUNCIL'S REPRESENTATIVE BEFORE PROCEEDING WITH THE WORK.
- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE FOLLOWING REPORTS: 2.1. GEOTECHNICAL INVESTIGATION REPORT PREPARED BY TERRA INSIGHT- XXXX
- 2.2. REF REPORT XXXX
- 2.3. WASTE CLASSIFICATION REPORT PREPARED BY TERRA INSIGHT XXX
- 2.4. HYDAULIC REPORT BY WESTLAKE PUNNETT REF No. XXX
- 2.5. WHS SAFETY IN DESIGN REPORT BY WESTLAKE PUNNETT AND ASSOCIATES REF
- ALL HATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT AND CURRENT AUSTRALIAN STANDARDS, NATIONAL CONSTRUCTION CODE INCC AND WITH THE 91-AMS AND ORDINANCES OF THE RELEVANT BULDING AUTHORITIES EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION.
- ALL DIMENSIONS AND LEVELS SHOWN SHALL BE VERIFIED BY THE CONTRACTOR ON SITE. ENGINEERS' DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS.
- DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED. TEMPORARY BRACING SHALL BE PROVIDED BY THE CONTRACTOR TO KEEP THE WORKS AND EXCAVATIONS STABLE AT ALL TIMES.
- THE CONTRACTOR SHALL GIVE 48 HOURS NOTICE FOR ALL ENGINEERING INSPECTIONS. SLABS, FOOTINGS, BEAMS AND WALLS SHALL BE POURED ON THE DAY OF APPROVAL UNLESS PERMISSION IS GIVEN OTHERWISE.
- UNLESS NOTED OTHERWISE ALL LEVELS ARE IN METRES AND ALL DIMENSIONS ARE IN
- DATUM FOR LEVELS IS AND (AUSTRALIAN HEIGHT DATUM) AND COORDINATES ARE TO HGA20 (MAP GRID OF AUSTRALIA)
- THE CONTRACTOR IS RESPONSIBLE FOR ALL SURVEY CONTROL INCLUDING SETOUT BY A REGISTERED SURVEYOR AND PROVISION OF WORKS AS EXECUTED DRAWINGS.
- 11. ALL SERVICE LOCATIONS ON PLANS ARE SCHEMATIC ONLY. 12. CONTRACTOR TO DETERMINE AND/OR CONFIRM LOCATION AND DEPTH OF ALL EXISTING
- SERVICES PRIOR TO COMMENCEMENT OF WORK ENGINEER TO BE NOTIFIED. PROPRIETARY PRODUCTS MAY BE REPLACED WITH EQUIVALENT PRODUCTS, ONLY FOLLOWING REVIEW AND WRITTEN APPROVAL BY SCC REPRESENTATIVE, CONTRACTOR TO PROVIDE SUPPORTING DOCUMENTATION INDICATING EQUIVALENT PROPERTIES FOR SCC REVIEW.
- REFERENCES TO SUPERINTENDENT OR PRINCIPAL SHALL BE TAKEN AS SCC REPRESENTATIVE.
- REFERENCES TO BUILDER, SUPPLIER OR OTHER PARTIES INVOLVED IN CONSTRUCTION CHAIL HAVE THE SAME MEANING AS CONTRACTOR
- THE CONTRACTOR IS RESPONSIBLE FOR ALL TESTING AS SPECIFIED IN THE CONTRACT DOCUMENTS TO DEMONSTRATE COMPLIANCE. THE CONTRACTOR SHALL BEAR ALL COSTS ASSOCIATED WITH COMPLIANCE TESTING.
- TRAFFIC MANAGENERY MEASURES ARE REQUIRED TO BE IMPLEMENTED AND MAINTAINED THROUGHOUT CONSTRUCTION IN ACCORDANCE WITH "RMS. TRAFFIC CONTROL AT WORK SITES - CURRENT EDITION' AND AS 1742 'HANUAL OF UNIFORM TRAFFIC CONTROL DEVICES ' TO BE SUBMITTED TO SCC REPRESENTATIVE FOR APPROVAL
- PEDESTRIAN CONTROL HEASURES ARE REQUIRED TO BE IMPLEMENTED AND MAINTAINED DURING CONSTRUCTION. IN ACCORDANCE WITH AS 712 "HANUAL OF UNIFORM TRAFFIC

SAFETY

- CONTRACTOR TO ERECT SIGNAGE ADVISING OF CONSTRUCTION ACTIVITIES PRIOR TO COMMENCEMENT OF WORKS ON SITE. SIGNAGE SHALL BE PLACED AS NECESSARY TO ENSURE CLEAR VISBILITY TO SIGNAGE FROM ANY ROUTE BY WHICH MOTORISTS, CYCLISTS, OR PEDESTRIANS MAY APPROACH THE WORK SITE.
- WHAS PRECLIDINGS SHALL BE GOSERVED IN ACCORDANCE WITH THE WHAS ACT 2011 AND RELEVANT ACCOMPANYING REQULATIONS. SAFETY SYSTEMS AND DOCUMENTATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL COMPLY WITH SPECIFIC REQUIREMENTS AS DETAILED IN RELEVANT PROJECT.
- SITE FACILITIES AND ACCESS TO BE MAINTAINED IN A NEAT AND TIDY CONDITION AT
- THE CONTRACTOR SHALL OBTAIN AND KEEP ON SITE ALL RELEVANT MATERIAL SAFETY DATA SHEETS INSDS! FOR ANY MATERIALS THAT ARE USED IN THE WORKS. ALL TRANSPORTATION, STORAGE AND USE OF THESE MATERIALS SHALL BE IN ACCORDANCE
- THE CONTRACTOR IS TO PREPARE A SITE SPECIFIC RISK MANAGEMENT PLAN TAKING RISKS IDENTIFIED IN THE SAFETY IN DESIGN REPORT

ENVIRONMENTAL

- ALL SAFEGUARDS AND MITIGATION MEASURES OUTLINED IN THE REVIEW OF ENVIRONMENTAL FACTORS ARE TO BE STRICTLY ADHERED TO FOR THE DURATION OF
- EROSION & SEDIMENT CONTROLS TO BE INSTALLED IN ACCORDANCE WITH COUNCIL'S SPECIFICATION & THE NSW DEPARTMENT OF HOUSING "BLUE BOOK" - SOILS AND CONSTRUCTION - MANAGING URBAN STORMWATER, 2004, REFER TO THE BLUE BOOK FOR STANDARD DRAWINGS "SD".
- ANY EARTHWORKS OR DEMOLITION ACTIVITY. THE LOCATION OF SUCH DEVICES IS INDICATIVE ONLY AND FINAL POSITION SHOULD BE DETERMINED ON SITE.
- TAKEN DURING THE COURSE OF CONSTRUCTION TO PREVENT SEDIMENT EROSION AND POLLUTION OF THE DOWNSTREAM SYSTEM. ALL SEDIMENT CONTROL STRUCTURES TO BE INSPECTED AFTER EACH RAINFALL EVENT FOR STRUCTURAL DAMAGE AND ALL TRAPPED SEDIMENT TO BE REMOVED TO A NOMINATED SOIL STOCKPILE SITE.
- RETAIN ALL EXISTING GRASS COVER WHEREVER POSSIBLE. TOPSOIL FROM ALL AREAS THAT WILL BE DISTURBED TO BE STRIPPED AND STOCKPILED AT THE NOMINATED SITE. A SEDIMENT FENCE TO BE PLACED DOWNHILL OF STOCKPILE.
- AREAS OF SITE RE-GRADING ARE TO BE COMPLETED PROSPESSIVELY DURING THE

- STABILISED DURING THE COURSE OF THE WORKS
- ALL DISTURBED AREAS ARE TO BE TRIMMED, LEVELED, TURFED & FERTILISED WITHIN 14
- ALL EXISTING TREES TO BE RETAINED UNLESS SHOWN OTHERWISE ON APPROVED DRAWINGS. TREES RETAINED ARE TO BE PROTECTED WITH A HIGH VISIBILITY FENCE, PLUS FLAGGING TO INDIVIDUAL TREES AS NECESSARY.
- ALL SILT FENCES & BARRIERS ARE TO BE MAINTAINED IN GOOD ORDER & REGULARL'
- ALL SILI PERICES & DARRIERS ARE 10 BE HAIRI AIRCE IN GOUD UNDER & REQUEATED.
 TOSS. TEST DURING THE CONSTRUCTION PERIOD. SILI FERKES TO SD6-8 OR SD6-9.

 STOCKPILES OF LOOSE MATERIALS SUCH AS SAND, SOIL, GRAVEL MUST BE COVERED.
- WITH GEOTEXTILE SILT FENCE MATERIAL WASTE MATERIALS ARE TO BE STOCKPILED OR LOADED INTO SKIP-BINS LOCATED ON SITE AS SHOWN ON PLAN.
- ALL VEHICLES LEAVING THE SITE HUST PASS OVER THE STABILISED SITE ACCESS BALLAST AREA ISHILAR TO SOG-14) TO SHAKE OFF SITE CLAY AND SOIL. F NECESSARY WHEELS AND AXLES ARE TO BE HOSED DOWN BALLAST IS TO BE MAINTAINED & REPLACED AS NECESSARY DURING THE CONSTRUCTION PERIOD.
- THE HEAD CONTRACTOR IS TO INFORM ALL SITE STAFF AND SUB-CONTRACTORS OF THEIR OBLIGATIONS UNDER THE EROSION AND SEDIMENT CONTROL PLAN. ANY SEDIMENT DEPOSITED ON THE PUBLIC WAY, INCLUDING PUBLIC RESERVE AND ROAD SURFACE. IS TO BE REMOVED IMMEDIATELY

EARTHWORKS

- ALL EXISTING BOULDERS ARE TO BE STOCKPILED ON SITE FOR LATER REUSE
- FOR THE FULL EXTENTS OF EARTHWORKS, CLEAR VEGETATION, DEBRIS, RUBBISH, EXISTING FISHWAY MATERIALS ETC. AND STRIP TOP SOIL. AVERAGE 200mm THICK. ALL UNSUITABLE/WASTE MATERIAL TO BE REMOVED FROM SITE.
- CUT AND BUT OVED THE SITE TO LEVELS DECINDED
- PRIOR TO ANY FILLING, PROOF ROLL THE EXPOSED SURFACE WITH A ROLLER OF MINIMUM WEIGHT OF 5 TOINNES WITH A MINIMUM OF 10 PASSES. THE CONTRACTOR IS TO PROVIDE A MINIMUM 48 HOURS NOTICE TO THE PRINCIPALS REPRESENTATIVE PRIOR TO PROOF ROLL. THIS CONSTITUTES A MANDATORY HOLD POINT
- EXCAVATE AND REMOVE ANY SOFT SPOTS ENCOUNTERED. DURING PROOF ROLLING AND REPLACE WITH APPROVED FILL COMPACTED IN LAYERS. THE WHOLE OF THE EXPOSED SUBGRADE AND FILL SHALL BE COMPACTED TO 98% STANDARD MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT ± 2%.
- FOR ON SITE FILLING AREAS, THE CONTRACTOR SHALL TAKE LEVELS OF EXISTING SURFACE AFTER STRIPPING TOPSOIL AND PRIOR TO COMMENCING FILL OPERATIONS.
- WHERE HARD ROCK IS EXPOSED IN THE EXCAVATED SUB-GRADE, THIS WILL BE INSPECTED AND A DECISION MADE BY THE PRINCIPALS REPRESENTATIVE ON THE LEVEL TO WHICH EXCAVATION IS TAKEN.
- FILL IN 200mm MAXIMUM (LOOSE THICKNESS) LAYERS TO UNDERSIDE OF CHANNEL LISING FILL N ZOSEM HALOMON LIDES. HICKNESS LYCHIS. 10 UNIXESSED CHARMEL LOSS LECET HATERIAL AND COPPACTED DRY STANDAUGH SIZE \$15 ILL MAXIMUM DRY DENSITY AT OPTHAM HOSTIME CONTENT LYCHIS STANDAUGH DRY STANDAUGH SIZE SIZES HAND LYCHIS STANDAUGH SIZES STANDAUGH SIZES SENSEFICIENT LYCHING DRY SIZES SAND LYCHIS SAND
- FILLING SHALL CONSIST OF SOUND GRANULAR FILL FILL SHOULD BE FREE FROM RUBBISH, PLASTIC, TIMBER, CLAY OR LARGE PIECES WHICH WOULD PREVENT COMPACTION. FILL SHALL CONTINUE PAST THE EDGE OF ANY FOOTING/STRUCTURE BY
- ALL FILL MATERIALS IMPORTED TO SITE MILST RE PRE-APPROVED FOR LISE FROM APPROVED AND APPROPRIATELY LICENCED SUPPLIERS AND SUPPORTED BY ALL
- FINISH FILLING AT LEVELS TO SUIT CONSTRUCTION AND ALLOWING FOR THE DESIGNATED DEPTH OF FISHWAY COMPONENTS.
- COMPACTION TESTING SHALL BE CARRIED OUT AT THE RATE OF 2 TESTS PER 1000SQ METRES PER LAYER BY A REGISTERED NATA LABORATORY. THE COSTS OF TESTING AND RE-TESTING ARE TO BE ALLOWED FOR BY THE CONTRACTOR.
- BATTERS TO BE AS SHOWN, OR MAXIMUM 1 VERT : 4 HORIZ.
- 14. ALL BATTERS SHALL BE TOP SOILED WITH 150MM APPROVED LOAM AND SEEDED LINEESS OTHERWISE SPECIFIED
- 15. THE ADEQUACY OF THE EXISTING SUBGRAGE SHALL BE DETERMINED ON SITE BY

ARMOUR ROCK

- PREPARED SURFACE IS TO BE ADEQUATELY EXCAVATED AND SHAPED WITH REMOVAL OF ANY ROCKS WITH SHARP EDGES PRIOR TO LAYING OF GEOTEXTILE FILTER
- ROCKS USED IN THE CONSTRUCTION OF THE WORKS SHALL COMPRISE GRANITE, MEETING THE FOLLOWING SPECIFICATION:
- 2.1 POCK SHALL BE POLICH AND ANGLE AD
- 2.1. ROCK SHALL HAVE A MINIMUM DRY DENSITY OF 2.500KG/m 2.2. SATURATED POINT LOAD STRENGTH INDEX (LSSO) GREATER THAN 15MPa
- THE DIAMETER AND GRADING OF THE ARMOUR ROCK USED IN THE WORKS SHALL BE AS
- - 3.1. MAIN CHANNE ROCK PROTECTED BATTERS
 - D₅₀ = 600 nm Dec = 350 mm D_m = 350 mm D₁₀ = 800 nn D₁₀ = 800 mm
- THE DIAMETER OF THE ROCK SHALL BE DEFINED AS THE AVERAGE OF THE MAXIMUM DIMENSION OF THE ROCK TO THE MINIHUM DIMENSION, MEASURED AT RIGHT ANGLES TO THE MAXIMUM DIMENSION. THE RATIO OF MAXIMUM TO MINIMUM DIMENSIONS OF ANY
- ROCK ARMOUR UNITS SHALL BE CAREFULLY PLACED IN A SOUND INTERLOCKING
- 6. ALL PLACEMENT SHALL BE SUPERVISED BY PERSON OR PERSONS EXPERIENCED IN THIS

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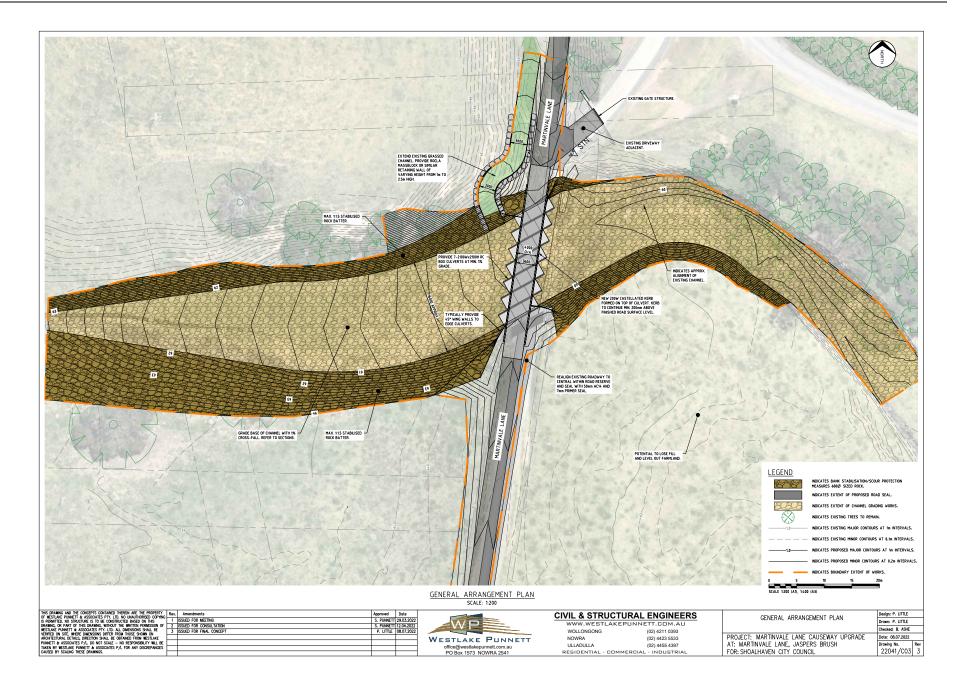
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,	ISSUED FOR FINAL CONCEPT	P. LITTLE	08.07.2022



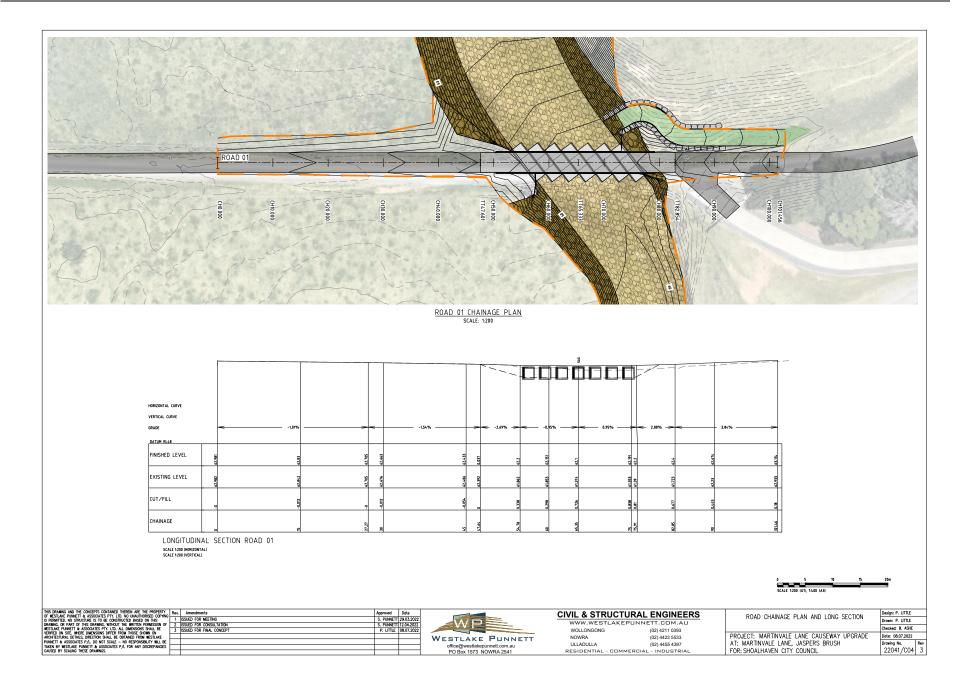
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	NOWRA	(02) 4423 5533	PROJECT: MARTINV
	ULLADULLA	(02) 4455 4397	AT: MARTINVALE LA
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CENERAL MOTEC	Design: P. LITTLE		
GENERAL NOTES			
	Checked: B. ASHE		
PROJECT: MARTINVALE LANE CAUSEWAY UPGRADE			
MARTINVALE LANE, JASPERS BRUSH	Drawing No.	Rev	
SHOALHAVEN CITY COUNCIL	22041/C02	3	
	GENERAL NOTES JECT: MARTINVALE LANE CAUSEWAY UPGRADE MARTINVALE LANE, JASPERS BRUSH SHOALHAVEN CITY COUNCIL	Dorser P. UTILE Checket B. ASHE JECT: MARTINVALE LANE CAUSEWAY UPGRADE MARTINVALE LANE, JASPERS BRUSH Dorsering No.	

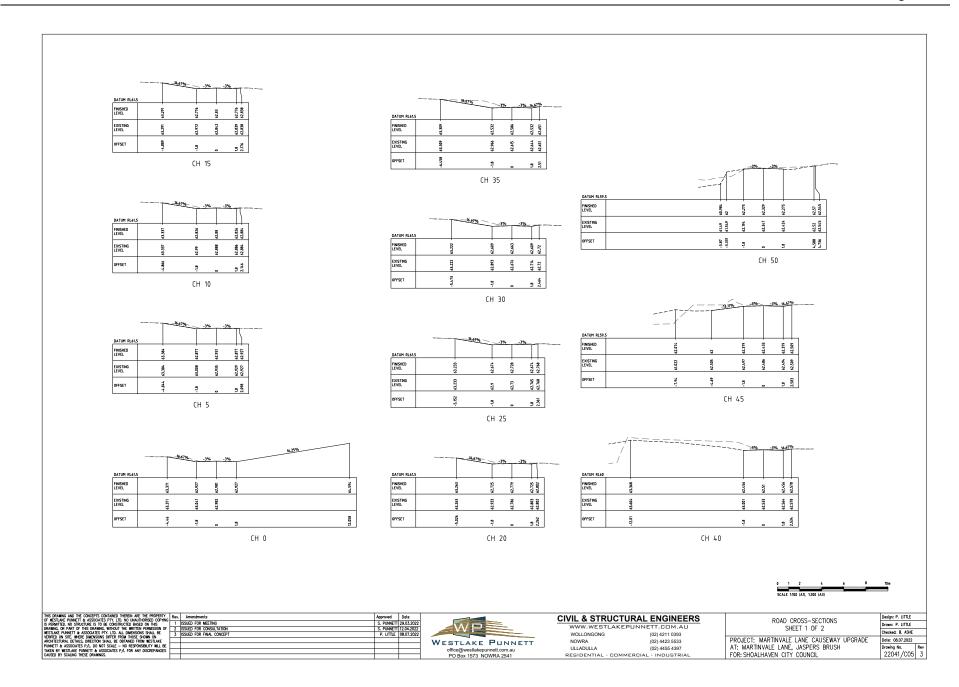




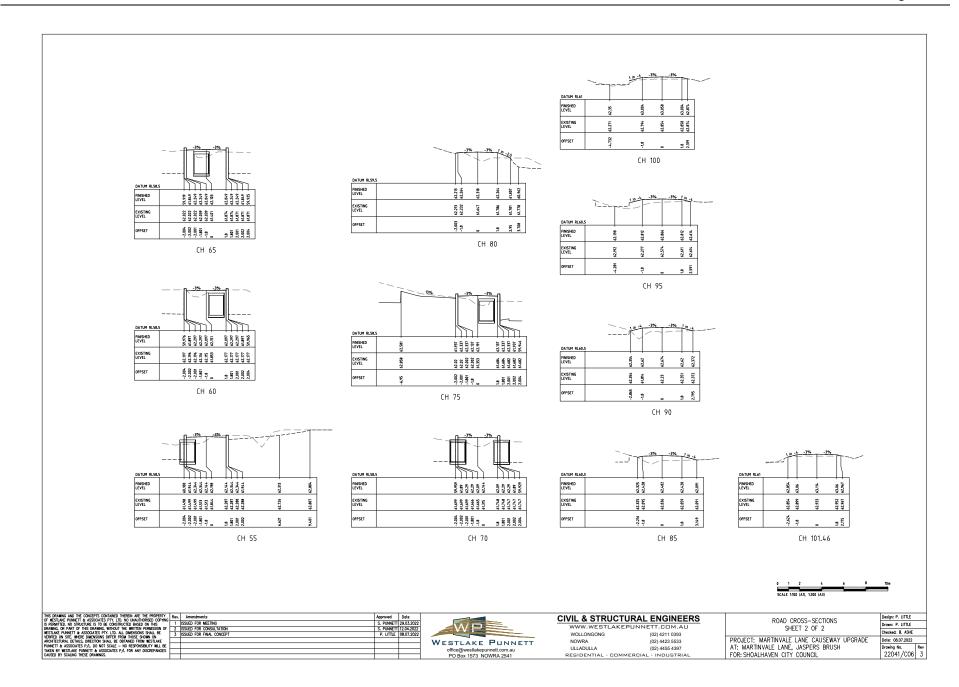






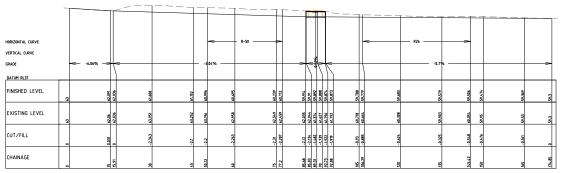












LONGITUDINAL SECTION CHANNEL 01
SCALE 1-00 HORIZONTAL)
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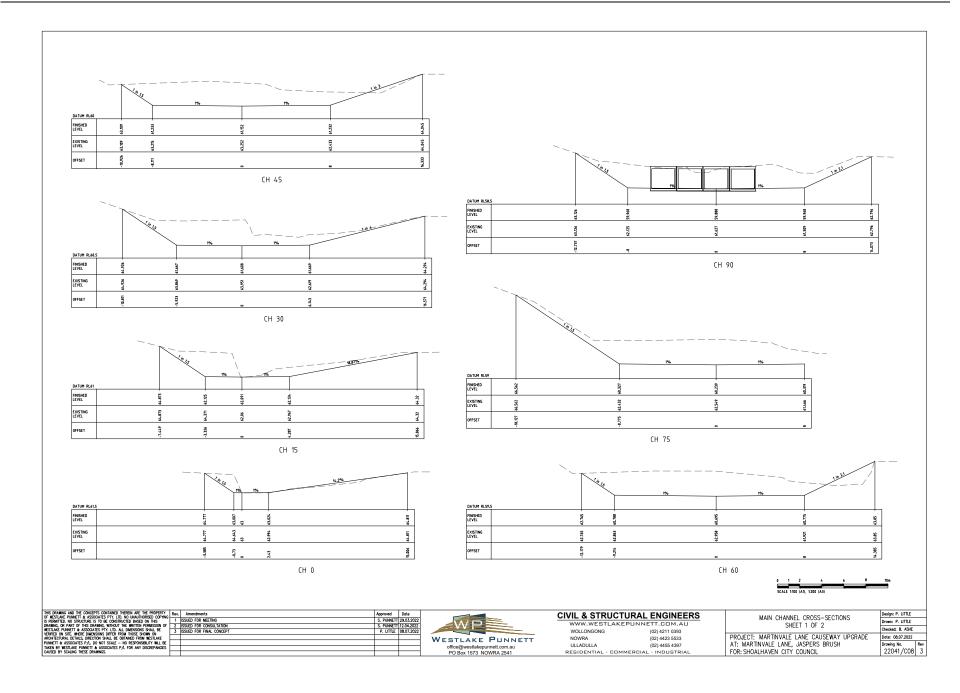
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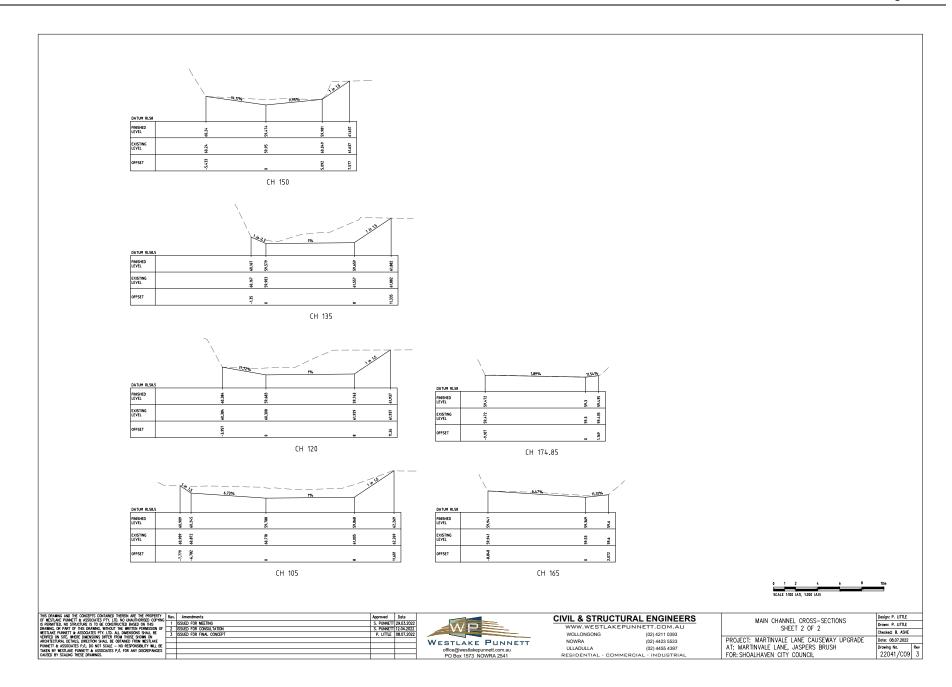
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MAIN CHANNEL CHAINAGE PLAN AND LONG SECTION Design: P. LITTLE	
Draw: P. LITTLE	
Checked: B. ASH	
ROJECT: MARTINVALE LANE CAUSEWAY UPGRADE Dote: 08.07.202:	:
T: MARTINVALE LANE, JASPERS BRUSH Drawing No.	Rev
DR: SHOALHAVEN CITY COUNCIL 22041/CO	7 3

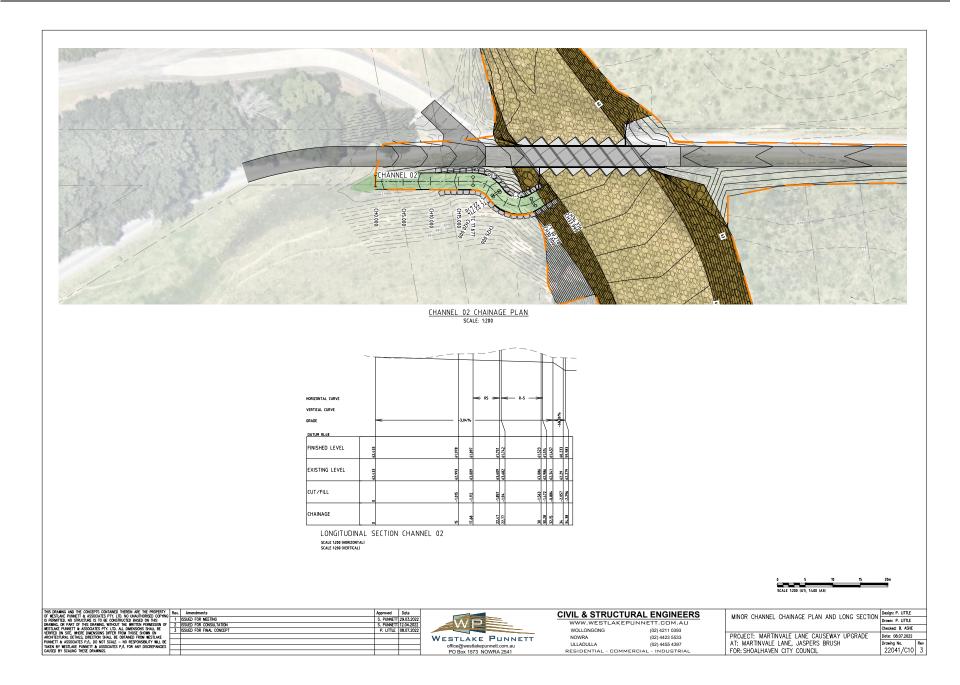




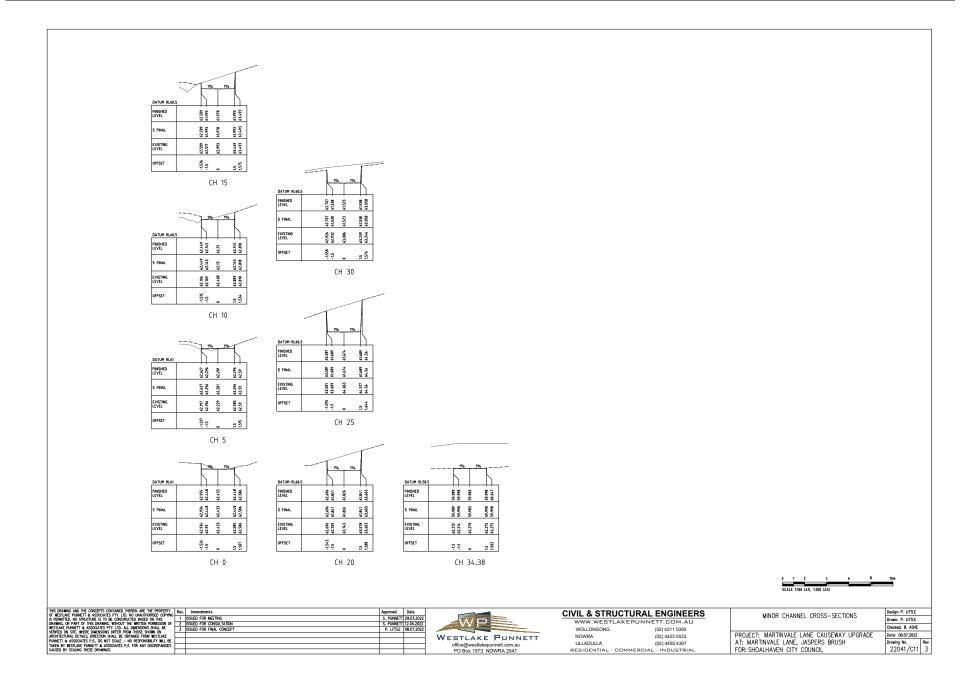




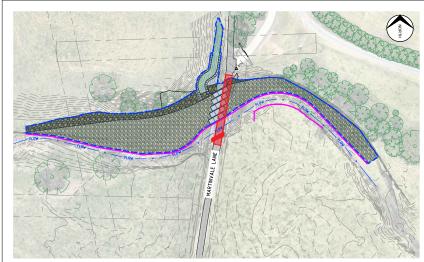












TEMPORARY DIVERSION STAGE 1 SCALE: 1:500



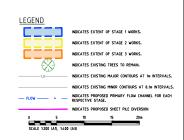
TEMPORARY DIVERSION STAGE 3 SCALE: 1:500

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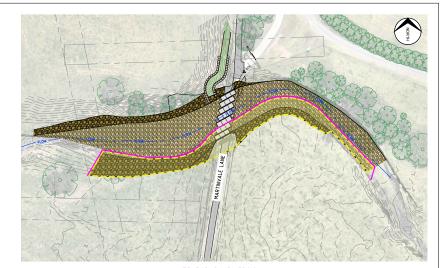




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Design: P. LITTLE Drawn: P. LITTLE TEMPORARY DIVERSION AND STAGING PLANS Checked: B. ASHE PROJECT: MARTINVALE LANE CAUSEWAY UPGRADE AT: MARTINVALE LANE, JASPERS BRUSH FOR: SHOALHAVEN CITY COUNCIL Date: 08.07.2022 Drawing No. Rev 22041/C16 3



TEMPORARY DIVERSION STAGE 2 SCALE: 1:500

- STAGE I METHODOLOGY.

 1. ESTABLISH STEAM DISTALL SUITABLE SEDMENT EROSON CONTROL AND DYNOROWETHAL MESUACES RETEX TO SEDMENT EROSON CONTROL PLAN, DETALS ON THE PROPERTY OF THE

STAME INTENDED.CO.Y.

AMEND EACHDON OF SHEET PLING PER STAGE 2 PLAN AND DIVERT FLOW PATH
DOWN CONSTRUCTED CLUKER'S AS SHOWN.

BESTALL CONCRETE BASE SLAM AND CUT OF WALLS FOR 2 SOUTHERN CULVERTS.

MISTALL 2 SOUTHERN CULVER'S.

MISTALL 2 SOUTHERN CULVER'S.

MISTALL 2 SOUTHERN CHARGES TO EXTENT SHOWN.

- STACE STERMONDORS

 CONTINUES OF SHALL AREA TO WEST OF WORKS AND ALLOW AS-MORMAL FLOW

 CONTINUES.

 LOCALLY BRING OFF SHALL AREA TO WEST OF WORKS AND CONFLETE

 REQUIRED TO FACILITATE WORKS.

 CONTINUES AND CONTINUES OF SHALL AREA

 REGULATED TO FACILITATE WORKS.

 TO SHALL TO WEST OFF SHALL AREA

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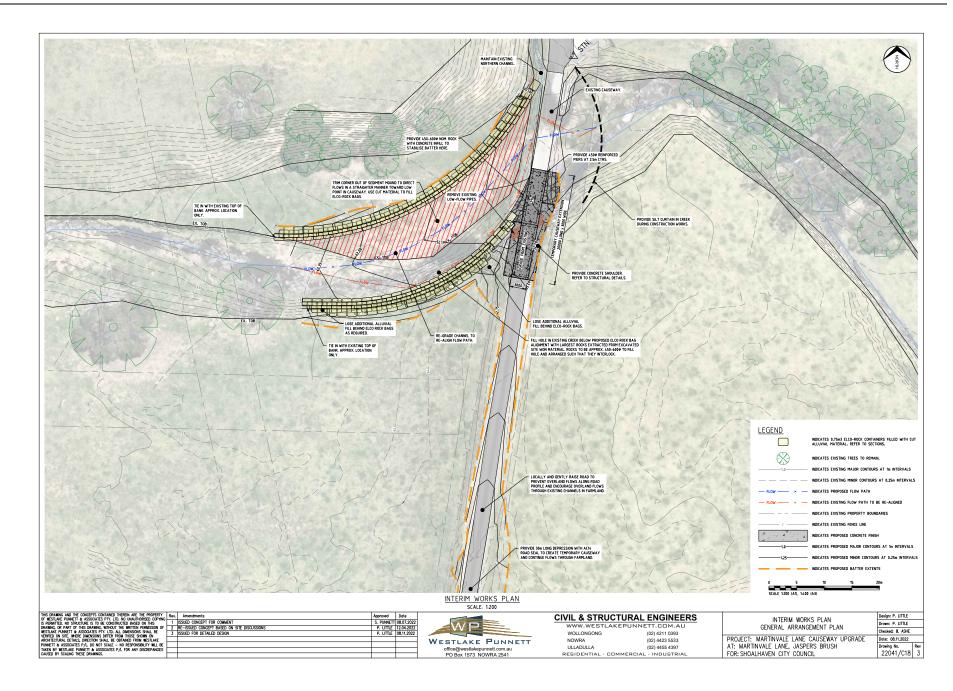
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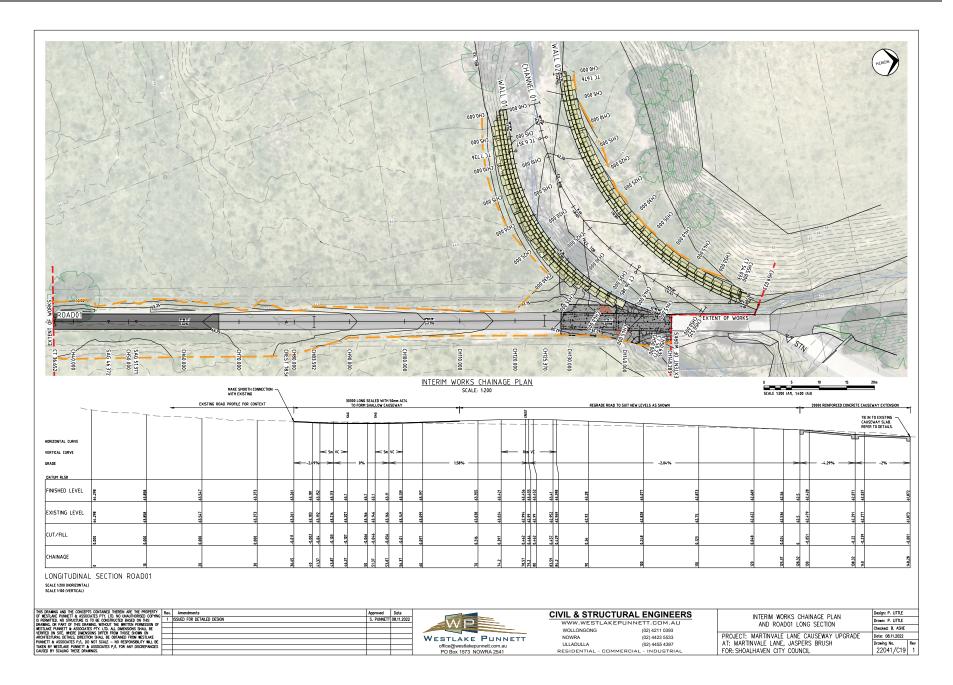
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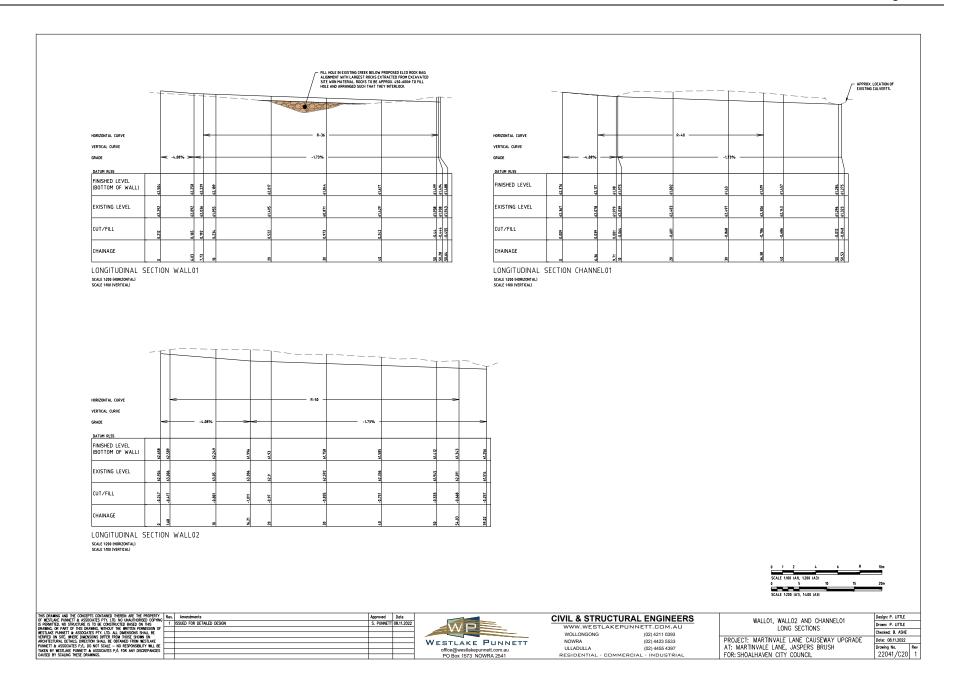




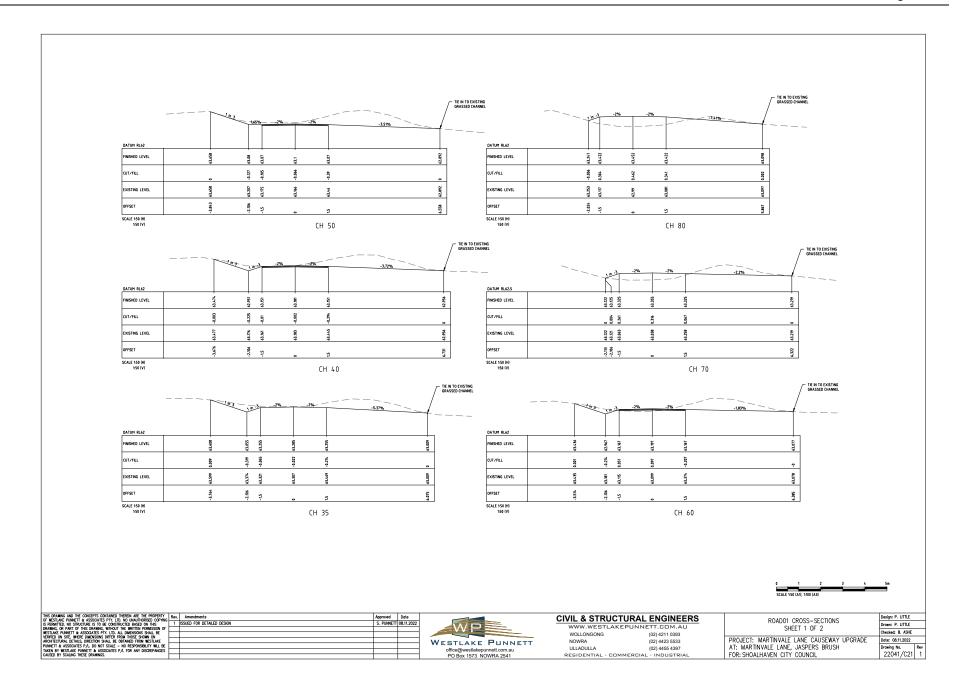




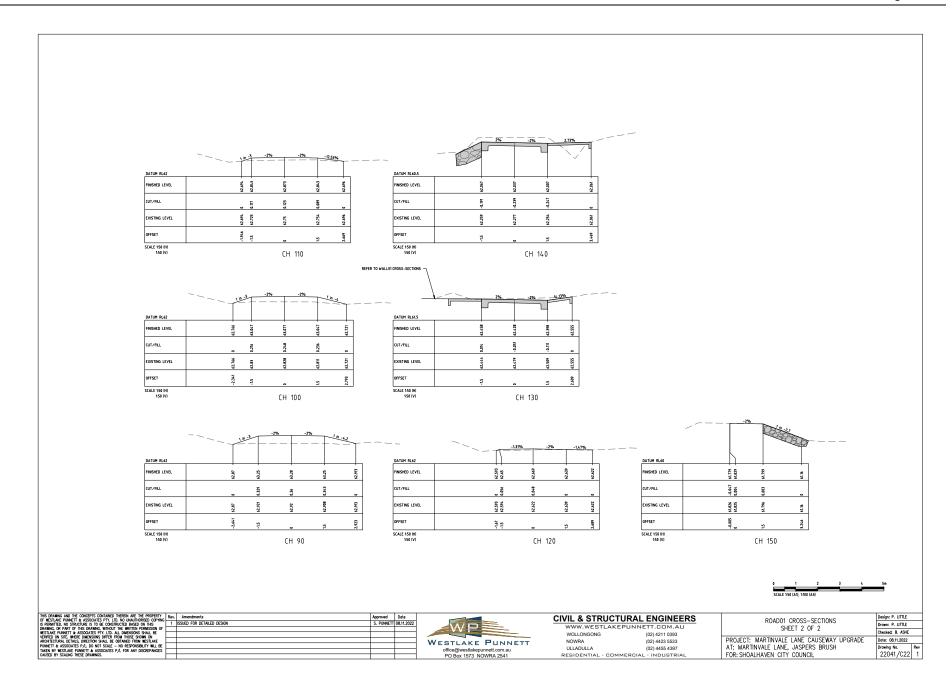




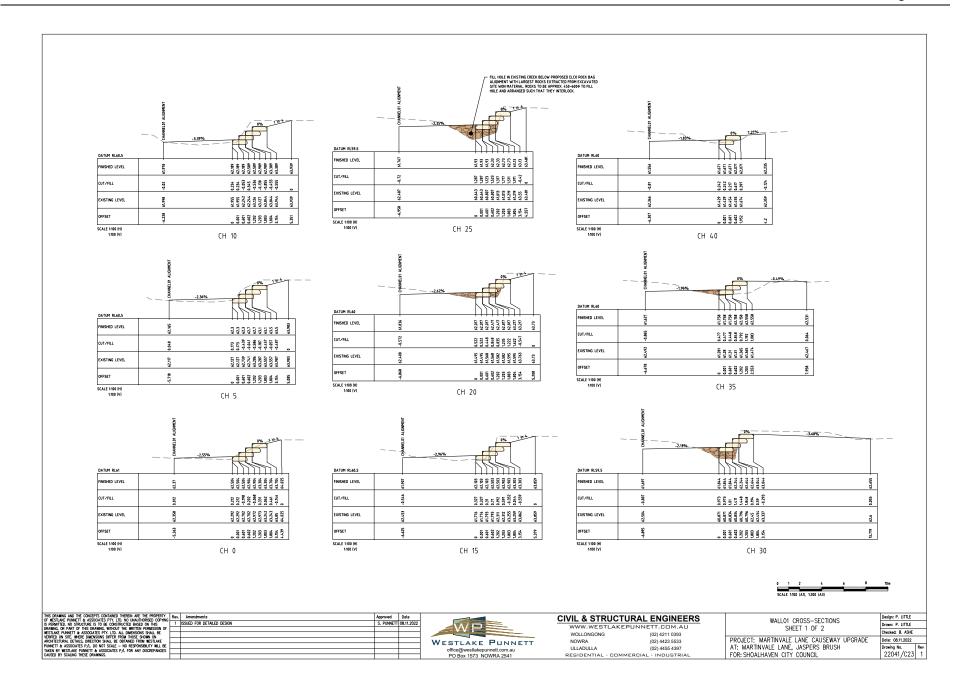




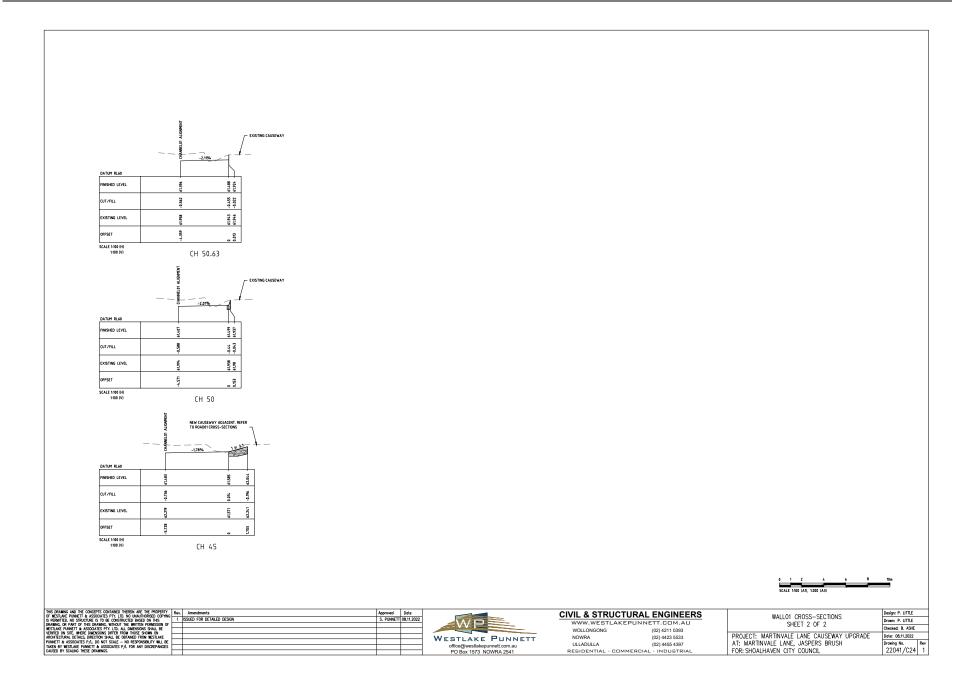




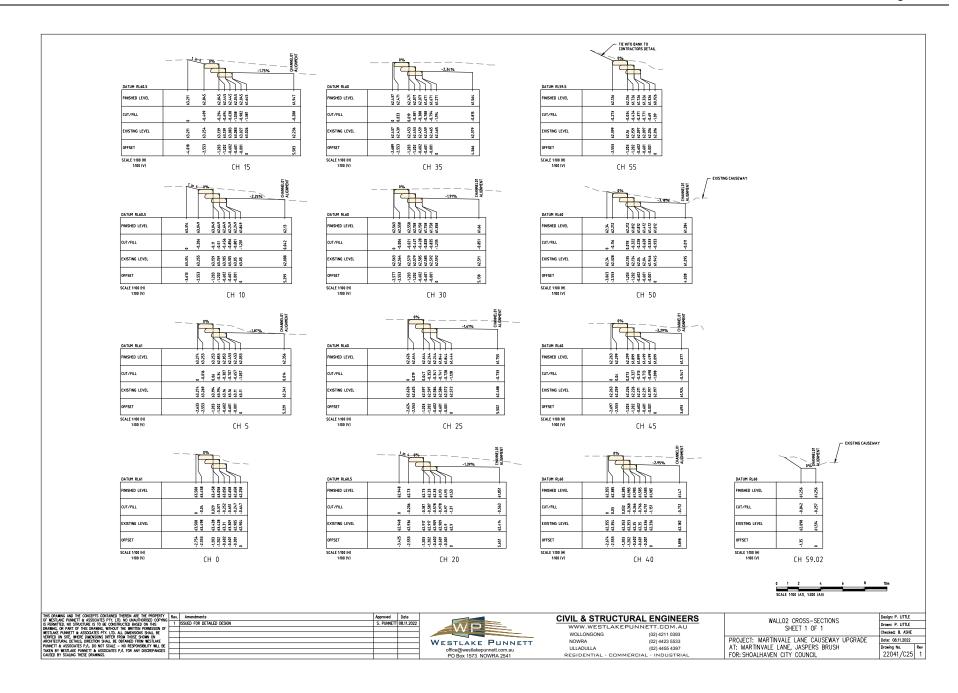




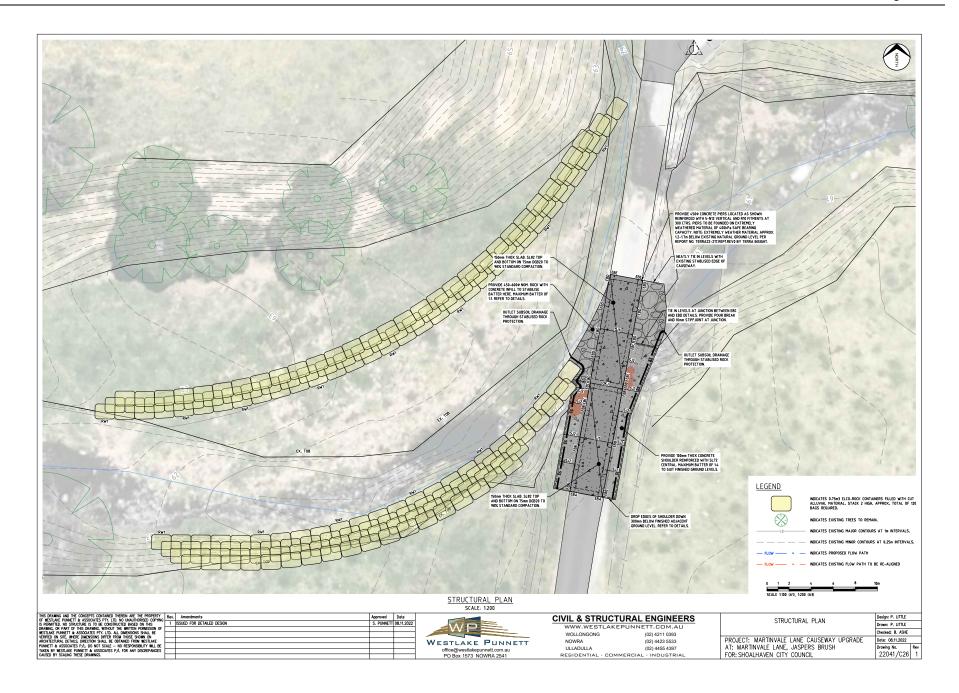




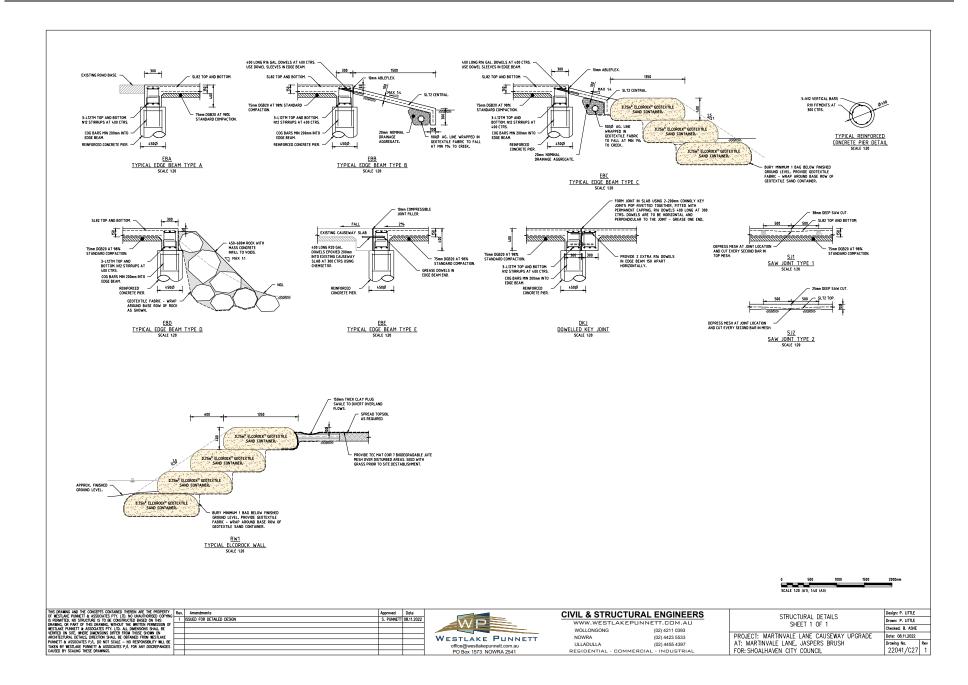














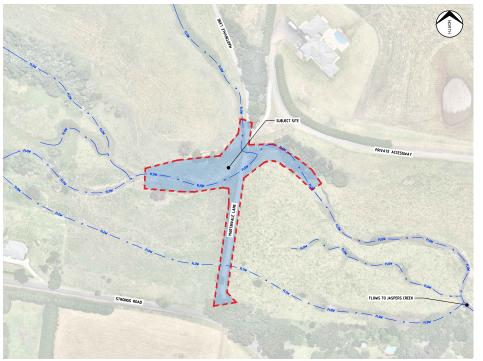




MARTINVALE LANE CAUSEWAY UPGRADE

MARTINVALE LANE, JASPERS BRUSH, 2535

	DRAWING NO.	DRAWING DESCRIPTION	REV.]
	22041/C01	COVER SHEET AND LOCALITY PLAN	5 3	
	22041/C02	GENERAL NOTES	3	
	22041/C03	GENERAL ARRANGEMENT PLAN	-	
	22041/C04	ROAD CHAINAGE PLAN AND LONG SECTION	-	
	22041/005	ROAD CROSS-SECTIONS	-	
SET	22041/006	ROAD CROSS-SECTIONS	-	S
	22041/007	MAIN CHANNEL CHAINAGE PLAN AND LONG SECTION	-	WORKS
≥	22041/008	MAIN CHANNEL CROSS-SECTIONS	-	🖇
NOT	22041/009	MAIN CHANNEL CROSS-SECTIONS	-	⊢
	22041/C10	MINOR CHANNEL CHAINAGE PLAN AND LONG SECTION	-	≦
SS	22041/C11	MINOR CHANNEL CROSS-SECTIONS	-	≨
DRAWINGS	22041/C12	TYPICAL SECTIONS	-	ERMANENT
- ₹	22041/C13	DETAILS	-	=
8	22041/C14	SEDIMENT EROSION CONTROL PLAN	-	
	22041/C15	SEDIMENT EROSION CONTROL DETAILS	-	
	22041/C16	TEMPORARY DIVERSION AND STAGING PLANS	-	
	22041/C17	TEMPORARY DIVERSION DETAILS	-	
	22041/C18	INTERIM WORKS PLAN	5	
	22041/C19	INTERIM WORKS CHAINAGE PLAN	3	
	22041/C20	WALL01, WALL02 AND CHANNEL01	2 2	
	22041/C21	ROAD01 CROSS-SECTIONS	2	ا م ا
	22041/C22	ROAD01 CROSS-SECTIONS	2	WORKS
	22041/C23	WALLO1 CROSS-SECTIONS	2	🖇
	22041/C24	WALLO1 CROSS-SECTIONS	2	Σ
	22041/C25	WALL02 CROSS-SECTIONS	2	줍
	22041/C26	STRUCTURAL PLAN	2	NTERIM
	22041/027	STRUCTURAL DETAILS	3	-
	22041/028	INTERIM SEDIMENT EROSION CONTROL PLAN	3	
	22041/C29	INTERIM SEDIMENT EROSION CONTROL DETAILS	1 1	



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	RE-ISSUED FOR APPROVAL		22.11.2022	
,		P. LITTLE	09.01.2023	
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COVER SHEET AND LOCALITY PLAN Drawn	: P. LITTLE	
Check	ed: B. ASHE	
PROJECT: MARTINVALE LANE CAUSEWAY UPGRADE Dote:	09.01.2023	
	ng No. 041/C01	Rev 5

GENERAL

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- 2.2. REF REPORT XXXX
- 2.3. WASTE CLASSIFICATION REPORT PREPARED BY TERRA INSIGHT –
 TERRA22-217.REP1.REV0
- 2.4. HYDAULIC REPORT BY WESTLAKE PUNNETT REF No. XXX
- 2.5. WHS SAFETY IN DESIGN REPORT BY WESTLAKE PUNNETT AND ASSOCIATES REF
- ALL HATERIALS AND WORKHANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT AND CURRENT AUSTRALIAN STANDARDS, AN INDIVAL CONSTRUCTION CODE INCCL AND WITH THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION.
- ALL DIMENSIONS AND LEVELS SHOWN SHALL BE VERIFIED BY THE CONTRACTOR ON SITE. ENGINEERS' DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS.
- DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED. TEMPORARY BRACING SHALL BE PROVIDED BY THE CONTRACTOR TO KEEP THE WORKS AND EXCAVATIONS STABLE AT ALL TIMES. THE CONTRACTOR SHALL GIVE 48 HOURS NOTICE FOR ALL ENGINEERING INSPECTIONS.
- SLABS, FOOTINGS, BEAMS AND WALLS SHALL BE POURED ON THE DAY OF APPROVAL UNLESS PERMISSION IS GIVEN OTHERWISE.
- UNLESS NOTED OTHERWISE ALL LEVELS ARE IN METRES AND ALL DIMENSIONS ARE IN HILLIMETRES. DATUM FOR LEVELS IS AND (AUSTRALIAN HEIGHT DATUM) AND COORDINATES ARE TO
- MGA20 IMAP GRID OF AUSTRALIA!
- 10. THE CONTRACTOR IS RESPONSIBLE FOR ALL SURVEY CONTROL INCLUDING SETOUT BY A REGISTERED SURVEYOR AND PROVISION OF WORKS AS EXECUTED DRAWINGS.
- ALL SERVICE LOCATIONS ON PLANS ARE SCHEMATIC ONLY. 12. CONTRACTOR TO DETERMINE AND/OR CONFIRM LOCATION AND DEPTH OF ALL EXISTING
- SERVICES PRIOR TO COMMENCEMENT OF WORK. ENGINEER TO BE NOTIFIED. PROPRIETARY PRODUCTS MAY BE REPLACED WITH EQUIVALENT PRODUCTS, ONLY
- FOLLOWING REVIEW AND WRITTEN APPROVAL BY SCC REPRESENTATIVE. CONTRACTOR TO PROVIDE SUPPORTING DOCUMENTATION INDICATING EQUIVALENT PROPERTIES FOR SCC REVIEW.
- REFERENCES TO SUPERINTENDENT OR PRINCIPAL SHALL BE TAKEN AS SCC
- REFERENCES TO BUILDER, SUPPLIER OR OTHER PARTIES INVOLVED IN CONSTRUCTION SHALL HAVE THE SAME MEANING AS CONTRACTOR. 16. THE CONTRACTOR IS RESPONSIBLE FOR ALL TESTING AS SPECIFIED IN THE CONTRACT
- DOCUMENTS TO DEMONSTRATE COMPLIANCE. THE CONTRACTOR SHALL BEAR ALL COSTS ASSOCIATED WITH COMPLIANCE TESTING. TRAFFIC MANAGEMENT MEASURES ARE REQUIRED TO BE IMPLEMENTED AND MAINTAINED
- THROUGHOUT CONSTRUCTION IN ACCORDANCE WITH 'RMS. TRAFFIC CONTROL AT WORK SITES - CURRENT EDITION' AND AS 1742 'HANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.' TO BE SUBMITTED TO SCC REPRESENTATIVE FOR APPROVAL.
- PEDESTRIAN CONTROL MEASURES ARE REQUIRED TO BE IMPLEMENTED AND MAINTAINED DURING CONSTRUCTION, IN ACCORDANCE WITH AS 1742 'HANUAL OF UNIFORM TRAFFIC

SAFETY

- CONTRACTOR TO ERECT SIGNAGE ADVISING OF CONSTRUCTION ACTIVITIES PRIOR TO COMMENCEMENT OF WORKS ON SITE. SIGNAGE SHALL BE PLACED AS NECESSARY TO ENSURE CLEAR VISBULITY TO SIGNAGE FROM ANY ROUTE BY WHICH MOTORISTS, CYCLISTS, OR PEDESTRAINS MAY APPROACH THE WORK SITE.
- WHAS PRECAUTIONS SHALL BE GOSERVED IN ACCORDANCE WITH THE WHAS ACT 2011 AND RELEVANT ACCOMPANYING REQULATIONS. SAFETY SYSTEMS AND DOCUMENTATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL COMPLY WITH SPECIFIC REQUIREMENTS AS DETALED IN RELEVANT PROJECT
- SITE FACILITIES AND ACCESS TO BE MAINTAINED IN A NEAT AND TIDY CONDITION AT
- THE CONTRACTOR SHALL OBTAIN AND KEEP ON SITE ALL RELEVANT MATERIAL SAFETY DATA SHEETS (MSDS) FOR ANY MATERIALS THAT ARE USED IN THE WORKS. ALL TRANSPORTATION, STORAGE AND USE OF THESE MATERIALS SHALL BE IN ACCORDANCE
- THE CONTRACTOR IS TO PREPARE A SITE SPECIFIC RISK MANAGEMENT PLAN TAKING INTO ACCOUNT ALL FORSEEABLE RISKS INCLUDING MANAGEMENT OF ALL RESIDUAL RISKS IDENTIFIED IN THE SAFETY IN DESIGN REPORT

ENVIRONMENTAL

- ALL SAFEGUARDS AND MITIGATION MEASURES OUTLINED IN THE REVIEW OF ENVIRONMENTAL FACTORS ARE TO BE STRICTLY ADHERED TO FOR THE DURATION OF
- EROSION & SEDIMENT CONTROLS TO BE INSTALLED IN ACCORDANCE WITH COUNCIL'S SPECIFICATION & THE NSW DEPARTMENT OF HOUSING "BLUE BOOK" - SOILS AND CONSTRUCTION - MANAGING URBAN STORMWATER, 2004. REFER TO THE BLUE BOOK FOR STANDARD DRAWINGS "SD".
- SEDIMENT & EROSION CONTROLS MUST BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS OR DEHOLITION ACTIVITY. THE LOCATION OF SUCH DEVICES IS INDICATIVE ONLY AND FINAL POSITION SHOULD BE DETERMINED ON SITE.
- TAKEN DURING THE COURSE OF CONSTRUCTION TO PREVENT SEDIMENT EROSION AND POLLUTION OF THE DOWNSTREAM SYSTEM. ALL SEDIMENT CONTROL STRUCTURES TO BE INSPECTED AFTER EACH RAINFALL EVENT FOR STRUCTURAL DAMAGE AND ALL TRAPPED SEDIMENT TO BE REMOVED TO A NOMINATED SOIL STOCKPILE SITE.
- RETAIN ALL EXISTING GRASS COVER WHEREVER POSSIBLE. TOPSOIL FROM ALL AREAS THAT WILL BE DISTURBED TO BE STRIPPED AND STOCKPILED AT THE NOMINATED SITE. A SEDIMENT FENCE TO BE PLACED DOWNHILL OF STOCKPILE.
- AREAS OF SITE RE-GRADING ARE TO BE COMPLETED PROGRESSIVELY DURING THE

- WORKS AND STARILISED AS EARLY AS POSSIBLE COUNCIL'S REPRESENTATIVE MAY STABILISED DURING THE COURSE OF THE WORKS
- ALL DISTURBED AREAS ARE TO BE TRIMMED, LEVELED, TURFED & FERTILISED WITHIN 14
- ALL EXISTING TREES TO BE RETAINED UNLESS SHOWN OTHERWISE ON APPROVED DRAWINGS. TREES RETAINED ARE TO BE PROTECTED WITH A HIGH VISIBILITY FENCE, PLUS FLAGGING TO NOIVIDUAL TREES AS NECESSARY.
- ALL SILT FENCES & BARRIERS ARE TO BE MAINTAINED IN GOOD ORDER & REGULARLY DESILTED DURING THE CONSTRUCTION PERIOD. SILT FENCES TO SD6-8 OR SD6-9.
- 10. STOCKPILES OF LOOSE MATERIALS SUCH AS SAND, SOIL, GRAVEL MUST BE COVERED WITH GEOTEVTILE SILT FENCE MATERIAL
- WASTE MATERIALS ARE TO BE STOCKPILED OR LOADED INTO SKIP-BINS LOCATED ON
- ALL VEHICLES LEAVING THE SITE HUST PASS OVER THE STABILISED SITE ACCESS BALLAST AREA ISHILAR TO SOG-14) TO SHAKE OFF SITE CLAY AND SOIL IF NECESSARY WHELS AND AXLES ARE TO BE HOSED DOWN BALLAST IS TO BE MAINTAINED & REPLACED AS NECESSARY DURING THE CONSTRUCTION PERIOD.
- THE HEAD CONTRACTOR IS TO INFORM ALL SITE STAFF AND SUB-CONTRACTORS OF THEIR OBLIGATIONS UNDER THE EROSION AND SEDIMENT CONTROL PLAN.
- ANY SEDIMENT DEPOSITED ON THE PUBLIC WAY, INCLUDING PUBLIC RESERVE AND ROAD SURFACE. IS TO BE REMOVED IMMEDIATELY

EARTHWORKS

- ALL EXISTING BOULDERS ARE TO BE STOCKPILED ON SITE FOR LATER REUSE.
- FOR THE FULL EXTENTS OF EARTHWORKS, CLEAR VEGETATION, DEBRIS, RUBBISH, EXISTING FISHMAY MATERIALS ETC. AND STRE TOP SOLL AVERAGE 200nm THICK. ALL UNSUITABLE/WASTE MATERIAL TO BE REMOVED FROM SITE.
- CUT AND FILL OVER THE SITE TO LEVELS REQUIRED.
- PRIOR TO ANY FILLING. PROOF ROLL THE EXPOSED SURFACE WITH A ROLLER OF MINIMUM WEIGHT OF 5 TONNES WITH A MINIMUM OF 10 PASSES. THE CONTRACTOR IS TO PROVIDE A MINIMUM 48 HOURS NOTICE TO THE PRINCIPALS REPRESENTATIVE PRIOR TO PROOF ROLL. THIS CONSTITUTES A MANDATORY HOLD POIN
- EXCAVATE AND REMOVE ANY SOFT SPOTS ENCOUNTERED DURING PROOF ROLLING AND REPLACE WITH APPROVED FILL COMPACTED IN LAYERS. THE WHOLE OF THE EXPOSED SUBGRADE AND FILL SHALL BE COMPACTED TO 98% STANDARD HAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT + 2%.
- FOR ON SITE FILLING AREAS, THE CONTRACTOR SHALL TAKE LEVELS OF EXISTING SURFACE AFTER STRIPPING TOPSOIL AND PRIOR TO COMMENCING FILL OPERATIONS
- WHERE HARD ROCK IS EXPOSED IN THE EXCAVATED SUB-GRADE, THIS WILL BE INSPECTED AND A DECISION MADE BY THE PRINCIPALS REPRESENTATIVE ON THE LEVEL TO WHICH EXCAVATION IS TAKEN.
- TO WIND CLANATION IS INCIDENCE.

 PLEIN ROBOTH TO SERVICE TO SERVICE TO UNDERSIDE OF CHANNEL USING SELECT MATERIAL AND COMPACTED TO 98% STANDARD (AS 1299 S.11 MACHIMIN MYST DIRECTORITY AT DETAIL AND COMPACTED TO 98% STANDARD (AS 1299 S.11 MACHIMIN MYST LIVE CONTROL TO 2.2 SHOULD THERE BE INSUPPRIENT MATERIAL FROM STIE EXCLANDARDS, PROTAT AS RECESSARY CLEAN GRANULAR FILL THAT HEETS EITHER VENMOR EITH CLEAN GRANULAR FILL THAT HEETS EITHER TO WHOM EITH CLEAN GRANULAR FILL THAT HEETS EITHER TO MEND GRANULAR FILL THAT HEETS ENTON THE MEND GRANULAR FILL THAT HE THAT NON-DISPERSIVE WITH AN EMERSON CLASS GREATER THAN 2.
- FILLING SHALL CONSIST OF SOUND GRANULAR FILL FILL SHOULD BE FREE FROM RUBBISH, PLASTIC, TIMBER, CLAY OR LARGE PIECES WHICH WOULD PREVENT COMPACTION. FILL SHALL CONTINUE PAST THE EDGE OF ANY FOOTING/STRUCTURE BY
- ALL FILL MATERIALS IMPORTED TO SITE MUST BE PRE-APPROVED FOR USE FROM APPROVED AND APPROPRIATELY LICENCED SUPPLIERS AND SUPPORTED BY ALL RELEVANT DOCUMENTATION.
- FINISH FILLING AT LEVELS TO SUIT CONSTRUCTION AND ALLOWING FOR THE DESIGNATED DEPTH OF FISHWAY COMPONENTS
- COMPACTION TESTING SHALL BE CARRIED OUT AT THE RATE OF 2 TESTS PER 1000SQ. METRES PER LAYER BY A REGISTERED NATA LABORATORY. THE COSTS OF TESTING AND RE-TESTING ARE TO BE ALLOWED FOR BY THE CONTRACTOR.
- BATTERS TO BE AS SHOWN, OR MAXIMUM 1 VERT : 4 HORIZ.
- ALL BATTERS SHALL BE TOP SOILED WITH 150MM APPROVED LOAM AND SEEDED
- 15. THE ADEQUACY OF THE EXISTING SUBGRAGE SHALL BE DETERMINED ON SITE BY COUNCIL'S REPRESENTATIVE.

ARMOUR ROCK (PERMANENT WORKS ONLY)

- PREPARED SURFACE IS TO BE ADEQUATELY EXCAVATED AND SHAPED WITH REMOVAL OF ANY ROCKS WITH SHARP EDGES PRIOR TO LAYING OF GEOTEXTILE FILTER UNDERLAY.
- ROCKS USED IN THE CONSTRUCTION OF THE WORKS SHALL COMPRISE BASALT, MEETING
- 2.1. ROCK SHALL BE ROUGH AND ANGULAR
- 2.1. ROCK SHALL HAVE A MINIMUM DRY DENSITY OF 2.500KG/m²
- THE DIAMETER AND GRADING OF THE ARMOUR ROCK USED IN THE WORKS SHALL BE AS
- 3.1. MAIN CHANNEL ROCK PROTECTED BATTERS
- D₅₀ = 600 nm Dec = 350 mm Dec = 350 mm D₁₀ = 800 nn D₁₀ = 810 mm
- THE DAMPETE OF THE ROCK SHALL BE DEFINED AS THE AVERAGE OF THE MAXIMUM DIMENSION OF THE ROCK TO THE MINIMUM DIMENSION, MEASURED AT RIGHT AMGLES TO THE MAXIMUM DIMENSION, MEASURED AT RIGHT AMGLES TO ANY ROCK SHALL NOT EXCEED 2.5.
- ROCK ARHOUR UNITS SHALL BE CAREFULLY PLACED IN A SOUND INTERLOCKING
- 6. ALL PLACEMENT SHALL BE SUPERVISED BY PERSON OR PERSONS EXPERIENCED IN THIS

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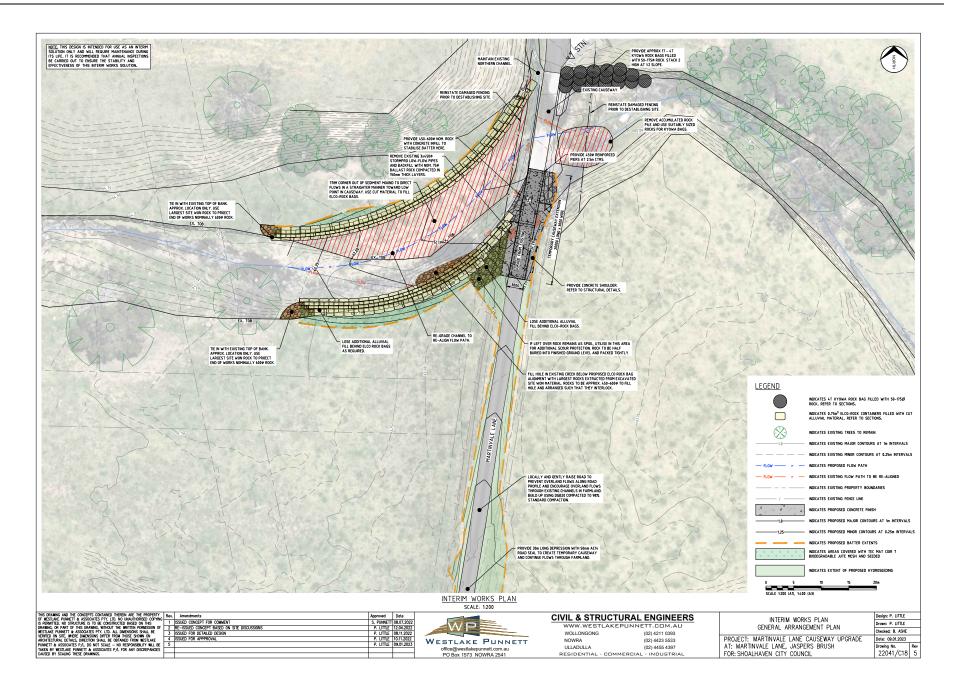
v.	Amendments	Approved	Date	
	ISSUED FOR MEETING	S. PUNNETT		
	ISSUED FOR CONSULTATION	S. PUNNETT		
	ISSUED FOR FINAL CONCEPT	P. LITTLE	08.07.2022	
Т				



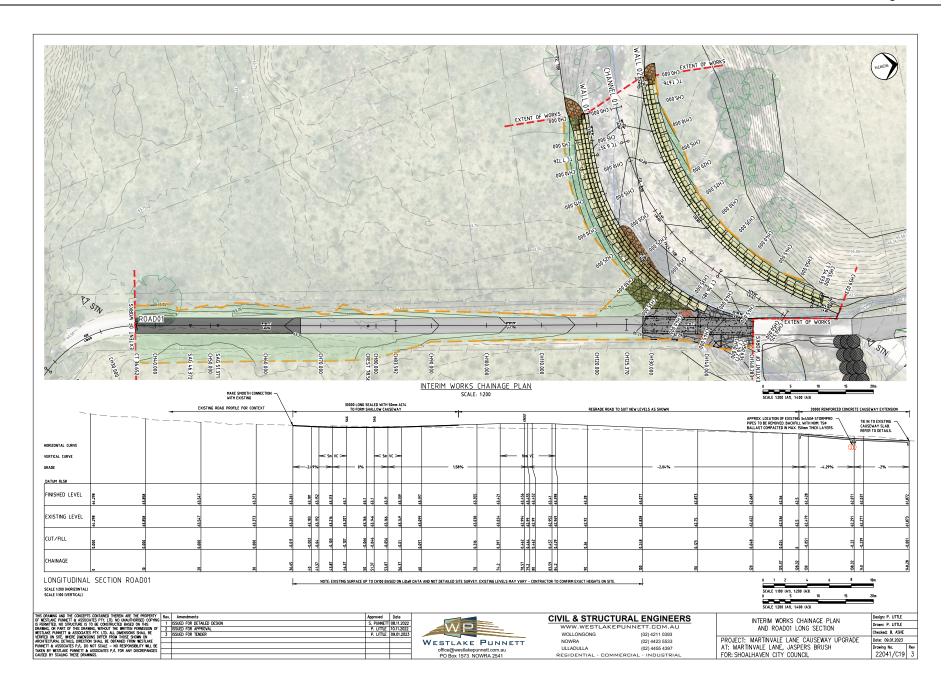
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NOWRA	(02) 4423 5533	F
ULLADULLA	(02) 4455 4397	/
RESIDENTIAL - COMME	RCIAL - INDUSTRIAL	l F

GENERAL NOTES	Design: P. LITTLE		
	Drawn: P. LITTLE	Drawn: P. LITTLE	
	Checked: B. ASHE		
PROJECT: MARTINVALE LANE CAUSEWAY UPGRADE	Date: 08.07.2022		
AT: MARTINVALE LANE, JASPERS BRUSH	Drawing No.	Rev	
FOR: SHOALHAVEN CITY COUNCIL	22041/C02	3	

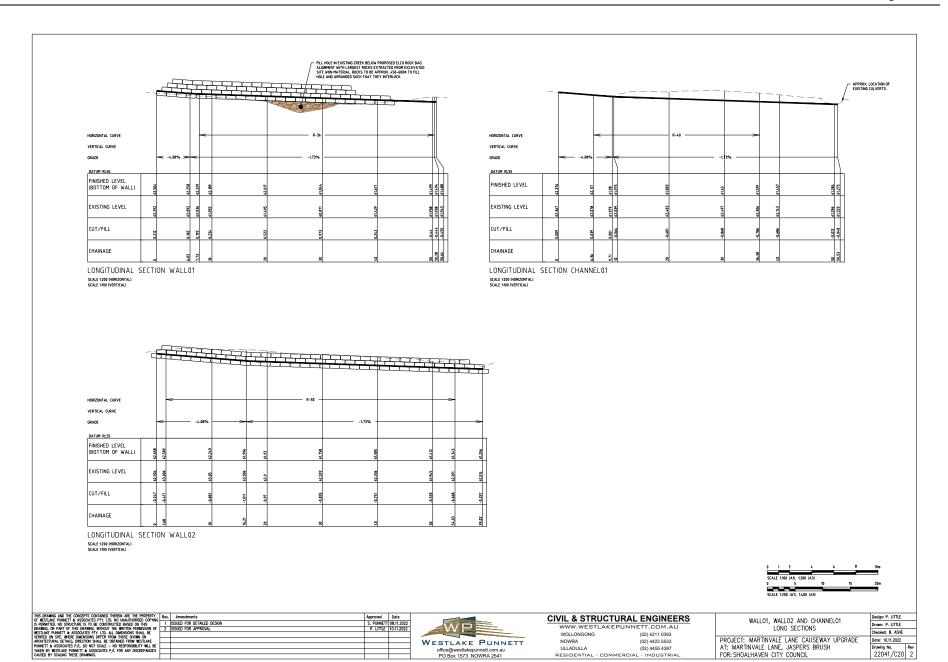




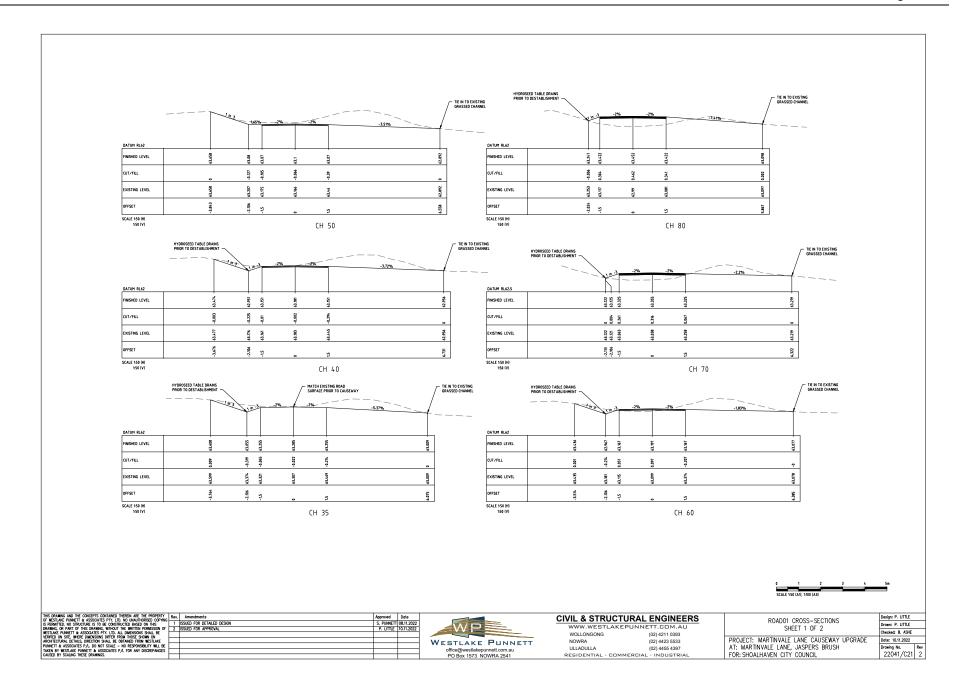




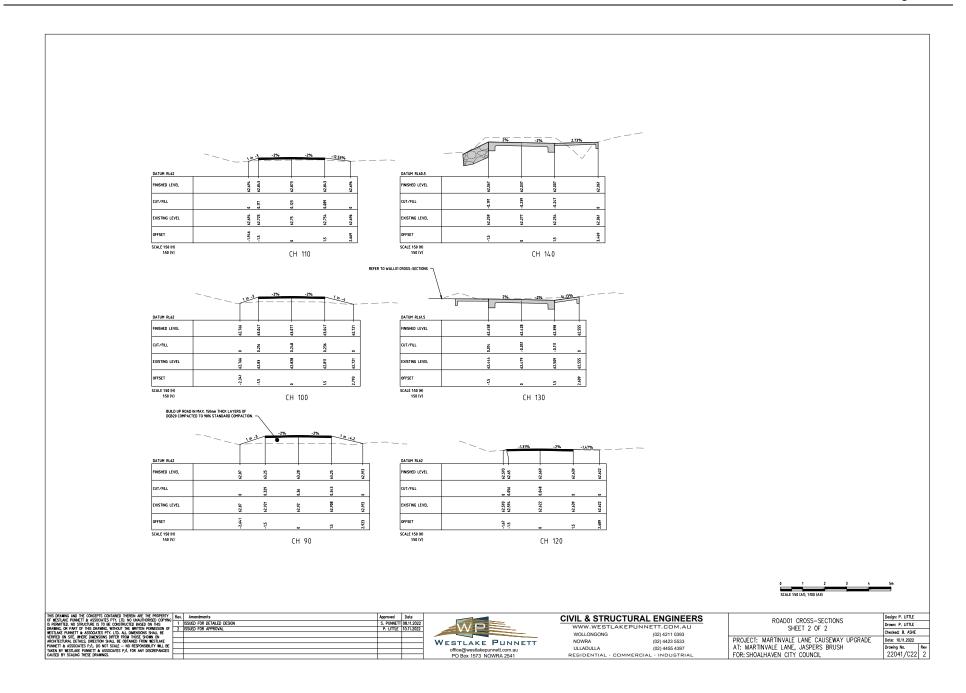




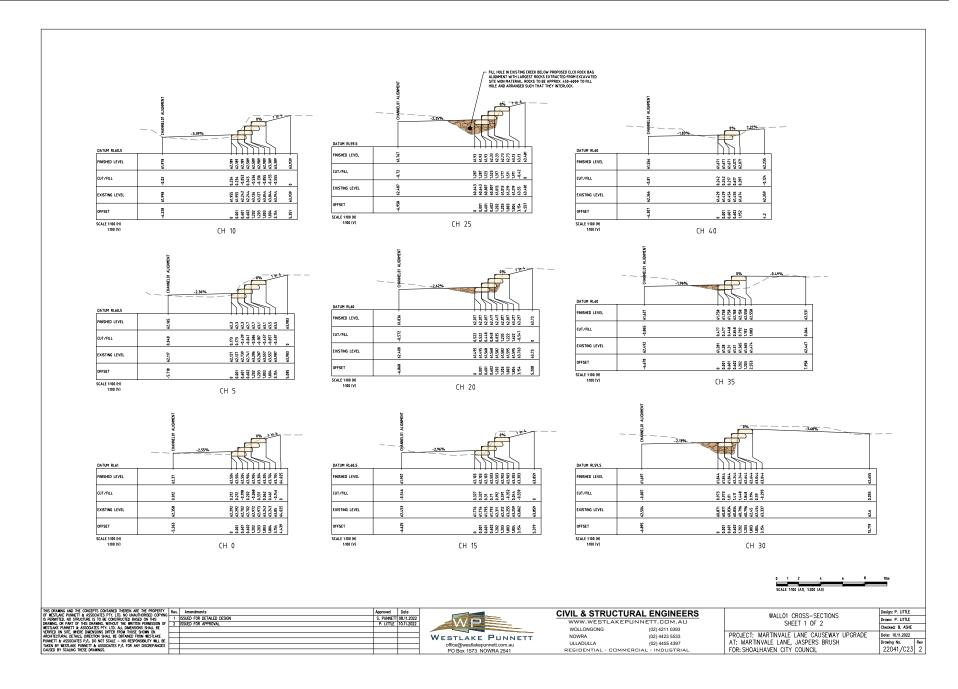




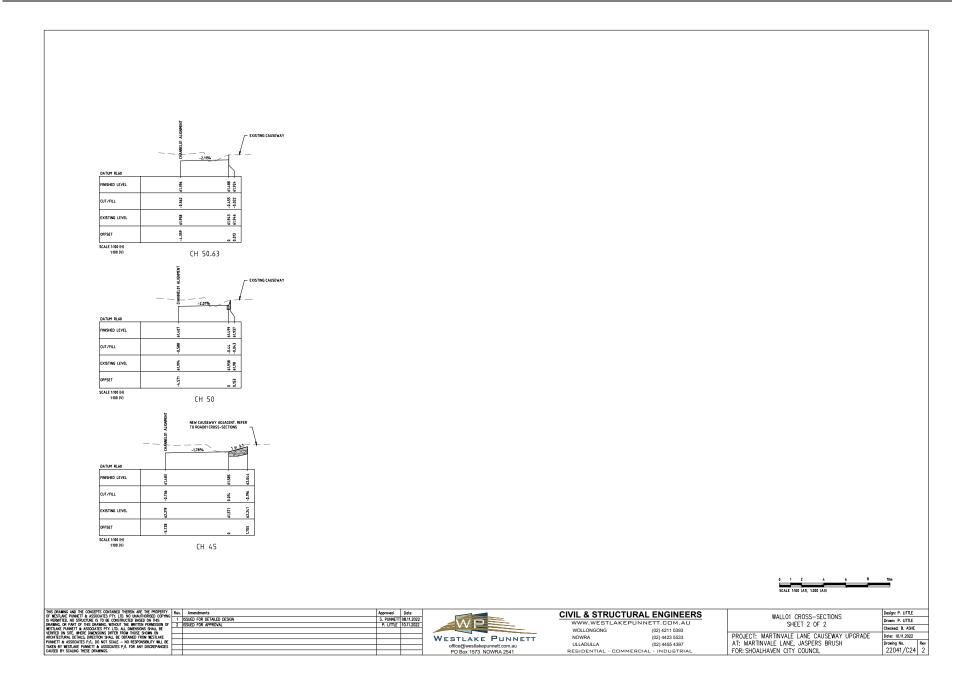




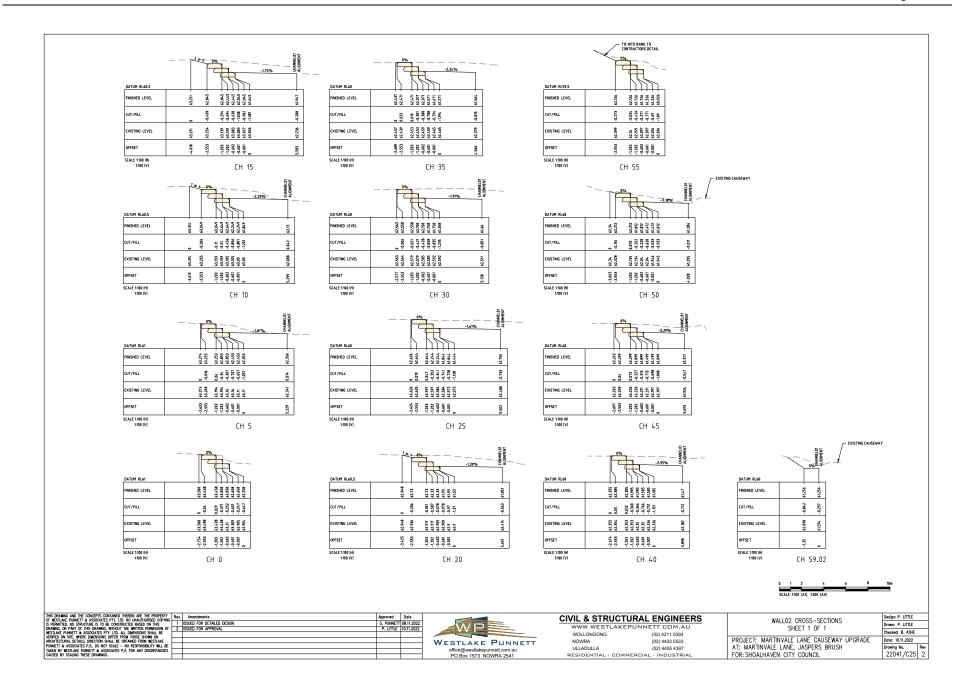




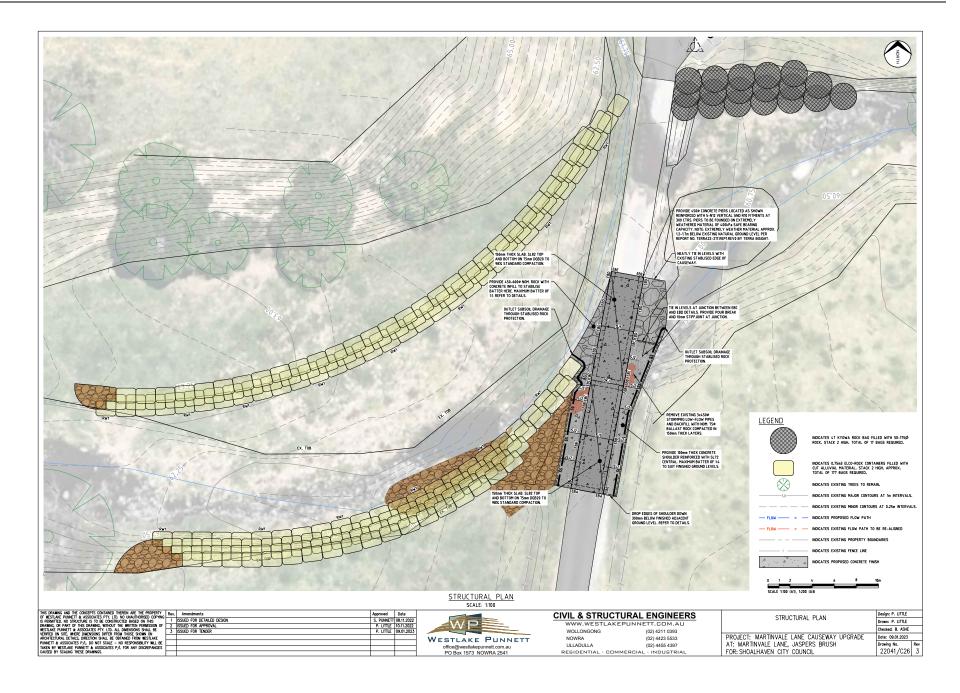




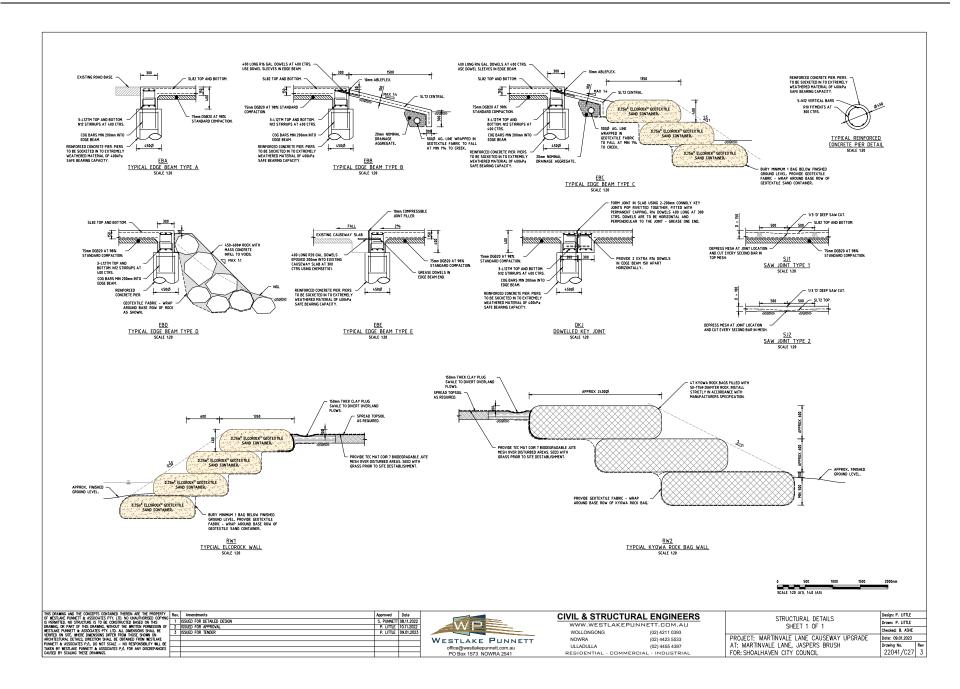




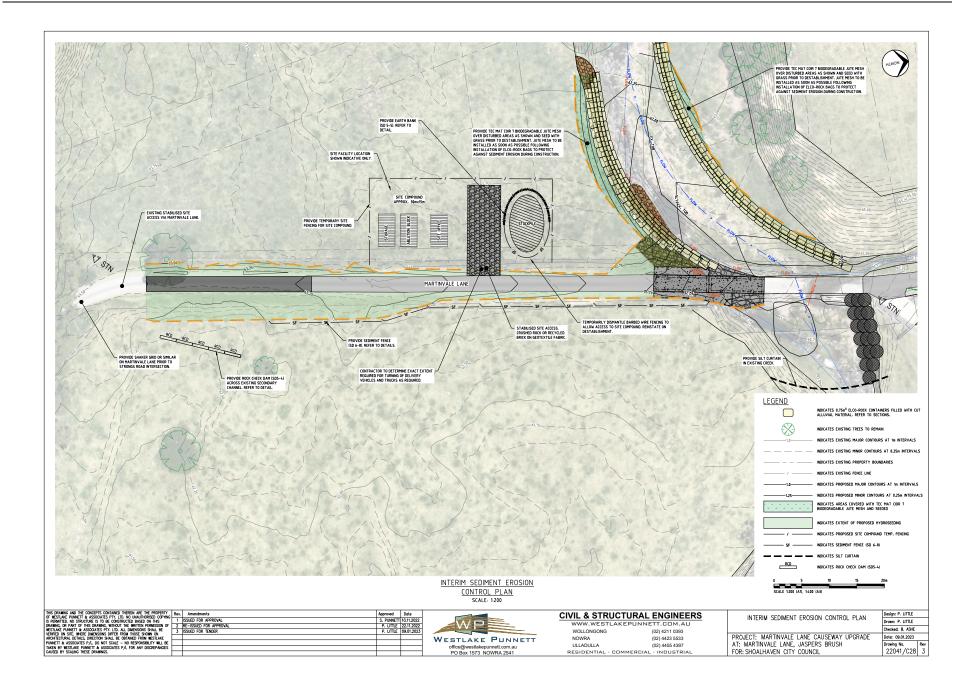




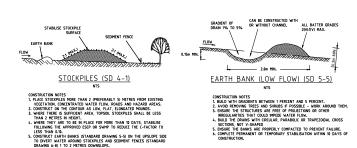


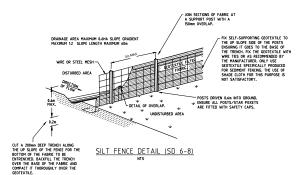


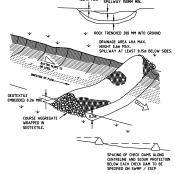












ROCK CHECK DAM DETAIL (SD 5-4)

CONSTRUCTION NOTES

CONSTRUCTION NOTES

CONSTRUCTION NOTES

AGRANGE AND STRAW BALES. THE MAINTENANCE PROGRAM SOURCE DESIGN THE MAINTENANCE PROGRAM SOURCE PROGRAM SOURCE PROMISE AND THE MAINTENANCE PROGRAM SOURCE SOURCE WORTH. WHERE AND ALL HEST BROWN TO ALL HEST TOOM THE MAINTENANCE PROGRAM SOURCE PROGRAM SOURCE SOURCE PROGRAM SOURC

THE OUTER EDGES.

SPACE THE DAMS SO THE TOE OF THE UPSTREAM DAM IS LEVEL WITH THE SPILLWAY OF THE NEXT DOWNSTREAM DAM.

STANDARD SCHEDULE OF EROSION & SEDIMENT CONTROL MEASURES TO BE IMPLEMENTED DURING CONSTRUCTION.

Construction shall be phased so that land disturbance is comfined to areas of workable size.
 This will limit the duration disturbed areas are to be exposed to erosion, perimeter/diversion
 Banks are to be stablesed impeddately after they are constructed.

3. TOPSOIL STOCKPLES ARE TO BE LOCATED AS DIRECTED BY SUPERVISING ENGINEER OR SURVEYOR. STOCKPLES ARE TO BE IMMEDIATELY VECTATED BY SEED AND FERTILIZER APPLICATION FOLLOWING FMAL PLACEMENT AND WATERING TO PROMOTE REVEGETATION. HAYBALES OR SEDIMENT FILTER FENCES ARE TO BE PLACED AROUND THE PERMETER OF THE STOCKPLES TO ACT AS EROSION AND SEDIMENT CONTROLS.

4. SEDIMENT AND DEBRIS ARE TO BE REMOVED FROM SITE ARE TO BE REMOVED IN TRUCKS THAT ARE 60%. FULL. ALL SEDIMENT REMOVED SHALL BE DISPOSED OF AS DIRECTED BY SUPERVISING ENGINEER OR SURVEYOR.

S. ALL CUT AND FEL BATTIES SHALL HAVE A GRADE OF 444YO OR AS SHOWN, ANY WITH A SLOPE LENGTH IN EXCESS OF THE TIESS SHALL HAVE A LOS WIDE BERN CONSTRUCTION FOR THE TOO THE TOO

- 4. TEMPORARY EROSION AND SEDMENT CONTROLS ARE TO BE INSTALLED DURING CONSTRUCTION. THESE
 CONTROLS ARE TO INCLUDE:
 A. PLACING OF TEMPORARY CROSS BANKS OF EARTH, SANDBAGS AND HAYBALES ARROSS DISTURBED ROAD
 SURFACES, THESE ARE TO BE CHECKED AND REPRAISED IF MECESSARY AT THE END OF EACH WORKING
- DAY.

 B. PLACING OF SANDBAGS AROUND INLET PITS AND HEADWALLS DURING CONSTRUCTION TO TRAP SEDIMENT AND ALSO TO PREVENT WATER FROM BY-PASSING THE INLET.

 BY PLACEN OF SEDIMENT TARPS AT KERS BLIETS.

7. ANY CONSTRUCTION EXITS SHALL BE CONSTRUCTED USING SHAKER GRID.

8. ALL SEDIMENT CONTROL DEVICES SHALL BE RETAINED WHILE ANY DISTURBED AREAS REMAIN OR ARE CONTRIBUTING SEDIMENT TO STORMWATER SYSTEM. NO DEVICES SHALL BE REMOVED UNTIL SUPERVISING ENGNIEER OR SURVEYOR GIVES DIRECTION.

9. ADDITIONAL SEDIMENT & EROSION CONTROL MEASURES TO BE PROVIDED AS PER SHOALHAVEN CITY COUNCILS REQUIREMENTS.

AIR & NOISE POLLUTION CONTROL

- L SUPPRESS DUST BY THE FOLLOWING METHODS WHERE APPLICABLE:
 a) STACE WIGHES TO LIMIT THE EXTENT OF EXPOSED AND UNPROTECTED AREAS.
 b) CONDUCT REQUIRE SPEATURE OF WASTERDING-EXITION THE STITE.
 c) COVEY AND SECONE VERTICALS CLOSE ENTERDING-EXITION THE STITE.
 a) USE AND EXPONENTERIALY FRONCE VIOLENCE. SPEATURE OR BOD SOIL TOGETHER THUS STABLISING
 c) USE AND EXPONENTERIALY FRONCE VIOLENCE.

- d USE AN ENVIRONMENTALLY FRENDLY CHEMICAL SPRAY TO BIND SOIL TOOL THEY THUS S UNISSED SOIL.

 8) RESTRICT SPEED OF VEHICLES ONISTE.

 1) COVER STOCKPILES TO PROTECT THEM FROM WIND.

 9) PROVIDE LIB HIGH DUST SCREENS, SHADE (LOTH, PVC BANNER OR POLYESTER MESH, SECURALLY FROIT OF DEFENTER FROM.

2. IMPLEMENT MEASURES TO LIMIT AIR POLLUTION BY VEHICLES AND PLANT WORKING ON OR PASSING THROUGH THE SITE.

3. MANTAN POLLUTION CONTROL MEASURES DURING CONSTRUCTION AND UNITE. FIAL. STABLISATION, ROUTINELY INSPECT EACH WEEK AND AFTER SIGNFICANT RAMPALL EVENTS, REPAR AND RENISTATE WORKS AS NEEDED TO MAINTAN PROTECTION, RECORD MAINTENANCE ACTIVITIES AND DETAILS AND PROVIDE TO EPA FOR RESPECTION WHEN REQUESTED.

4. ENSURE ALL CONSTRUCTION WORK THAT GENERATES NOISE TAKES PLACE ONLY WITHIN THE PRE-APPROVED OPERATING HOURS FOR THE PROJECT:

-MONDAY TO FRIDAY, BETWEEN 7A.M. & 6P.M. -SATURDAY, BETWEEN 8A.M & 3P.M.

THIS DRAWNO AND THE CONCEPTS CONTAINED THEREIS ARE THE PROPERTY BRY. Amendments of PRIVATED NO. THE CONCEPTS CONTAINED THE PROPERTY OF THE CONCENTRATION OF P.L 24.07.2021



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NOWRA	(02) 4423 5533
ULLADULLA	(02) 4455 4397
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COVER SHEET AND LOCALITY PLAN	Design: B.ASHE	
COVER SHEET AND LOCALITY FLAN	Drawn: B.ASHE	
	Checked: P.UTTLE	
PROJECT: JINDABYNE SEWER DEVIATION	Date: 24.07.2021	
AT: CLYDE ST JINDABYNE	Drawing No.	Rev
FOR: SNOWY MONARO REGIONAL COUNCIL	21440	1



COUNCIL ASSESSMENT REPORT

	COUNCIL ASSESSMENT REPORT
Panel Reference	PPSSTH-102 and PAN-98150
DA Number	RA21/1000
LGA	Shoalhaven City Council
Proposed Development	Extractive Industry (Sand Mine – Terara Shoalhaven Sands) – Proposed extension to approved dredge area
Street Address	The following parcels of land form the subject site: Lot 1 DP 1184790 at Terara Rd Terara (located on Pig Island)
	 Lot 2 DP 1184790 at Terara Rd Terara (located on Pig Island) Lot 3 DP 1184790 at Terara Rd Terara (located on Pig Island) Lot 4 DP 1184790 at Terara Rd Terara (located on Pig Island) Bed of Shoalhaven River below the Mean High Water Mark
Applicant/Owner	Applicant: SAM 8888 Pty Ltd C/- Ernest Panucci
	Owner: Burraga Island Pty Ltd (Lots 1-4 DP 1184790)
	Department of Planning & Environment – Crown Land (Bed of the Shoalhaven River below the mean high water mark)
Date of DA Lodgement	18 May 2021
Total No. of Submissions (No. of Unique Objections)	Three (3) Submissions
Recommendation	Deferred Commencement Approval
Regional Development Criteria (Schedule 6 of the SEPP (Planning Systems) 2021	Section 7, Schedule 6 of the SEPP (Planning Systems) 2021: Particular designated development Development for the purposes of— (a) extractive industry facilities that meet the requirements for designated development under the Environmental Planning and Assessment Regulation 2021, Schedule 3, section 26
List of all relevant s4.15(1)(a) matters	 State Environmental Planning Policy (Planning Systems) 2021 State Environmental Planning Policy (Resilience and Hazards) 2021 State Environmental Planning Policy (Biodiversity and Conservation) 2021 Shoalhaven Local Environmental Plan 2014
List all documents submitted with this report for the Panel's consideration	Prepared by Allen Price & Associates dated May 2012 (APA Ref No. 21519). Prepared by EA Panucci and PDC Lawyers and Town Planners dated 7 th May 2021. Supplementary Information prepared Martens Consulting Engineers dated 29 th September 2022 (Ref No. P1806743JC05V01).
	Dredging Plan • Prepared by Mitchell McCormac (No Date or Ref No).
	Survey Plan of Dredge Area and Seagrass Location Prepared by Johnston Procter Surveyors dated 28th September 2022 (Drawing No. 14152 (L). Prepared by Mac Drafting dated 27th February 2023 (Drawing No. RA21-1000-1 Rev 1).
	Dredge Area Comparison Plan Prepared by Johnston Procter Surveyors dated 5 th December 2018 (Drawing No. 14152 (G).
	Flora & Fauna Assessment



- Prepared by Martens Consulting Engineers dated November 2012 (Ref No. 110377JR04V02
- Prepared by Peter Dalmazzo dated 15th March 2019.
- Prepared by Peter Dalmazzo dated 27th September 2022.

Letter of Undertaking for Adaptive Management Strategy - Biodiversity

Prepared by Lodge Environmental dated 17th February 2023 (LE1637).

Flood Assessment

- Prepared by Martens Consulting Engineers dated February 2019 (Ref No. 1806743JR04V02).
- Refuge Stock Mounds prepared by Martens Consulting Engineers dated 5th August 2020 (Ref No. 14042800JC01V02).
- Supplementary Information in response to Further Information Request dated 19th September 2022 (Ref No. 1806743JC03V01).
- Supplementary Information in response to Shoalhaven City Council & Biodiversity & Conservation Division Comments dated 27th February 2023 (Ref No. P1806743JC06V01).

Geomorphology Supplementary Information

- Prepared by Fluvial Systems Pty Ltd dated 18th September 2022 (Ref No. 22004_terara sand_shoalhaven).
- Prepared by Fluvial Systems Pty Ltd dated February 2023 (Ref No. d:\fluvial systems\consulting 2016 -\22004_terara sand_shoalhaven\report\)
- Letter of Undertaking for Adaptive Management Strategy Geomorphology.
- Prepared by Fluvial Systems Pty Ltd dated 27th February 2023.

Mine Safety Management Plan

Prepared by Shoalhaven Sand Pty Ltd dated 1st February 2012.

Qualitative Ambient Air Assessment

 Prepared by Clearsafe Environmental Solutions dated 14th February 2012 (Ref No. 1144-01-A-AQ).

Estuarine Water Quality Impact Assessment

 Prepared by Martens Consulting Engineers dated March 2019 (Ref No. P1806743JR06V02).

Estuarine & Water Surface Monitoring Plan

- Prepared by Martens Consulting Engineers dated May 2019 (Ref No. P1806743JR05V01).
- Prepared by Martens Consulting Engineers dated September 2022 (Ref No. 1806743JR05V02).
- Supplementary Information in response to Further Information Request Prepared by Martens Consulting Engineers dated 16th September 2022 (Ref No. 2106743JC04V01).
- Final Report prepared by Martens Consulting Engineers dated February 2023 (Ref No. P1806743JR05V04).

River Stability Assessment

Prepared by Martens Consulting Engineers dated March 2019 (Ref No. P1806743JR01V01).

Recreational Fishing & Bait Collection Assessment

Prepared by Peter Dalmazzo dated 17th January 2019.

Land Resource Assessment

 Prepared by Martens Consulting Engineers dated March 2019 (Ref No. P1806743JR07V01).



	Waste Minimisation & Management Plan Prepared by Applicant (No Date or Ref. Number).	
	Rehabilitation Management Plan • Prepared by Martens Consulting Engineers dated P1806743JR08V01).	April 2019 (Ref No.
	Environmental Noise Impact Assessment Prepared by Harwood Acoustics dated 14 th March 2019 (F	Ref No. 1808009E-R).
	Contamination Assessment • Prepared by Martens Consulting Engineers dated P1806743JR03V01).	April 2019 (Ref No.
	Acid Sulfate Soils Assessment • Prepared by Martens Consulting Engineers dated P1806743JR02V01).	April 2019 (Ref No.
	Aboriginal Due Diligence Advice Prepared by Biosis dated 30 January 2020 (Ref No. Matte	er 31375).
Clause 4.6 requests	Not Applicable	
Summary of key submissions	 Water quality impacts. Flood afflux upon Lower Shoalhaven Floodplain communities. Significance of impacts upon threatened species of migratory shorebirds and the 'Swamp Oak and Salt Marsh' Endangered Ecological Community (ECC). Management of the coastal environment. Long term scouring and bank erosion impacts upon the Terara Levee. Acid sulfate soils - impacts. 	
Report prepared by	Justin Lamerton, Shoalhaven City Council	
Report date	6 April 2023	
Summary of s4.15 matters Have all recommendations in relation to relevant s4.15 matters been summarised in the Executive Summary of the assessment report?		Yes
Legislative clauses requiring consent authority satisfaction Have relevant clauses in all applicable environmental planning instruments where the consent authority must be satisfied about a particular matter been listed, and relevant recommendations summarized, in the Executive Summary of the assessment report?		Yes
Clause 4.6 Exceptions to development standards If a written request for a contravention to a development standard (clause 4.6 of the LEP) has been received, has it been attached to the assessment report?		Not applicable
Special Infrastructure Contributions Does the DA require Special Infrastructure Contributions conditions (S7.24)? Note: Certain DAs in the Western Sydney Growth Areas Special Contributions Area may require specific Special Infrastructure Contributions (SIC) conditions		Not applicable
Conditions Have draft conditions been provided to the applicant for comment?		Draft Conditions prepared by internal and external referral



Note: in order to reduce delays in determinations, the Panel prefer that draft conditions, notwithstanding Council's recommendation, be provided to the applicant to enable any comments to be considered as part of the assessment report

authorities have been made available for the applicant's review

1. Executive Summary

The Site

The site is described as Lots 1 to 4 DP 1184790 which represents all four allotments making up 'Pig Island' and the bed of the adjacent Shoalhaven River below the mean high water mark.

Pig Island is a landform located entirely within the Shoalhaven River at a distance of approximately 1.5km east of the Nowra Bridge. The townships of Nowra and Bomaderry are located within close proximity to the south-west and north-west of the Island respectively. The village of Terara is located directly to the south of the Island

The Shoalhaven River anabranches to the north and the south as it meanders towards the Pacific Ocean which is located at a distance of approximately 11km downstream. The River commences in the Gourock Range in the Eastern Highlands, is approximately 332 kilometres in length and drops 860 metres in elevation through to its connection with the Pacific Ocean. Pig Island is the first major landform within the lower River system. It is known to collect sediment deposits including sand from natural processes through its significant upstream system. These sediment deposits collect on the western and northern ends of the Island.

The bed of the Shoalhaven River immediately to the north-west of Pig Island therefore forms part of the development site and is identified as the location where the proposed dredge expansion would take place.

The below image depicts the subject site and its proximity to other nearby landforms.



Figure 1 - Subject Site



Approvals history

Terara Shoalhaven Sand Pty Ltd (formerly Terara Sand Pty Ltd) was originally granted a Permissive Occupancy approval to extract mineral (sand) from the bed of the River and process it into coarse river sand for distribution as part of PO1968/29 on 1st October 1968.

The existing approval for sand extraction at the site was issued by the Southern (then) Joint Regional Planning Panel as part of RA12/1000 issued on 28th August 2014. The approval permitted up to 100,000 tonnes of sand to be extracted per annum with the proponent advising in the submitted Environmental Impact Statement that on average, 60,000 tonnes was extracted per annum under the current approval and extraction licence issued in 2014. The sand was won and extracted from the bed of the River and transported to the adjacent premises owned by Terara Sand located at No. 125 Terara Rd Terara (land based) for processing.

The approval granted consent for an extension to the approved dredge area, which based upon previous sand extraction rates, was to enable an extension to the extraction timeframe for a period of a further 25 to 30 years. Documentation prepared as part of RA12/1000 was in accordance with the Secretary's Environmental Assessment Requirements (SEARs) issued by the NSW Department of Planning on 11th November 2011.

The current approved extraction area is marked in red in Figure 2 below:



Figure 2 - Existing Approved Location

The process involves 'the extraction of sand out of the sediment material dredged from the River, and separation from shells, carbonates, and other fines'. From here, the sand product is on sold to other businesses and operations for use within the locality. Existing facilities located at Terara Shoalhaven Sand's land based operations are depicted in Figure 3 below:



Planning Report – S4.15 Assessment – Lots 1-4 DP 1184790 Terara Rd, TERARA and Bed of Shoalhaven River below the Mean High Water Mark

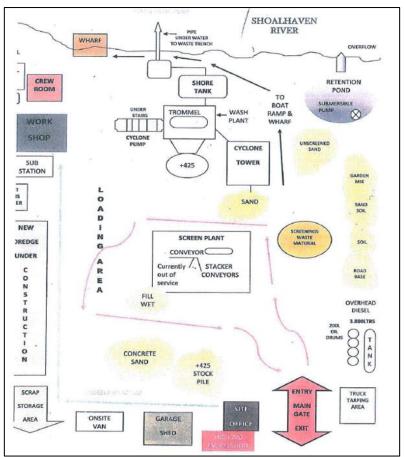


Figure 3 – Terara Shoalhaven Sands Facility

Proposed development

The current proposal is to extend the approved dredge extraction area over an area on the northern and western side of the Island noting that the sand supply from the previous approved and licenced extraction area has been exhausted following operations conducted in the previous seven (7) years. The intention of the proposed extension is to provide a sand supply that would last for approximately 19 to 40 years (the timeframe is largely dependent upon extraction volumes and rates).

The extended dredge area would cover an area of more than 10 hectares and is depicted in Figure 4 below (Note: The area is denoted in dark blue hatching. The area denoted in light blue hatching does not form part of the current application area and would be subject to a separate future application).



Planning Report – S4.15 Assessment – Lots 1-4 DP 1184790 Terara Rd, TERARA and Bed of Shoalhaven River below the Mean High Water Mark

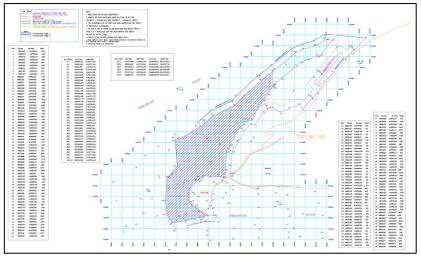
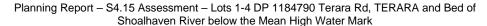


Figure 4 - Proposed Expanded Dredge Area

The proposal also involves the placement of three stock mounds on Pig Island which would be made up of fines disposed following the removal of material from the bed of the River and following separation from coarse river sand.

The applicant's proposed location for the stock mounds is depicted in the below excerpt from the supplementary flood study. However it is noted that the final location of the mounds (as discussed further in the Report) must be amended to ensure they are located wholly within areas mapped as 'High Hazard Flood Storage' area only. This is required to ensure that the location of the stick mounds permits ongoing compliance with applicable requirements including the Shoalhaven Development Control Plan 2014, Chapter G9 — Development on Flood Prone Land and the Floodplain Development Manual.





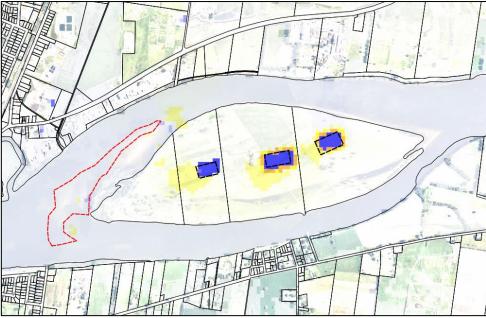


Figure 5 - Application Location for Proposed Stock Mounds

A detailed assessment of the proposal has been carried out against applicable legislation, Acts, Plans, and Policies with the outcome of the assessment detailed in the following sections of this Report.

Following a consideration of the likely impacts of the proposal, the assessment recommends determination by way of deferred commencement development consent. This would be subject to the following requirements being imposed as requirements to be addressed, prior to an Operational Consent being issued and prior to the proponent being able to act on the Consent:

Flooding and Stock Mound - Deferred Commencement Requirements

Flooding - Filling within High Hazard Floodway Areas

A professional engineer, (as defined in the National Construction Code) must submit to the satisfaction of Council, certification that the following items have been detailed on an amended submitted Stock Mound Plan

 All proposed filling is kept outside of areas mapped as High Hazard Floodway in the Lower Shoalhaven River Flood Study (Cardno, 2022) for the 2050 scenario 1% AEP event.

Reason: In accordance with the recently released Lower Shoalhaven River Flood Study, whilst the majority of Pig Island is designated with a flood hazard category of 'High Hazard Floodway', there a number of locations on Pig Island which have the designation, 'High Hazard Flood Storage'.

In accordance with Chapter G9 – Development on Flood Prone Land of the Shoalhaven Development Control Plan (SDCP) 2014, filling/earthworks are prohibited on land classified 'High Hazard Floodway'. Council notes that the submitted plans depict the construction of part of the stock mounds within areas of Pig Island designated 'High Hazard Floodway', which is prohibited. In order for compliance with the SDCP 2014 to be demonstrated, the deferred commencement condition will require that all stock mounds be located wholly within the areas designated 'High Hazard Flood Storage' only.



<u>Geomorphology – Adaptive Management Plan – Deferred Commencement Requirements</u>

Adaptive Management Plan - Geomorphology

An Adaptive Management Plan – Geomorphology must be prepared by a suitably qualified consultant and be submitted to the Shoalhaven City Council for approval.

The plan must, as a minimum:

- Elaborate on the commitments made in the approved Letter of Undertaking for an Adaptive Management Strategy – Geomorphology prepared by Fluvial Systems, dated 27 February 2023.
- b) Be developed in collaboration with Shoalhaven City Council and the NSW Department of Planning and Environment.
- c) Set clear purpose and objectives to avoid significant impact to geomorphic processes and forms in the Lower Shoalhaven River. This includes but is not limited to the existing P1L1 Riverview Road and P1L2 Terara flood levees.
- Detail performance measures and specific measurement methodologies for monitoring.
 This will include but not be limited to regular river bed and bank surveys.
- e) Detail frequency of monitoring and reporting.
- f) Define the study area and monitoring extent.
- g) Describe the activity and current baseline conditions of the monitored area.
- h) Define triggers for the adaptive management strategy and outline relevant response mechanisms. This includes the immediate cessation of extraction if these triggers are reached or exceeded.
- i) Define the extent of liability for damages and repairs to infrastructure and property as a result of potential significant adverse impacts from the activity.

Reason: Council's Natural Resources and Floodplain Section advised as part of their final referral response that the information submitted by the applicant including an amended Geomorphological Assessment adequately responded to Council's concerns regarding bank erosions / scour impacts upon levee banks and other infrastructure.

Given the concerns regarding geomorphological impacts was found to be adequately addressed, the Natural Resources and Floodplain Section considered a Letter of Undertaking submitted by the applicant to inform a future Adaptive Management Strategy which would set objectives, monitoring strategies and mechanisms, and response methods to ensure ongoing operations avoid adverse geomorphic impacts to the river bed and coastal infrastructure including the levee banks.

<u>Biodiversity – Adaptive Management Plan – Deferred Commencement Requirements</u>

Biodiversity Adaptive Management Plan

A Biodiversity Adaptive Management Plan must be prepared by a suitably qualified ecological consultant and be submitted to the Council for approval.

The plan must, as a minimum:

- a) Elaborate on the commitments made in the approved Letter of Undertaking relating to an Adaptive Management Strategy prepared by Lodge Environmental, dated 17th February 2023.
- b) Address all items listed in section 8.4 and section 8.5 of the Biodiversity Assessment Method (DPIE, 2020).
- c) Review management actions and monitoring required by Conditions 32 and 44 of DS15/1297 and incorporate these into the Plan.
- d) Set clear objectives and measurable performance indicators for management and monitoring.
- e) Define the study area.



- Describe the activity and current baseline conditions of the study area.
- Identify links to legislation, other plans and documents.
- Describe the threats and processes that influence the objectives with reference made to biodiversity values identified by Council (Environmental Assessment Officer referrals 1 and as well as DPE's Biodiversity Conservation Division referral and DPIE Fisheries GTA).
- Detail all management actions to be considered and how these will be implemented. Management actions must include education to all contractors and workers.
- Describe how the management actions and monitoring program will achieve objectives. Monitoring must include observational techniques (such as systematic bird point counts, photo-point monitoring and GPS vegetation mapping) as well as assessment of modelling (such as preparation of bathymetric maps).
- Monitoring to assess of the effectiveness of management actions.
- Describe the responsibilities and detail who will carry out the implementation and monitoring plans.
- m) Detail the procedure to analyse and evaluate monitoring data against measurable performance indicators.
- Provide procedures to respond and adapt management actions and monitoring if performance indicators are exceeded.

A summary of the results of the implementation of the above must be provided to Council as part of the six-monthly Audit to continue operation of the approved works. If the six-monthly Audit report is not provided, all works must cease.

Council's Environmental Services Section considered the following documentation submitted by the applicant as part of their final referral response:

- An amended Extraction Area Plan which reduced the proposed dredge area extent to affect a maximum of 2.09 hectares of isolated intertidal sand flats.
- Revised Biodiversity Conservation Act 2016, Section 7.3 Test of Significance which confirmed that entry into the Biodiversity Offsets Scheme (BOS) was not triggered.

Given the concerns regarding biodiversity impacts were found to be adequately addressed via the submission of the abovementioned amended documentation, the Environmental Services Section considered a Letter of Undertaking submitted by the applicant to inform a future Adaptive Management Strategy which would set objectives, monitoring strategies and mechanisms, and response methods to ensure ongoing operations avoid adverse biodiversity impacts to the local estuarine environment.

2. Application Details

Applicant: SHOALHAVEN CITY COUNCIL

Owner: Burraga Island Pty Ltd (Lots 1-4 DP 1184790)

Department of Planning & Environment - Crown Land (Bed of the Shoalhaven River below

the mean high water mark)

Capital Investment Value: \$100,000.00 (total estimate of all activities forming part of the process as nominated by the applicant within their submitted documentation).

Disclosures: No disclosures with respect to the Local Government and Planning Legislation Amendment (Political Donations) Act 2008 have been made in accordance with the submitted Pre-DA Application Form



3. Detailed Proposal

Development Application

The applicant has an existing approval for Extractive Industries (Sand Extraction won from the Shoalhaven River) issued as part of Regional Approval No. RA12/1001. The current proposal is for expansion of the existing Extractive Industries proposal to cover a wider area of the Shoalhaven River which would consist of an area of more than 10 hectares. The depth of the dredge operations is described as -6.7m AHD within the original submitted Environmental Impact Statement and Land Resource Assessment. (Note that the General Terms of Approval issued by Department of Primary Industries – Fisheries will limit the depth of dredging operations to -6.0m AHD)

The extraction area has been described in the submitted Land Resource Assessment as being:

- **Topography:** The sand flats for the proposed dredging area are slightly undulating, with site slopes < 2%. The site is located on sand flats in the tidal portion of Shoalhaven River at the western portion of Pig Island. The southeast portion of the proposed dredging area (closest to the western end of Pig Island) has an elevation of 0.2m AHD, 0.3m AHD in the northern, 1.1m AHD in the eastern and 2.7 m AHD in the western portion.
- Expected Geology: The Wollongong 1:250,000 Geological Series Sheet S1 56.9 (1966) describes site geology as alluvium, gravel, swamp deposits and sand dunes. The NSW Environment and Heritage eSPADE website identifies the site as having Shoalhaven soil landscapes consisting of alluvium gravel, sand, silt and clay derived mainly from sandstone and shale overlying buried estuarine sediments.
- Extraction Amount / Length: Involves the extraction of sand via dredge of up to 100,000 tonnes per annum over 19 to 40 years.
- Surrounding Vegetation: Consists of mix of swamp oak, saltmarsh, mangroves, Acacia, seagrasses, and non-native species as depicted in the following image with a buffer of 25m to vegetation:



Figure 6 - Vegetation Areas



The following provides a description of dredging process as described by the applicant:

- The dredging method is cutter suction. There is a cutter head with a suction pipe mounted behind. A spud is used to hold the back of the dredge in place which provides the centre of the arc, slew ropes are then connected to anchors on either side of the dredge.
- The timing of the dredging is dependent on the extraction rate / sale rate for the year, noting the current extraction license allows for Terara Shoalhaven Sands (TSS) to dredge a maximum of 100,000 tonnes of material a year.
- Extracted material is then taken to the existing TSS facility at 125 Terara Rd where sand is
 extracted from other materials including shells, carbonates, and other fines.
- Sand material is then on sold to businesses, companies, etc as part of normal business practices.
- Fines left over from mined material are either exported offsite, disposed using sedimentation
 ponds approved as part of DA91/2897, or would be disposed via the use of proposed stock
 mounds which would be installed on Pig Island.

Figures 2, 4, and 5 above depict the layout of the proposed development with respect to the surveyed location of the proposed dredge area, proposed stock mounds relative to Pig Island, and the location of where extracted material would be processed into sand.

4. Subject Site and Surrounds

Site Description

Street address: Terara Rd Terara and Bed of the Shoalhaven River Below the Mean

High Water Mark.

Title details: Lot 1 to 4 DP 1184790

Zoning: The site is zoned RU1 Primary Production (Pig Island) and W2

Recreational Waterways (Bed of the Shoalhaven River below the mean high water mark) under the Shoalhaven Local Environmental

Plan 2014 (SLEP).

Site dimensions: The subject land is approximately 132.9ha (Pig Island – 122.4ha and

Bed of Shoalhaven River 10.5 ha approx.).

Topography Dredge Area (Elevation of 0.2m AHD in the southern, - 0.3m AHD in

the northern, -1.1m AHD in the eastern and - 2.7 m AHD in the western

portion)

Vegetation: The site comprises vegetation to the south, east and west of the

proposed dredge area as depicted in Figure above – consisting of Acacia, mangroves, saltmarsh, seagrass, swamp oak, and non-native

species.

Existing buildings: Existing homestead and associated farm buildings located on Pig

Island. No works are proposed to these structures and they would not

be used as part of the proposal.

Existing facilities including buildings (office, work sheds, and extractive material separation infrastructure) located at TSS facilities at 125 Terara Rd Terara. Note: The existing TSS facilities are existing and

therefore do not form part of the subject application.



Surrounding Site

The site is located approximately 1.5km to the east of the Nowra Bridge over the Shoalhaven River. On the southern bank of the River is the Terara Village, adjoining industrial properties such as the Terara Shoalhaven Sands land-based premises, and farmland. On the northern bank of the River is the Manildra development and adjoining farmland.

Within the wider locality is the Nowra urban area and CBD (approximately 1.5km to the south west of the site, the Bomaderry urban area and village centre (locate approximately 1km the north west of the site), and the Shoalhaven River mouth and Shoalhaven Heads township located 11km downstream to the east.

The below photographs provide a further visual perspective of the site and the surrounding locality:



Image 1 – View of western and northern side of Pig Island and proposed dredge location (with existing dredge equipment in the foreground).



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Image 2 - View of eastern edge of Pig Island and existing dredge area and equipment



Image 3 – View of northern side of Pig Island and proposed dredge location



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Image 4 – View of development on northern bank of Shoalhaven River (Manildra and Farmland)



Image 5 – View from dredge site looking west towards the Nowra Bridge



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Image 6 – View of development on southern bank of Shoalhaven River (Terara Village)



Image 7 – View of development on southern bank of Shoalhaven River (Terara Shoalhaven Sands Dock and Facility)



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Image 8 - View of Pig Island looking east towards existing homestead and sheds



Image 9 - View of Pig Island looking south towards proposed stock mound location



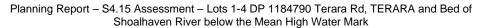




Image 10 – View of existing Terara Shoalhaven Sands land based facilities

5. Background / Previous Development Approvals

Action(s)	Date
Permissive Occupancy Approval No. PO1978/29 issued for extraction of mineral (sand) from the Shoalhaven River and processing into coarse river sand for distribution.	1 October 1968
Development Approval No. DA91/2897 was issued for a sedimentation trench on Pig Island.	10 August 1993
Development Approval issued for a filter and overflow dam on Pig Island.	11 February 1994
Regional Approval No. RA12/1001 was issued by the Southern Regional Joint Planning Panel for Extractive Industries (Sand Dredging) at a defined location within the Shoalhaven River and then processing facility to be carried out at a facility located at No. 125 Terara Rd Terara.	28 August 2014
A maximum extraction rate of 100,000 tonnes per annum was required as a condition of consent. However based upon previous extraction rates, the approval was expected to have a timeframe of 30 years.	
Modification Application No. DS15/1020 was issued approving a Modification to Conditions 26 – 32 of the Regional Approval.	4 th February 2015

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Action(s)		D)ate
Modification Application N Modification to Conditions 26 Condition 28.			th October 2017

6. Consultation and Referrals

Internal Referrals

Internal referrals were provided in response to the development application as described below.

Section	Comments	
Environmental	1 st referral response	
Assessment Officer (EAO)	Provided by the EAO on 17 th January 2022 having consideration for the Fauna and Flora Assessment and the biodiversity impacts associated with the proposal.	
	As part of the response, referral to the Department of Planning and Environment – Biodiversity Conservation Division (DPE-BCD) was recommended, with responses as detailed below.	
	Further Information was requested to enable the completion of the assessment which related to the following matters:	
	Impacts to Marine Vegetation	
	The submitted Fauna and Flora Assessment must be amended to incorporate the following:	
	 a) A 25 metre buffer is to be placed between the vegetation and the dredge boundary to "reduce the risk of slumping into the dredge hole". b) The Report does not provide adequate justification for the use of this buffer width and we remain concerned that significant indirect impacts to this vegetation could occur. Further justification for applying this width should be provided. c) Mapping of vegetation communities and habitats in the Assessment is reliant on dated information and reports ranging from 1985-2010 and partial mapping of the proposal based on 2018 aerial provided in Figure 7. While it is important to acknowledge previous work and review the changing nature of habitat and threatened ecological communities occurring in and adjacent to the river, given the extent of works, an assessment using up-to-date mapping that reflects current conditions is required to be provided. d) Mapping of Plant Community Types (PCTs), threatened ecological communities and threatened species habitat is required. e) The proposal will impact the saltmarsh and Swamp Oak Floodplain Forest on the island. The Test of Significance must consider all threatened entities which will be directly or indirectly impacted. 	
	Impacts to Threatened Species of Migratory Shorebirds	
	The area to be dredged comprises approximately 9 hectares of mudflat which provides foraging habitat for shorebirds. It is estimated that a total of 26.8 hectares of this type of habitat occurs within the Shoalhaven estuary. Regardless of other types of suitable available habitat, the removal of this area is a significant proportion of the total area of mudflat.	
	Two Commonwealth listed shorebird species have been recorded foraging close to the site on Pig Island (bar-tailed godwit and eastern curlew). Other	



significant species known to occur in the estuary, including the black-tailed godwit and curlew sandpiper, may also use the area.

At the time of assessment, the subject site was not on the Biodiversity Values Map. The site is now on the Biodiversity Values Map (listed as having "threatened species or communities with potential for serious and irreversible impacts" - added to map 27/9/2021). While the Biodiversity Values Map does not trigger the BOS in this case, further work is required to determine if the BOS is triggered via the Test of the Significance. We do not consider the conclusions from the submitted Test of Significance as providing sufficient evidence to demonstrate that a significant impact will not occur.

As such, the submitted Fauna and Flora Assessment must be amended to incorporate the following:

- ToS Either further information is required to justify no significant impact, or if it cannot be provided, a precautionary approach should apply and a Biodiversity Development Assessment Report prepared in accordance with the BOS.
- b) Provide an assessment against up to date data. The Assessment presently relies on survey effort completed in 2011 and Birdlife data recorded by volunteers (and NPWS staff) between 2010 and 2011. Council notes that recent data between 2013 and 2017 can be viewed on Birdata Birdlife Australia and contains records of EPBC Act and BC Act listed species including Bar-tailed Godwit (2016, 2017), Little Tern (2016), Eastern Curlew (2017), Whimbrel (2013) and White-bellied Sea-Eagle (2014). Birdata also contains notes stating that "really high numbers of foraging non-listed birds", Masked Lapwing and White-faced Heron, have also been observed on the northern / western side of Pig Island.
- Indirect impacts on shorebirds downstream at the highly significant river mouth have not been adequately considered.

Biodiversity Offsets Scheme

Taking into consideration, the requirements listed at Items 11 and 12 of the referral response, Council's EAO finds that, "based on the information provided and application of the Threatened Species Test of Significance Guidelines / precautionary principle, entry into the Biodiversity Offset Scheme (BOS) is triggered by the proposal due to a significant impact to migratory shorebirds".

As such, a Biodiversity Development Assessment Report (BDAR) must be prepared by an accredited assessor in accordance with the Biodiversity Assessment Methodology (BAM) 2020.

Note: As detailed in section 7 of the Report below and as detailed in the below further referral responses, Council found following submission of further information and consideration of likely impacts that the BOS has not been triggered.

2nd referral response

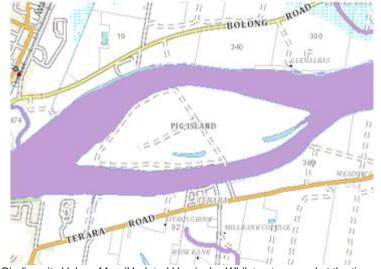
Provided by the EAO on 13th December 2022 following a review of the initial Fauna and Flora Assessment and recent Supplementary Information to the Fauna and Flora Assessment.

Impacts to Threatened Species of Migratory Shorebirds

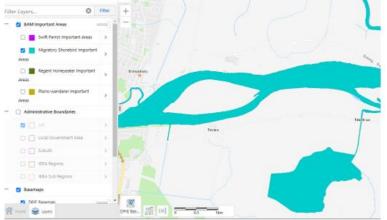
Areas of the proposed development have been mapped by the number of sources as providing important or priority habitats for shorebirds, including:



- NSW Government Biodiversity Values Map as habitat for Threatened species or communities with potential for serious and irreversible impacts (mapped in 2021)
- NSW Government Important habitat maps for a threatened species (mapped in 2021)
- Jacket and Craven 2009
- Threatened migratory shorebird habitat mapping project (DEC 2006)



Biodiversity Values Map (Updated Version) – Whilst not mapped at the time of lodgement of the application, this is an important factor which the assessment authority has a duty to consider.



NSW Government Important habitat maps – Identifies the site as habitat for the Bar-tailed Godwit, Black-tailed Godwit, Curlew Sandpiper, Eastern Curlew. Important habitat maps identify areas that are considered essential to support critical life stages of the species. The Important habitat mapping is restricted to



species that are highly mobile and difficult to reliably detect by survey, and for which DPE holds extensive, long-term data sets.

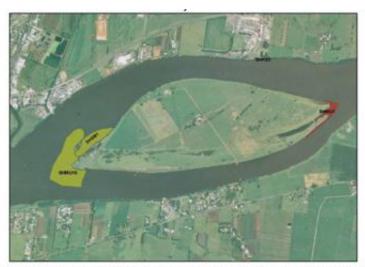


Figure 9. Map of shorebird habitats around Pig Island (Jacket and Craven (2009)). SHMU1 and SHMU10 were mapped as mud. SHSM1 was mapped as saltmarsh. Jacket and Craven attributed medium priority for actions to improve habitat value to areas mapped light green and high priority to the areas mapped red.

Historical mapping completed by Jacket and Craven in 2009, also identifies areas of the development as priority habitat for shorebirds.

The Shoalhaven has been recognised as an internationally significant site for Eastern Curlew and nationally important for Pacific Golden Plover, Lesser Sand Plover and Ruddy Turnstone. Based on the data sources reviewed, the development area is recognised to provide habitat (at least occasionally) for the following listed species:

Species	NSW BC Act listing	Commonwealth EPBC Act listing
Bar-tailed Godwit <i>Limosa</i> lapponica	Not listed	Migratory*#
Black-tailed Godwit Limosa limosa	Vulnerable	Migratory*#
Curlew Sandpiper Calidris ferruginea	Endangered	Critically Endangered Migratory*#
Eastern Curlew Numenius madagascariensis	Not listed	Critically Endangered Migratory*#
Lesser Sand Plover Charadrius mongolus	Vulnerable	Endangered Migratory*#
Pacific Golden Plover Pluvialis fulva	Not listed	Migratory*#
Ruddy Turnstone Arenaria interpres	Not listed	Migratory*#

Given that there are several sources identifying the development area as important or priority habitat for shorebirds, and recognition that it is inherently difficult to make an assessment of impacts to migratory shorebirds based on survey data (DPIE 2021), Council cannot concur with the assessment made in



the Flora and Fauna Report – Additional Information that concludes that the development footprint does not provide habitat for the identified shorebirds.

Indirect Impacts to Migratory Shorebird Habitat

As a consequence of the dynamic nature of the river system, it is difficult to accurately determine the full suite of indirect impacts resulting from the proposed development to biodiversity values. However, the following is noted:

- The Fluvial Systems Pty Ltd (September 2022) report states that under modelled flood event scenarios, the side and top surfaces of the three proposed mounds are exposed to velocities 2.1 – 5.2 m/s for the PMF event, which would likely result in scour of the mounds. There is concern regarding how the scouring of the mounds would affect sedimentation of downstream habitats, namely the highly significant downstream habitats used by migratory shorebirds.
- Given the operation is proposed to be conducted over a 30 year period (i.e.
 up to the year 2053) and considered the recent unpredictability of flood and
 drought events, it is difficult to be confident whether the extracted area will
 recover to the extent that it will replace the shorebird habitat lost, or over
 which time this will occur.
- The assessment of indirect impacts resulting from the proposal to biodiversity disputes the mapping provided without sufficient evidence and fails to reference the impacts suggested by other specialist reports provided and raise by other Council teams/DPE.

Precautionary Principle

Given that the outcome of the predicted impact assessment and modelling cannot be guaranteed, there is a chance that the proposal will result in a significant impact to migratory shorebirds, and potentially Coastal Saltmarsh in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions and Swamp oak floodplain forest of the NSW North Coast, Sydney Basin and South East Corner bioregions endangered ecological communities. When applying the principles of Ecologically Sustainable Development, Council reminds the determining authority that the risks to the environment must be considered along with the economic and social considerations.

Section 6(2a) of the *Protection of the Environment Administration Act 1991 Act*, prescribes that lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

The following case law supports the application of the precautionary principal in proposals similar to RA21/1000:

- Clippers Anchorage Pty Ltd v Port Stephens Council [2018] NSWLEC 1029
- Providence Projects Pty Ltd v Gosford City Council [2006] NSWLEC 52
- BT Goldsmith Planning Services Pty Ltd (2005) NSWLEC
- BGP Properties Pty Ltd v Lake Macquarie City Council (2004) 138 LGERA 237
- Murrumbidgee Ground-water Preservation Association v Minister for Natural Resources (2004) NSWLEC 122

Given the uncertainties surrounding the direct and indirect impacts of the proposal to biodiversity values, the Precautionary Principal is to be applied and a significant impact is to be assumed for State and Commonwealth listed migratory shorebirds.



3rd referral response

Provided by the EAO on 6th March 2023 following a review of the following documents, which were submitted to enable the three part BC Act 2016 test to be passed, and to enable ongoing management to be carried out in a way which is deemed acceptable:

- Letter of Undertaking relating to an Adaptive Management Strategy prepared by Lodge Environmental, dated 17 February 2023
- Proposed Extraction Area Drawing Number RA21/1001-1 (Mac Drafting) resulting in a reduced extraction area that avoided impacts to an area of intertidal sand flats.

The EAO advised that the Peter Dalmazzo Flora and Fauna Reports should not form part of the approved documents, however be sent to the Regional Planning Panel along with EAO Referrals 1 & 2 to provide context to biodiversity issues and how the following conclusions have been reached:

Background

An initial letter of undertaking was presented by Lodge Environmental (LE) on 17th February (D23/64819). This was reviewed along with the revised extraction alignment provided by the applicant on the 20th February 2023.

Review comments by Councils Biodiversity team were returned to LE and the applicant on 20th February requesting further information.

Review

A review of the revised letter of undertaking provided on 22nd February 2022 found:

- Industry guidelines for avoiding, assessing and mitigating impacts on EPBC
 Act listed migratory shorebird species is referenced in Appendix C Significant
 Impact Criteria. Council will have the opportunity to ensure these key
 references are used to establish context in the introduction for the Adaptive
 Management Plan to be submitted prior to commencement.
- Conditions would be recommended to refer to ensure an Adaptive Management Plan aligns with the wording from the DPIE Biodiversity Assessment Method 2020 which forms the framework for this Plan (Deferred Commencement Section).
- Direct and indirect impact thresholds will be included in conditions (Parts C and I). Council will also have the opportunity to ensure all indirect impacts are monitored and mitigated in the Adaptive Management Plan prior to commencement.
- Threatened ecological communities —Saltmarsh TEC requirements addressed. Swamp Oak Floodplain Forest is well outside of the proposed stock mound locations as shown below. As such, no Test of Significance is required for this TEC. Conditions will ensure impacts are avoided (Parts C and I).
- Ongoing monitoring to be carried out as part of any Adaptive Management Plan (AMP). Systematic bird survey is covered by two monitoring field visits proposed. Council can require more if needed when reviewing the AMP.
- Clause 7.3 Test of Significance Species are accepted and the test for 'serious or irreversible impacts has been covered off.
- The significant impact criteria is accepted and no referral to the federal government is required.

Based upon the above, the EAO found following assessment of the likely impacts of the development, that the subject proposal is capable of support



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	subject to recommended conditions of consent (including a detailed deferred commencement condition requiring a Biodiversity Adaptive Management Strategy) – see Deferred Commencement Section of Draft Consent.
Natural	Referral response provided by the NR&F Team on 24th October 2022.
Resources Floodplain	Flooding
(NR&F)	Response provided advising that the proposed stock mounds (as considered in technical reports including the updated Flood Impact Assessment and Fauna and Flora Assessment) be removed in order for impacts associated with flooding to be addressed.
	This advice was provided based upon the following comments summarised within the referral response:
	 The Shoalhaven River and Pig Island comprises a High Hazard Floodway combined hazard and hydraulic category in the Lower Shoalhaven River Floodplain Risk Management Study & Plan (2011) and the Draft Lower Shoalhaven River Flood Study (2022) which underwent public exhibition earlier this year. DCP Chapter G9: Development on Flood Prone Land, identifies that filling in
	 High Hazard Floodway areas is not suitable for development. Therefore, the proposed filling on Pig Island is inconsistent with a merit-based assessment in accordance with DCP Chapter G9. As there are no exemptions from this performance criteria, constructions of stock refuge mounds in High Hazard Floodways, as proposed, are not supported by DCP Chapter G9.
	The NSW Floodplain Development Manual (2005) identifies floodways as areas that even if only partially blocked would cause a significant increase in flood levels and/or significant redistribution of flood flow, which may in turn adversely affect others.
	Further to this Clause 5.21 (2)(a) of the Shoalhaven LEP 2014 identifies that "Development consent must not be granted to development on land the consent authority considers to be within the flood planning area unless the consent authority is satisfied the development is compatible with the flood function and behaviour on the land". As noted above filling of High Hazard Floodway areas is not compatible with the flood function and behaviour on the land at Pig Island.
	No Flood Compliance Report as required by DCP Chapter G9 has been submitted to assess the proposed development against the acceptable solutions and performance criteria in DCP Chapter G9 and Clause 5.21 of SLEP 2014.
	The proposed mounds are expected to be the key contributor to any potential adverse flood impacts (water level afflux and velocity increases). Therefore when removed from the development application it is unlikely that there would be any unacceptable adverse flood impacts.
	It was concluded that, subject to the removal of the flood mounds from the proposal, the development would not have an unacceptable impact upon flooding and would be conditioned accordingly.
	Geomorphology / Potential Impacts upon Bank Erosion
	Response provided advising that based upon current submitted information, it cannot be guaranteed that the proposal would not have an adverse impact upon bank stability and stability associated with the Terara levee bank.
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This advice was provided based upon the following comments summarised within the referral response:

- The River Stability Bank Erosion & Flow Paths Report concludes that erosion along both banks of the Lower Shoalhaven River south of Nowra Bridge is ongoing and widespread. The assessment included a desktop assessment of previous studies, site inspections and analysis of flood modelling results.
- The Martens report identified no indications that historic or current dredging operations may impact erosion and bank instability, but did not specifically indicate this has not or could not be a contributing factor for bank instability.
- It is noted that recent visual audit reports have identified at least five locations in which there are earthen levee slips in the location of the current dredge extent. These have all been caused by undercutting of steep banks, leading to tension cracks and then earthen slips.
- Whilst the geomorphology analysis has identified numerous likely contributing factors for bank erosion, given the highly dynamic environment it is possible that dredge operations may be a contributing factor to previous and future bank and levee damage. Hence there is still some concern that existing dredge operations area and proposed dredge expansion area could potentially contribute to increased bank instability which could impact the structural integrity of the Riverview Road and Terara flood levees.
- The River Stability Bank Erosion & Flow Paths Report and the Geomorphology Supplementary Information, are to a great extent relying on existing studies and a desktop assessment approach. Neither study includes a detailed fluvial geomorphology assessment to determine the short- and long-term impacts on nearby levees and infrastructure as a result of the proposed expanded dredging area.
- It is however unclear as to what potential long-term impacts the dredging may
 have on other infrastructure upstream of the proposed expanded dredge
 area, including but not limited to wharfs and pontoon structures adjacent
 Wharf Rd and the bridges. Dredge operations in a river bed can potentially
 result in the development of a head cut that would propagate upstream
 depending on shear stress and stream power impacts on in-situ riverbed
 material.
- Bed lowering has the potential to steepen batters which would contribute to erosion, tension cracks and potential earthen levee failures.
- The fluvial geomorphology assessment should also assess and comment on the potential impact of changes in riverbed profile on the structural integrity of existing structures constructed within the river over time. Clarification is sought as to whether these hydraulic model outputs have been considered as part of the fluvial geomorphology assessment.

Re-referral response provided by the NR&F Unit on 15th March 2023.

The following summarising comments were made:

- Draft flood conditions of consent have been provided for consideration by the Regional Planning Panel.
- · Draft conditions of consent have been provided.

The above summarising comments are supported by the following commentary provided by the NR&F Unit:

Proposed Flood Refuge Mounds:

According to the recently released Lower Shoalhaven River Flood Study (2022), the site is now predominantly mapped as a High Hazard Floodway area, with



some minor areas mapped as High Hazard Flood Storage. It is also noted that prior to the adoption of the Lower Shoalhaven River Flood Study (2022) on 23 January 2023, the entire island was mapped as High Hazard Floodway as per the Lower Shoalhaven River Floodplain Risk Management Study & Plan – Climate Change Assessment (Webb, McKeon and Associates, 2011). Hence at the time the DA was lodged for this project, the proposed area in which filling is proposed was mapped entirely as High Hazard Floodway.

The majority of the proposed flood refuge mounds are located within the High Hazard Floodway combined hazard and hydraulic category, with some parts of the mounds within the High Hazard Flood Storage category (based on the latest mapping in the Lower Shoalhaven River Flood Study, 2022).

Previous referrals and meetings between the applicant and Council officers indicated that filling was not supported in High Hazard Floodway areas as this was inconsistent with the NSW Floodplain Development Manual (2005), DCP Chapter G9 and Clause 5.21 (2) of the SLEP, and there was no supporting information to establish consistency with current controls.

The applicant has reduced the number, footprint, and top level of the proposed mounds when compared with the original mound extent. Fill mounds are presently proposed in Lot 2, Lot 3 and Lot 4 DP 1184790 on Pig Island. The proposed fill mounds in Lot 2 and Lot 3 are partially located in areas mapped with some minor High Hazard Flood Storage areas, however the proposed fill mound for Lot 4 is fully located in a High Hazard Floodway area.

As noted in previous referrals and meetings between the applicant and Council officers, the Shoalhaven DCP Chapter G9 requires High Hazard Floodway areas to be kept free of fill and/or obstructions (Performance Criteria P2). As there are no exemptions from this performance criteria, construction of stock refuge mounds in High Hazard Floodway areas, as proposed, are con-compliant with the Performance Criteria included in DCP Chapter G9.

It is noted that the proposed development has been assessed as a Land Use Category E – Earthworks in accordance with Schedule 2 of DCP Chapter G9. The Supplementary Flood Assessment (Martens, February 2023) incorrectly assessed the proposed filling as Land Use Category F – Resource Management / Agriculture. Whilst the proposed purpose of the mounds may be stock refuge, constructing them requires earthworks in flood prone land mapped partially or entirely as High Hazard Floodway.

The NSW Floodplain Development Manual (2005) identifies floodways as areas that even if only partially blocked would cause a significant increase in flood levels and/or significant redistribution of flood flow, which may in turn adversely affect others. Therefore, filling in High Hazard Floodway areas is inconsistent with the NSW Floodplain Development Manual (2005).

It is noted that Martens has undertaken a flood impact assessment for the proposed flood refuge mounds on adjacent land, where "no impacts" have been assessed as +/- 10mm. It is noted that this requirement was only requested for the 1% AEP event for existing urban areas in accordance with afflux requirements in Councils Engineering Design Specifications. The afflux maps provided in the Supplementary Flood Assessment (Martens, February 2023) identify that afflux up to and including the 1% AEP event can satisfy this requirement. Greater afflux would be permitted in more extreme events.

Noting the above, it is pertinent for a deferred commencement condition be imposed which requires all stock refuge mounds be removed from areas mapped within a hazard category of High Hazard Floodway via an amended



	Plan to areas of High Hazard Flood Storage only. This is considered to be acceptable following a consideration of the likely impacts of the development (condition recommended for inclusion in the Deferred Commencement Section of any consent).
	Adaptive Management Strategy – Geomorphology:
	The additional information provided, as requested by Council, have been reviewed, and following a consideration of the likely impacts of the proposal is accepted as adequately responding to Council's concerns regarding bank erosions / scour impacts upon levee banks and other infrastructure.
	The draft development consent recommends a deferred commencement condition requiring the development of an Adaptive Management Strategy – Geomorphology in collaboration with Council and NSW State Government agencies (condition recommended for inclusion in the Deferred Commencement Section of any consent).
Coastal Management	Referral response provided by the Coastal Management Team on 9 th November 2022.
	Concerns were raised that the proposed dredge footprint could impact on flow paths within the river, and possibly exacerbate bank erosion. The NR&F Section in collaboration with the Coastal Management team have further assessed the likely impacts based on the amended details submitted and have recommended the approval of the application subject to deferred commencement conditions (condition recommended for inclusion in the Deferred Commencement Section of any consent).
Environmental	Referral response provided by the EHO on 2 nd November 2022.
Health Officer (EHO)	Response recommending conditions be imposed within any consent relating to:
	 Preparation of an Acid Sulfate Soils Management Plan (ASSMP) for review and acceptance by the EHO prior to works commencing (Part C). Monthly estuarine water quality testing is to be undertaken accordance with Figure 4 of the Estuarine Water Quality Impact Assessment prepared by
	 Martens Consulting Engineers (Part I). Use of the site in accordance with the recommendations of the acoustic report (Part I).
	Monitoring of stockpiles and road conditions must be undertaken as part of the development (Part I). This should include but not be limited to: i. Management and monitoring of stockpiles to prevent air pollution or dust nuisance to sensitive receptors; ii. implementation and/or maintenance of watering systems (whether truck or sprinklers) to be utilised and allowing application of moisture to road.
	surfaces and stockpiles; iii. Maintenance and/or implementation of a meteorological station.

Internal referral comments are referred to as required in the s4.15 assessment throughout this report.

External Referrals

Agency	Comments
DPE	Referral response received form DPE-BCD Division on 8 th December 2022.
Biodiversity	Advice provided that BCD continues to have concerns regarding floodplain risk management, river stability and water quality issues, and biodiversity.



Conservation Division

The concerns raised are summarised as follows:

Floodplain Risk Management

Based on our review of the Supplementary Flood Assessment letter, we remain concerned over floodplain risk management issues. Specifically, the proposal to place livestock refuge mounds within the high hazard floodway area on Burraga Island (aka Pig Island) is inconsistent with the NSW Floodplain Development Manual (2005), Council's DCP as well as Clause 5.21 (2) of the LEP and there is no supporting information to establish consistency with current controls.

It is demonstrated in the supplementary assessment provided by the proponent that any development including the proposed stock mound fill would not be compatible with the flood function and behaviour at that location. The proposal to place the fill in a floodway for the purpose of refuge poses safety concerns as it presents a risk to life for both people and stock that can otherwise be avoided. It remains unclear how emergency management evacuation requirements have been assessed as any people or stock on the island need to evacuate at the early stages of a Shoalhaven River flood rather than encouraged to seek refuge on filled low flood island areas until evacuation is no longer safely possible and the fill is overwhelmed by fast flowing floodwater.

Council Comment: Subject to amendment of the stock mound location as suggested within the NR&F Section response out of the High Hazard Storage Area, the proposal would be suitable as it relates to impacts associated with flooding.

River Stability

In addition to impacts on flood behaviour, proposed dredging and subsequent filling in the Shoalhaven River main channel floodway poses increased risks to the stability of the river channel and flood mitigation assets at Terara. The proposal to fill Burraga Island with fine materials is likely to cause erosion impacts. These impacts have not been adequately assessed and no strategies have been established to offset and manage those impacts. The overall geomorphological instability of the Shoalhaven River channel in this area is well known to be associated with large floods, evidenced since the initial settlement of Terara and as such, any development activities that increase erosion risks to existing development and assets including the Terara Flood Levee, and the overall river environment, warrants a detailed assessment that is not evident.

Council Comment: In accordance with the response from the NR&F Section, the likely geomorphological impacts of the development have been adequately considered and would be suitably managed, subject to implementation of the future Adaptive Management Strategy.

Water Quality

Our previous water quality concerns have not been addressed adequately. The adopted site specific trigger Values (SSTVs) for turbidity are not considered to be realistic. The default ANZECC guidelines quoted in Table 7 of 10-50 NTU is not appropriate.

The value of 50 is for lowland rivers, 10 is the default ANZECC value for estuaries. This value has been superseded by trigger values within DPE sampling and analysis protocols (DPE 2016) based on many years of data for reference estuaries in NSW.



These guidelines recommend a turbidity trigger value for river estuaries of 3, 3.1 and 6 depending on whether the site is within the lower, middle or upper part of the estuary based on salinity. A much lower SSTV should be applied consistent with consideration of best practice guidelines and council's long term dataset averages.

The actions to follow if the SSTVs are not met have not been adequately described. The interim management and mitigation responses that would be implemented (as conveyed in section 3.11.5) need to be clear and consistent with our previous advice.

Council Comment: Noting that the Environmental Protection Authority have issued General Terms of Approval providing terms of approval for the development, it is considered that water quality impacts are capable of being managed subject to the issued conditions of consent (See Part B – Conditions 8).

Biodiversity

We continue to have concerns regarding biodiversity issues previously raised in our letter dated 1st March 2022 (ref: DOC22/151355).

The additional information provided on threatened shorebirds within the Shoalhaven River, including more recent Birdlife Australia records has some value, however it is still difficult to conclude that the area is not used by listed species at certain times.

Suitable habitat, which is very limited in extent, occurs at the development site. It is also difficult to conclude that existing survey data gives a full picture of the importance of this habitat given the opportunistic and historical nature of some records. The difficulty in relying on survey data is why the subject species are now assessed via the "Important Habitat Mapping" under the Biodiversity Assessment Method (BAM) as opposed to requiring survey.

The test of significance conclusions generally relies on the absence of threatened shorebird records for the Pig Island area; however, it is our view that those species described on the Important Habitat Map should be assumed present. Based on the revised test of significance, we consider it is still difficult to conclude there will not be a significant impact on shorebirds.

In particular, the area of mudflat at Pig Island is 9.04 ha, with the total area of mudflat in the Shoalhaven estuary mapped as 26.80 ha. While we acknowledge that shorebirds utilise a range of habitats, the proportion of mudflat to be removed (34%) is concerning. Cumulative impacts of current and past habitat removal have not been considered.

Given the extensive loss of shorebird habitat at the development site, we recommend that further measures be considered to avoid potential impacts to this habitat. This may include re-designing the development to minimise the area of habitat lost, and/or reviewing alternative locations to extract the resource.

If the Consent Authority is to approve the development application, we recommend that an Adaptive Management Strategy to protect threatened birds and their habitat be required as a Condition of Approval. Regardless of whether a Biodiversity Development Assessment Report is required or not, this Strategy could be modelled on section 8.5 of The Biodiversity Assessment Method (BAM) – Adaptive management for uncertain biodiversity impacts.

Regarding protection of EECs, we recommend that impact avoidance measures, as specified in Section 4.1 of the Flora and Fauna Report – Additional



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	Council's final Further Information Request sent to the applicant. Council is now satisfied, following consideration of the likely impacts of the development, that the reasons for not supporting the proposal have been addressed based upon the further information submitted to Council in response
	the Request.
	The response items were reviewed in detail by Council's internal NR&F and EAO Units and found to be capable of a recommendation for approval subject to deferred commencement requirements (conditions recommended for inclusion in the Deferred Commencement Section of any consent).
RMS Maritime	Referral response provided by RMS Maritime on 22 nd October 2021.
	Advice provided that RMS Maritime have no objections to the proposal, assessed on the grounds of impacts to safe navigation.
Natural	Referral response from NRAR provided on 1st July 2022.
Resource Access Regulator (NRAR)	Advice provided that a Controlled Activity Approval is not required as it is exempt under Schedule 4, section 18 of the Water Management (General) Regulation 2018. This exemption was subject to a lease, licence or permit being from NSW Crown Lands.
Environmental Protection	Referral response provided by the EPA on 25 th November 2022 providing General Terms of Approval.
Authority (EPA)	General Terms of Approval were provided recommending consent subject strict procedures:
	 Water quality monitoring validation. Trigger response protocol development. Estuarine and surface water quality monitoring. Resource recovery framework.
Department of Primary	Referral response provided by DPI – Fisheries on 14 th December 2022 providing General Terms of Approval.
Industries DPI) – Fisheries	General Terms of Approval were provided recommending consent subject strict procedures:
1	No dredging permitted west of the line marked in Figure of the GTAs.

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- Annual monitoring to take place of riverbank erosion, distribution of marine vegetation, and surveys of the dredge area.
- The monitoring is to ensure the 25m buffer zone is being suitably maintained.
- Best practice erosion and sediment control measures to be used.
- · An Acid Sulfate Soils Management is required.
- No pipelines permitted to be used, including those to the on land processing facility.
- Operational Plan outlining procedures to avoid harm to marine vegetation to be formulated.

Regional Planning Panel

A briefing meeting with the Regional Planning Panel was held on Wednesday 9th March 2022 which raised a number of additional matter which were to be addressed by the applicant. The applicant provided a response to the issues identified which is provided below:

Regional Planning Panel Issues to be Resolved	Applicant comments
Further information on the material to be dredged (grain size distribution and composition) including a clear dredging plan which identifies method, timing, shape of the dredged area upon completion, setbacks or slopes to seagrasses and banks of the island, and ongoing monitoring and review.	A Dredging Plan was submitted by the applicant in support of the proposal as a response to Council's Further Information request.
Clarification as to whether the original DA from 2012 sought approval for the larger area that is now the subject of this DA. If so, the reasons the larger area was refused should be outlined.	In the Report to the Planning Panel prior to the deferral, the Council identified the following in its assessment against potential impacts for Stage 2: With reference to Stage 2, the applicant acknowledges that additional flora and fauna assessment is required to resolve environmental issues associated with this stage. Given that no detailed flora and fauna assessment has been provided for Stage 2, Council has been unable to undertake an adequate assessment and is therefore unable to determine



whether the works proposed as part of Stage 2 are likely to have a significant effect on threatened species, populations or ecological communities, or their habitats. It is therefore unclear, at this time, whether an SIS will be required due to the impacts, in part, Stage 2 may have on the two EEC's that are located in this stage. As such, Council is unable to recommend approval of Stage 2 of the amended proposal. Therefore, in accordance with Part 4, Division 2, Section 80 (Determination) of the EPA Act, any development consent granted will be partial (i.e. for Stage 1 only subject to conditions).

As part of the Minutes of the Southern Joint Regional Planning Panel (ITEM 1 – 2012STH015) held on 18th June 2013, the Application was deferred back to Council staff which included a recommended for removal of any reference to Stage 2, as follows:

Motion:

That:

- a) The development application RA12/1001 2012STH015 – Extension of area over the Shoalhaven River where sand is won via dredging be deferred for a further report that addresses the following:
- 1. A clear understanding of what is now being considered;
- 2. The relationship of existing consents to what is currently proposed and whether these operate as an integral function of the proposal or as a separate activity;
- 3. Identification of mitigation measures needed for the amended proposal and their appropriateness or otherwise;
- 4. Deletion of any reference of Stage 2; and
- 5. Appropriate owners consent.
- b) The applicant be required to provide the relevant information to assist Council in providing the report, specifically the owner's consent
- c) The matter be reported to the panel as a matter of urgency.

Moved Alison McCabe Seconded Mark Grayson MOTION CARRIED [UNANIMOUSLY]

Subsequently, an amended Dredging Plan was submitted which depicted only the works previously described as Stage 1. The amended layout was supported and an approval given by the Southern Joint Regional Planning Panel on 28th August 2014.



With respect to the stockpile mounds on Pig Island:

- a description of the current and proposed stabilisation or revegetation program for the mounds.
- a description of the potential for acid sulphate soils risks from the stockpiled material,
- an assessment of potential air quality impacts from fines being blown from the stockpiles into nearby settlements and environments, an assessment of the potential for the stockpiled fines being remobilised into the water column during rain or by floodwaters, and any potential water quality impacts at and downstream of the site associated with this. The assessment should consider any water quality sampling or modelling relevant to the site, and
- Any expected flooding impacts associated with the mounds. The assessment should consider the past performance of the mounds and their future response during floods, including both the likelihood of the mounds being washed away versus the impact to flood levels in the unlikely event that the stock mounds remain stable during a major flood.

A description of this potential for Aboriginal Heritage items to be disturbed on the river bed during dredging and an unexpected finds protocol should this occur. The applicant advised:

 A Native Title Claim under the Native Title Act 1993 (Comm) has been made by the South Coast People, Tribunal file #NC2017/003, and accepted 31/1/2018. The claim is yet to be determined. The claim is far reaching and includes the majority of the NSW South Coast east of the dividing range, south of Liverpool and down to the East Boyd State Forest.

The current arrangement between Terara Sands and Lands Department NSW is that royalties are paid to Lands and collected on behalf of the NSW government. If Native Title (NT) is established royalty monies paid and collected will be distributed to the successful claimants.

Clarification of the current requirements for Aboriginal consultation for this DA (e.g., 2010 guidelines or similar), and a description of how the EIS meets the requirements or otherwise.

The applicant advised:

Consultations with the Nowra Local Aboriginal Lands Council was undertaken in accordance with the document Aboriginal cultural heritage consultation requirements for proponents 2010,

The applicant proposes:

- The construction of three Stock Refuge Mounds one each located on Existing Lot 2, 3, and 4.
- Planning approval for the mounds to be constructed utilising the fines from the sand dredging process.
- Construction of the stock mounds in accordance with Department of Primary Industry Guidelines.
- Detailed earthworks plans to be prepared at CC stage to confirm livestock refuge mound design.

In order to ensure the proposed stock mounds are appropriately constructed and ensure compliance with relevant planning requirements, Council recommends:

- The submission of an amended Stock Mound Plan as a deferred commencement requirement, depicting their location within areas designated only as High Hazard Flood Storage not High Hazard Floodway.
- Revegetation of the stock mounds as part of the construction works to ensure that impacts to air and water quality due to disposal of fines is not caused.
- Council cannot issue a Construction Certificate for civil works alone. Any requirements associated with the construction of stock mounds would be dealt with as general and prior to works commencement conditions.

Compliance with Council's EHOI recommendations relating to air quality and acid sulfate soils would be applied within any recommended consent.

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	 Part 6 NP&WA 1974. The NLALC is the incorporated body for this part of the NSW South Coast and its council has the requisite knowledge of the area as to Aboriginal Heritage. The due diligence report and accompanying management plan prepared by Biosis notes that no Aboriginal Heritage items were found in its investigations on the island and sand banks. The plan of management outlines the procedures to be adhered to if any Aboriginal Heritage items are found. This plan of management forms part of DA12/1001. Accompanying the application is a letter from the NLALC which was presented to the council and signed by the CEO on behalf of the council. The NLALC states that it has no objections to the dredging however if a successful claim is made and determined it wants to share in the royalties.
An assessment of the potential for visual impacts arising from the development, and associated mitigation measures.	Requested at Item 15(d) of Council's RFI Request dated 19 th April 2022. Noting the applicant's response within the 'Additional Information Response Cover Letter' and 'Geomorphology Assessment', this item has not been addressed in the response provided by the applicant. However Council notes that there are current dredging operations which have been undertaken in this location for many years. Further the process for sand extraction and associated equipment is not proposed to be modified. As such, Council assesses that there would be no further visual impact associated with the proposal over and above that which is already present. Council finds that the proposal would not have an adverse visual impact upon the surrounding built environment.
Clarification of the licences that are currently held and will be required in relation to this DA approval (e.g. controlled activity approval, EPA licence, Crown Lands licence, and others if required).	Licences and approvals required to operate the proposed development include: Crown Land Licence to operate the proposed development within a Crown water course. An Environmental Protection Licence pursuant to section 43a and 47 of the Protection of the Environment Operations (POEO) Act 1997 (Scheduled Development). Approval under section 201 of the Fisheries Management Act 1994.
Clarification of the monitoring and response regime to be implemented during dredging operations, to monitor for and respond to potential environmental and other impacts.	Adaptive Management Strategies would be required as Deferred Commencement requirements to in particular permit the ongoing monitoring and mitigating of any impacts associated with biodiversity an geomorphology which result from the proposed development.



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	These will be requirements which need to be resolved prior to any operational consent being given. This approach is considered appropriate following consideration of the likely impacts of the development.
A description of the formation of the estuary (geomorphology) at and downstream of the dredging operations, including the formation of Pig Island (e.g. during the Holocene period).	A detailed response has been provided within the submitted Geomorphological Assessment – Supplementary Information prepared by Fluvial Systems Pty Ltd.
Use of historical and other data (such as historical photographs, historical river surveys, and presumably, survey data presumably collected by the dredging operators over time in association with their past EPA licence, academic research papers such as by RC Carvalho of University of Wollongong, eg) to provide an assessment of:	A detailed response has been provided within the submitted Geomorphological Assessment – Supplementary Information prepared by Fluvial Systems Pty Ltd.
 changes in the location and depth of the channels and banks at and downstream of the dredging operations, from prior to dredging to present day the rate of infilling of deep dredge holes, and infilling of the dredge area more broadly, including recent flood events, over the last 20+ years the impact of deep dredge holes on nearby channels (in terms of channel location and depth). 	
An assessment of the sedimentological data (such as the samples collected by the dredging operators in accordance with their EPA licence, and academic research papers as noted above), to clearly describe: • the volume of sediment removed during dredging (annually), • for the dredged material, the proportion of sand extracted versus the proportion of material returned to the stock mounds and/or the river, and the grain size(s) of returned material, • existence of acid sulphate soils and the potential for this material to be exposed during operations or in stock mound.	A detailed response has been provided within the submitted Geomorphological Assessment – Supplementary Information prepared by Fluvial Systems Pty Ltd.



Given that the sand resource is finite and is being removed permanently from the sediment system, and that past and future approvals are sought for 20 to 50 years or more, assessment of the potential long-term impacts from dredging is sought, including:

- long term impacts to Shoalhaven's beaches and beaches further north given that a substantial portion of sand sized material is being removed by dredging rather than being supplied to the coast (noting that the Shoalhaven/Crookhaven River is one of only 2 rivers in NSW that supplies sand sized material to the coast). This assessment needs also to consider the combined impact of the dam built upstream in 1976 that will already have contributed to a reduced sand supply to the estuary and coast,
- the long-term changes in the geomorphology of the lower estuary due to the increase in tidal regimes from training of the Shoalhaven River and how this may have interacted or will interact with dredging impacts, and

future long-term impacts of sea level rise which is expected to increase the tidal ranges in the estuary and may therefore change the impact of dredging operations on surrounding channels and banks. A detailed response has been provided within the submitted Geomorphological Assessment – Supplementary Information prepared by Fluvial Systems Pty Ltd.

7. Statutory Considerations

This report assesses the proposed development/use against relevant Commonwealth, State, Regional and Local Environmental Planning Instruments and policies in accordance with section 4.15 (1) of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The following planning instruments and controls apply to the proposed development:

(a) Biodiversity and Conservation Act 2016

The proposed development has been assessed under Part 7, Clause 7.2 Development or activity "likely to significantly affect threatened species".

- (1) For the purposes of this Part, development or an activity is likely to significantly affect threatened species if—
 - (a) it is likely to significantly affect threatened species or ecological communities, or their habitats, according to the test in section 7.3, or
 - (b) the development exceeds the biodiversity offsets scheme threshold if the biodiversity offsets scheme applies to the impacts of the development on biodiversity values, or
 - (c) it is carried out in a declared area of outstanding biodiversity value

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Overall, Council's EAO found that the proposal does not trigger entry into the Biodiversity Offsets Scheme (BOS) and that a Biodiversity Development Assessment Report (BDAR) is therefore not required to be submitted in support of the proposal as required under the Act. This position was founded based upon a consideration of the likely impacts of the proposal and the following:

- At the time of lodgement of the Development Application, the subject site was not mapped on the Biodiversity Values Map. However the site has since been mapped as depicted below: Notwithstanding, the DA does not enter the BOS via this method given the site was not mapped at the time of lodgement.
- The site does not trigger entry into the BOS based upon area of vegetation to be removed, noting that there is no minimum lot size which applies to the development site within the Shoalhaven River.
- The third method of triggering entry into the Biodiversity Offsets Scheme is whether it is likely to significantly affect threatened species or ecological communities, or their habitats, according to the test in section 7.3 of the BC Act 2016.

As detailed in the referral response provided by Council's EAO and following consideration of the following, it was found that that the proposal would not have a significant impact (serious or irreversible impact) upon State and Commonwealth listed species of migratory shorebirds:

- S7.3 Test of Significance prepared by Lodge Environmental (Ref No. LE1637 dated 17th February 2023).
- Letter of Undertaking for the future Adaptive Management Strategy prepared by Lodge Environmental (Ref No. LE1637 dated 17th February 2023).
- Amended Extraction Area Plan depicting a large reduction in the proposed dredge area to minimise impacts to inter-tidal sand flats and to accord with the recommended GTAs provided by DPI Fisheries.

(b) Fisheries Management Act 1994 (NSW)

The proposed development has been assessed under the s201 of the *Fisheries Management Act* 1994, due to the proposal requiring a permit to carry out dredging or reclamation work (extractive industries involving an extension to the existing approved dredge area).

The Department of Primary Industries – Fisheries has reviewed the proposal and has found that approval is permitted subject to a list of General Terms of Approval. A further note was included, that given dredging associated with the previous approval had taken place outside the licenced and approved area, that ongoing audit and management procedures be imposed within any consent.

(c) Protection of the Environment Operations (POEO) Act 1997

The proposed development involves the carrying out of a scheduled activity in accordance with sections 43a and 47 of the Protection of the Environment Operations (POEO) Act 1997, as follows:

- 16 Crushing, grinding or separating
- (1) This clause applies to crushing, grinding or separating, meaning the processing of materials (including sand, gravel, rock or minerals, but not including waste of any description) by crushing, grinding or separating them into different sizes.
- (1A) However, this clause does not apply to the processing of materials by crushing, grinding or separating that occurs as part of an activity that is declared to be a scheduled activity by—
- (a) clause 33 (Railway activities—railway infrastructure construction), or
- (b) clause 35 (Road construction).



(2) The activity to which this clause applies is declared to be a scheduled activity if it has a capacity to process more than 150 tonnes of materials per day or 30,000 tonnes of materials per year.

The Environmental Protection Authority (EPA) has reviewed the proposal and has found that approval is permitted subject to a list of General Terms of Approval including a reduction in the area and limitation on the depth of proposed dredging.

In addition, the EPA noted that the information submitted as part of the Estuarine and Water Quality Monitoring Plan had not addressed the further requirements listed within the Additional Information Request. It was therefore required that two additional conditions be imposed further to the issued GTAs that address requirements relating estuarine and water quality management. These additional conditions are provided within the GTAs referenced within Condition 8 under Part B of the Draft Determination and are briefly described by the EPA as:

- 1) A special condition requiring:
 - a) The matters outlined at Attachment B to be addressed in the proposed Interim Water Quality Monitoring Program (validation sampling).
 - b) Validation sampling to be completed within 3 months of the commencement of works;
 and
 - c) A Water Quality Modelling Validation Report to be provided to the EPA within 4 weeks upon completion of validation sampling.
- A special condition requiring development of a Trigger Response Protocol and adjustment (as required) to the proposed water quality monitoring points based on the findings of the validation sampling.

(d) Crown Land Management Act 2016 (NSW)

The proposed development will be located on a Crown water course (Shoalhaven River). The waterway land is owned and managed by Crown Land and therefore, the applicant is required to obtain a licence under section 2.20 of the *Crown Land Management Act 2016*.

Crown Lands provided their owner's consent for lodgement of the Development Application with Council, however further advised as follows in a response provided on 15th March 2022 (Note: Crown Lands comments are provided in regular font and Council's comment / response is provided in italics):

- The applicant currently has an expired Crown land licence over the existing consent area being RA12/1001. Should RA21/1000 be approved, the applicant will be required to make an application to Crown lands to seek legal occupation over the extension area prior to any dredging occurring within this area. However in order for a licence to be able to be issued, the following further requirements were required to be addressed in order for such a future licence to be able to be issued:
 - It is suggested that Council give consideration to the findings of any recent investigations prepared as part of the Scoping Phase of the CMP in its review of applicant responses to CI 13 SEPP Coastal Management – see further assessment in Report below against the CMP.
 - The Council should be satisfied that critical infrastructure (i.e. the flood levee) on Council managed Crown land is not at greater risk from alterations to local morphology and potential riverbank stability due to a proposed increase in the extraction area this comment is noted, and has been explored in detail by Council's Natural Resources & Floodplain (NR&F) Unit. Impacts to coastal infrastructure such as flood levee banks will be required to be closely monitored as works commence within the specified area which incorporates ongoing monitoring as part of the Adaptive Management Strategy Geomorphology.
 - The DA needs to clarify the timeframe / consent period that is associated with the development. The EIS needs to assess potential and cumulative impacts over the proposed lifetime of the development – The timeframe within the EIS as identified as being 19-40 years.



However it is noted that the applicant has applied for a maximum extraction rate of 100,000 tonnes per annum – which matches the conditions of their previous issued approval.

- It is recommended that Council give consideration to any PoM prepared under the CLM Act for R45715. If there is a PoM in place, the proposed development should be consistent with the objectives and actions of the PoM, particularly actions related to foreshore or river bank management As part of any determination, monitoring procedures taking place as part of the existing issued consent would need to be incorporated in addition to any further requirement issued by Integrated referrals and as deemed necessary by the consent authority.
- The Council should be satisfied that natural or built values and assets on or adjoining Crown land are not at greater risk from alterations to local morphology and potential riverbank stability due to a proposed increase in the development footprint As above An adaptive management strategy for geomorphology will be required to be developed, which includes monitoring and triggers and measures to be implemented where any potential impacts to infrastructure has been identified as part of the procedures of the Strategy.
- Council should be satisfied that the proposed development will not impact on Council's existing sewer infrastructure or be in conflict with future easements on Crown land for such infrastructure – The proposal would not be likely to impact upon existing public sewer infrastructure.
- The draft Commercial Dredging and Extraction Audit on Coastal Crown Lands, currently under preparation by Crown Lands, indicates that the existing operation on the Shoalhaven River has the potential to impact seagrass The proposal has been amended with a buffer of 25m being provided to seagrass. A further condition has been imposed as part of the DPIE Fisheries GTAs which limits the extent of the development to minimise impacts of the proposal against seagrasses and other marine vegetation.



(e) Environmental Planning and Assessment Act 1979

Section 4.36 - State Significant Development (SSD)

Pursuant to section 4.36 of the Act, development that is declared to be SSD is referred to within the Planning Systems SEPP. The Minister for Planning is the consent authority for SSD. The proposal does not trigger the criteria for SSD.

Section 4.46 - Integrated Development

The subject development is considered integrated development as the proposal triggers the requirements for other separate approvals, including *Fisheries Management Act 1994* as it requires a permit to carry out dredging or reclamation work and *Protection of the Environment Operations Act 1997* as it involves the carrying out of a scheduled activity.

As detailed in the Report above, General Terms of Approval have been issued by each respective Authority in relation to works carried out under these legislative provisions.

Section 7.11 - Shoalhaven Contribution Plan 2019

The proposed development is not considered to trigger contributions required by the Shoalhaven Contribution Plan 2019.

Local Government Act 1993

Activities identified under section 68 of the *Local Government Act 1993* require prior approval from Council before the activity can be carried out, except in so far as this Act, the regulations or a local policy adopted under Part 3 allows the activity to be carried out without that approval.

The proposal does not intend to carry works that require a section 68 approval.

8. Statement of Compliance/Assessment

The following provides an assessment of the submitted application against the matters for consideration under section 4.15 of the EP&A Act.

(a) Any planning instrument, draft instrument, DCP and regulations that apply to the land

i) Environmental Planning Instruments

The following Environmental Planning Instruments apply to the assessment of the subject DA:

- State Environmental Planning Policy (Planning Systems) 2021
- State Environmental Planning Policy (Resilience and Hazards) 2021
- Shoalhaven Local Environmental Plan 2014

State Environmental Planning Instruments Policies

State Environmental Planning Policy (Planning Systems) 2021

The proposal is categorised as a Regional Significant Development under section 7 of Schedule 6 of the SEPP.



Particular designated development

Development for the purposes of-

(a) extractive industry facilities that meet the requirements for designated development under the Environmental Planning and Assessment Regulation 2021, Schedule 3, section 26.

As such the proposal is required to be determined by the Regional Planning Panel in accordance with section 4.7 of the EP&A Act.

State Environmental Planning Policy (Resilience and Hazards) 2021

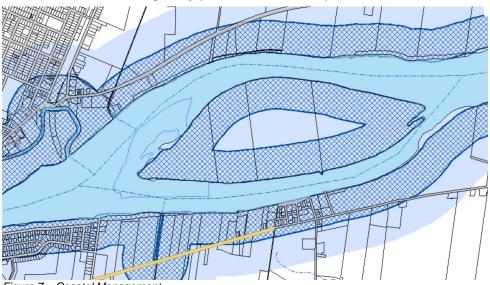


Figure 7 - Coastal Management

Chapter 2 Coastal management, Section 2.10

The site is mapped as being located within the 'Coastal Environment Area' within SEPP (Resilience and Hazards) 2021. As such, section 2.10 applies.

Section 2.10 - Development on land within the coastal environment area

- (1) Development consent must not be granted to development on land that is within the coastal environment area unless the consent authority has considered whether the proposed development is likely to cause an adverse impact on the following—
 - (a) the integrity and resilience of the biophysical, hydrological (surface and groundwater) and ecological environment,
 - (b) coastal environmental values and natural coastal processes,
 - (c) the water quality of the marine estate (within the meaning of the Marine Estate Management Act 2014), in particular, the cumulative impacts of the proposed development on any of the sensitive coastal lakes identified in Schedule 1,
 - (d) marine vegetation, native vegetation and fauna and their habitats, undeveloped headlands and rock platforms,
 - (e) existing public open space and safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,
 - (f) Aboriginal cultural heritage, practices and places,



- (g) the use of the surf zone.
- (2) Development consent must not be granted to development on land to which this section applies unless the consent authority is satisfied that—
 - (a) the development is designed, sited and will be managed to avoid an adverse impact referred to in subsection (1), or
 - (b) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or
 - (c) if that impact cannot be minimised—the development will be managed to mitigate that impact.

The site (including Pig Island) is classified as being a 'Coastal Environment Area'. Whilst the Crown Waterway is not specifically mapped as being part of the mapped 'Coastal Environment Area' area as shown in Figure 7 above, it is intrinsically linked to Pig Island and therefore must be considered when assessing the impacts against the 'Coastal Environment Area' in accordance with Section 2.10 of the Policy.

The proposal has been modified to reduce impacts upon marine vegetation since its initial lodgement, which has included a substantial reduction in the proposed dredge area. The reduction in the dredge area was undertaken to match the conditional requirements imposed by DPI Fisheries in their General Terms of Approval and to ensure that the Test of Significance against Clause 7.3 of the BC Act did not reveal that entry to the Biodiversity Offsets Scheme would be triggered. The reduction in the dredge area, in conjunction with ongoing monitoring procedures to be employed post-consent — would ensure that impacts the Coastal Environment Area can be managed and prevented where possible.

The requirement for an Adaptive Management Plan – Geomorphology to be developed as a Deferred Commencement Condition will ensure the management of potential impacts forms part of the ongoing operations of the development and must be agreed upon by Council prior to the operation of the consent. Following a consideration of the likely impacts, Council are satisfied that the requirements of section 11 of the SEPP have been satisfactorily addressed.

Chapter 2 Coastal management, Section 2.11

The site is mapped as being located within the 'Coastal Use Area" within SEPP (Resilience and Hazards) 2021 per Figure 7 above. As such, section 2.11 applies which requires as follows:

- (1) Development consent must not be granted to development on land that is within the coastal use area unless the consent authority—
 - (a) has considered whether the proposed development is likely to cause an adverse impact on the following
 - i) existing, safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,
 - overshadowing, wind funnelling and the loss of views from public places to foreshores.
 - iii) the visual amenity and scenic qualities of the coast, including coastal headlands,
 - iv) Aboriginal cultural heritage, practices and places,
 - v) cultural and built environment heritage, and
 - i) is satisfied that—
 - the development is designed, sited and will be managed to avoid an adverse impact referred to in paragraph (a), or
 - ii) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or
 - iii) if that impact cannot be minimised—the development will be managed to mitigate that impact, and
 - has taken into account the surrounding coastal and built environment, and the bulk, scale and size of the proposed development.



As noted above, as part of its further request for information and as detailed in the Briefing with the Planning Panel, Council requested the applicant provide further advice regarding the expected visual amenity impacts of the development upon the surrounding built environment.

Whilst this matter was not addressed, as the proposal seeks to utilise existing infrastructure to assist with extraction of sand, and no additional or new infrastructure is proposed, it is considered that visual impacts would not be significantly altered from that of the existing approved development. It is further considered that upon review of the existing visual amenity impacts of the development that there are no significant detrimental impacts on the landscape and accordingly the continuation of the infrastructure in the area is not of concern. It is therefore considered that this component is capable of support.

Cultural heritage values have been considered and local aboriginal organisations consulted as part of the lodgement process as required by the SEARs issued by the DPE. This resulted in no significant issues being raised as part of the consultation process.

Safe navigation of the waterway and access to the coast would not be adversely impacted as stated in the referral response by the RMS Maritime.

It is therefore considered that the proposal would be acceptable as it relates to the assessment provided against potential impacts to the 'Coastal Use Area'.

Shoalhaven LEP 2014

Land Zoning

The site is zoned both W2 – Recreational Waterways (Shoalhaven River below the MHWM) and RU1 Primary Production (Pig Island) under the LEP as shown below.

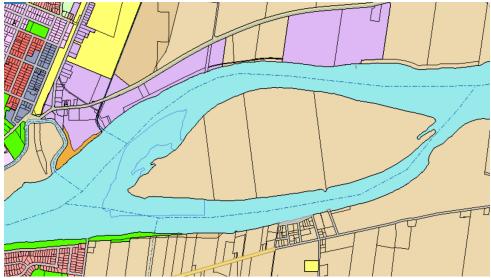


Figure 8. Shoalhaven LEP 2014 zoning map excerpt



Characterisation and Permissibility

The proposal is best characterised as *Industries* (*Extractive Industries*) under the SLEP 2014. The proposal is prohibited in W2 Recreational Waterways Zone however is permissible with consent within the RU1 Primary Production Zone. Notwithstanding this the development is permissible as an existing use in accordance with section 163 of the *Environmental Planning and Assessment* (*EP&A*) Regulation 2021:

163 Certain development allowed

- (1) An existing use may, subject to this Part
 - a) be enlarged, expanded or intensified, or
 - b) be altered or extended, or
 - c) be rebuilt, or
 - d) be changed to another use, but only if the other use is a use that may be carried out with or without development consent under the Act, or
 - if it is a commercial use—be changed to another commercial use, including a commercial use that would otherwise be prohibited under the Act, or
 - if it is a light industrial use—be changed to another light industrial use or a commercial use, including a light industrial use or commercial use that would otherwise be prohibited under the Act.

As such, the proposal is an expansion of an existing use and is therefore in accordance with section 163 of the EP&A Regulation 2021 within Zone W2. Further to this per section 164 (excerpt below), the proposed expansion of the existing use is for the same use and is to be carried out within the land on which the existing use was carried out prior to the development becoming prohibited under SLEP 2014.

164 Enlargement, expansion and intensification of existing uses

- (1) Development consent is required for any enlargement, expansion or intensification of an existing use.
- (2) The enlargement, expansion or intensification must be
 - a) for the existing use and for no other use, and
 - carried out only on the land on which the existing use was carried out immediately before the relevant day.

Clause 2.3 - Zone objectives

The consent authority must have regard to the objectives for development in a zone when determining a development application in respect of land within the zone. The objectives of the W2 Recreational Waterways zone are outlined below:

- To protect the ecological, scenic and recreation values of recreational waterways.
- To allow for water-based recreation and related uses.
- To provide for sustainable fishing industries and recreational fishing.

Council finds that the proposed sand extraction would remain consistent with the objectives for the W2 Recreational Waterways zone, noting that operational procedures for mining of sand would remain largely unchanged to that which has previously been carried out. It is further noted that the response from RMS Maritime revealed that there were no concerns relating to access and egress by marine vessels as part of the subject development.

The objectives of the RU1 Primary Production zone are outlined below:

- 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.

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- 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 conserve and maintain productive prime crop and pasture land.
- To conserve and maintain the economic potential of the land within this zone for extractive industries.

The use of proposed stock mounds on the RU1 zoned Pig Island is considered to represent compliance with the objectives of the zone, noting that it would protect and conserve the use of the land for grazing. The stock mounds would provide safety for grazing animals during flood events occurring within the surrounding river system. The use of the land for this purpose would also support the use of the In for the purpose of extractive industries as described within Objective No. 6.

SLEP 2014 Clauses

Clause	Comments	Compliance			
Part 2 Permitted or prohibited development					
2.6 Subdivision – Consent requirements	The application does not seek consent for the subdivision of the site.	N/A.			
2.7 Demolition requires development consent	The application does not seek consent for demolition works as part of the development.	N/A.			
Part 4 Principal development standards					
4.3 Height of buildings	A maximum building height of 11 metres applies to the site. The application does not propose any building on site.	N/A			
4.4 Floor space ratio	Not applicable.	N/A			
Part 5 Miscellaneous pro	Part 5 Miscellaneous provisions				
5.10 Heritage conservation	The site is not identified as a local heritage item nor is it within a heritage conservation area. The site is not located at proximity of local heritage items or conservation area. As noted in the applicant's response to the Further Information Request, the site as well as a large portion of the eastern coast of Australia is the subject of a Native Title land claim. Notwithstanding, there are no identified mapped items of aboriginal cultural heritage significance within the proposed extractive area and consultation was held with local aboriginal organisations as required by the SEARs where no issues were raised within the consultation process. The proposal is therefore considered acceptable as it relates to heritage conservation.	N/A			
5.21 Flood planning	The site is mapped within the 1% AEP flood area and flood planning area. The siting of the development is also mapped within a flood hazard category area of 'High Hazard Floodway' with parts of Pig Island mapped as 'High Hazard Flood Storage' pursuant to the recently released Lower Shoalhaven River Floodplain Study. The proposed stock mounds on Pig Island are currently depicted on the submitted documentation as being partially within the Floodway and Storage Areas. Subject to the	Compliant			



	recommended deferred commencement condition provided by the NR&F Section – the following objectives would be achieved:	
	 (2) Development consent must not be granted to development on land the consent authority considers to be within the flood planning area unless the consent authority is satisfied 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. 	
	 (3) In deciding whether to grant development consent on land to which this clause applies, the consent authority must consider the following matters— a) the impact of the development on projected changes to flood behaviour as a result of climate change, b) the intended design and scale of buildings resulting from the development, c) whether the development incorporates measures to minimise the risk to life and ensure the safe evacuation of people in the event of a flood, d) the potential to modify, relocate or remove buildings resulting from development if the surrounding area is impacted by flooding or coastal erosion. 	
Part 7 Additional local p	rovisions	
7.1 Acid sulfate soils	The site is identified as being Class 1, 2, 3, and 4. A recommendation has been made by the EHO for inclusion of the requirement for an Acid Sulfate Soils Management within any consent as follows: An Acid Sulfate Soil Management Plan (ASSMP) must be developed specifically addressing excavation of acid sulfate soil, or potential acid sulfate soils by a qualified environmental consultant with experience in the assessment of acid sulfate soils. The report must be submitted to Shoalhaven City Council's Environmental Health Unit for review and acceptance. This requirement is recommended for imposition as Condition	Complies
	13 within Part C of the Draft Determination.	



	The objective of this clause is to ensure that earthworks for	
7.2 Earthworks	which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land.	
	The impacts of the earthworks associated with the stock mounds would be capable of being managed by conditions of consent in the event of an approval to provide for stability and vegetation of mounds which would assist in mitigating potential impacts to coastal processes and functions through the release of sediments into the water course.	Capable of complying via condition.
	This requirement is recommended for imposition as Condition 34 within Part I of the Draft Determination.	
7.2A Stock Mounds	The objective of this clause is to ensure that earthworks for stock mounds will not have a detrimental impact on environmental functions and processes on land at or below the flood planning level or affected by acid sulfate soils.	
	It is noted that the stock mounds are proposed at a location which is both High Hazard Floodway and High Hazard Flood Storage and in a location subject to Class 1, 2, 3, and 4 acid sulfate soils.	
	Despite any other provision of this Plan, development consent is required for earthworks for the purposes of a stock mound on land to which this clause applies if— (a) the land is at or below the flood planning level, or (b) the land is identified as Class 1, Class 2, Class 3 or Class 4 on the Acid Sulfate Soils Map and development consent is not otherwise required for the earthworks under clause 7.1.	Yes
	The applicant has applied for consent for the stock refuge mounds as part of the subject development application. A detailed assessment with regard to flood impacts and requirements relating to acid sulfate soils management is contained within this Report, and has revealed that compliance would be achieved subject to recommended conditions of consent.	
	Such recommended conditions are recommended for imposition as: Deferred Commencement Condition Subsection C, Conditions 13 and 14 of Part C of the Draft Determination.	
7.4 Coastal risk planning	This clause applies to the land identified as "Coastal Risk Planning Area" on the Coastal Risk Planning Map. The site is not identified on the map and accordingly this clause does not apply.	N/A
	This clause applies to land—	
7.5 Terrestrial biodiversity	(a) identified as "Biodiversity—habitat corridor" or "Biodiversity—significant vegetation" on the Terrestrial Biodiversity Map, and	Complies.
	(b) situated within 40m of the bank (measured horizontally from the top of the bank) of a natural waterbody.	
	A small area of Pig Island is identified as being of Terrestrial Biodiversity – Significant Habitat, however it is noted that the	

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Planning Report – S4.15 Assessment – Lots 1-4 DP 1184790 Terara Rd, TERARA and Bed of Shoalhaven River below the Mean High Water Mark

	attack as a condition of the condition o	
	stock mounds have been proposed for installation at a location which is outside of the mapped area.	
	(2) This clause applies to all of the following— (a) land identified as "Riparian Land" on the Riparian Lands and Watercourses Map,	
	(b) land identified as "Watercourse Category 1", "Watercourse Category 2" or "Watercourse Category 3" on that map,	
	(c) all land that is within 50 metres of the top of the bank of each watercourse on land identified as "Watercourse Category 1", "Watercourse Category 2" or "Watercourse Category 3" on that map.	
	The site is within a Watercourse Category 1 being the Shoalhaven River and therefore this section applies.	
	 (3) Before determining a development application for development on land to which this clause applies, the consent authority must consider— (a) whether or not the development is likely to have any adverse impact on the following— 	
	(i) the water quality and flows within the watercourse,	
	(ii) aquatic and riparian species, habitats and ecosystems of the watercourse,	
7.6 Riparian and Watercourses	(iii) the stability of the bed and banks of the watercourse,	Compliant
watercourses	(iv) the free passage of fish and other aquatic organisms within or along the watercourse,	
	(v) any future rehabilitation of the watercourse and its riparian areas, and	
	(b) whether or not the development is likely to increase water extraction from the watercourse, and	
	 (c) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development. 	
	Subject to the conditions being imposed as a requirement of any consent, Council finds that the proposal would not have an adverse impact upon water quality, biodiversity, stability of beds and banks, and rehabilitation, subject to monitoring, rehabilitation, and triggers for prevention of impacts associated with the implementation of adaptive management strategies to manage potential adverse risks such as biodiversity and geomorphology.	
	Such requirements have been imposed as requirements within both Part C of the Draft Determination, highlighting requirements to be achieved prior to works commencing and within Part I, highlighting requirements to be implemented as ongoing requirements during operations.	
7.8 Scenic Protection	The site is mapped being an area of scenic amenity value – see excerpt below:	Yes





In deciding whether to grant development consent for development on land to which this clause applies, the consent authority must—

- (a) consider the visual impact of the development when viewed from a public place and be satisfied that the development will involve the taking of measures that will minimise any detrimental visual impact, and
- (b) consider the number, type and location of existing trees and shrubs that are to be retained and the extent of landscaping to be carried out on the site, and
- (c) consider the siting of the proposed buildings.

It is noted that the applicant did not provide a response to Council's Further Information Request requesting an assessment of the impact of the development on visual amenity associated with the surrounding locality including where viewed from the Nowra Bridge.

It is assessed that the visual impact of the development is however acceptable. This assessment has been made taking into consideration the fact that the equipment used for the present operations would also be used for the proposed operations, with no new or additional infrastructure proposed to be used. As such, there would be largely no visual change between the current operations (which was determined by way of approval and therefore found to be acceptable) and the proposed operations.

Further, the location of the dredge equipment would be on the northern side of Pig Island on the northern bank of the Island which is considered of a less sensitive nature due to its proximity to and the combination of multiple influencing factors in this location including the Manildra industrial operation and farmland. Additionally, the equipment would be located further away from residences within Terara village than that of the existing operations.

ii) Draft Environmental Planning Instrument

Not applicable.

iii) Any Development Control Plan

Shoalhaven DCP 2014

The following chapters of Shoalhaven Development Control Plan 2014 apply to the subject development application assessment:

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Generic Chapters

- Chapter 2: General Environmental Considerations
- G1: Site Analysis, Site Design and Building Materials
- G2: Sustainable Stormwater Management and Erosion/Sediment Control
- G4: Tree and Vegetation Management
- G5: Biodiversity Impact Assessment
- G6: Coastal Management Areas
- G7: Waste Minimisation and Management
- G9: Development on Flood Prone Land
- G26: Acid Sulphate Soils and Geotechnical (Site Stability) Guidelines

This chapter is assessed in the Table below.

Chapter 2 General	and Environmental Considerations	Achieved
2. Potentially Contaminated Land	The site is not mapped as being potentially contaminated land. However, a Contamination Assessment was prepared in support of the proposed development as required by the SEARs. The Assessment was prepared by Martens Consulting Engineers dated April 2019 (Ref No. P1806743JR03V01.	Yes
	The Report has concluded the following: The associated results found that all sampling including benzene, toluene, ethylbenzene, xylenes, and naphthalene (BTEXN), Total recoverable hydrocarbons (TRH), Polycyclic aromatic hydrocarbons (PAH), heavy metals, OCP/OVP pesticides and PFAS. All results came back as acceptable in accordance with the NEPC (2013) National Environmental Protection (Assessment of Site Contamination) Measure thresholds. with the exception of one sample which had an exceedance for nickel. Council's EHO reviewed the proposal as part of their referral response and noted the findings of the assessment. On this basis, no conditional requirements were requested to be imposed.	
European Heritage	The site is not a heritage item nor is it within a heritage conservation area. The nearest listed heritage items are within the Terara Village which is also identified as a heritage character area. A precautionary condition would be recommended to apply during site works should European heritage be found, to ensure compliance. Refer Condition 18 within Part F of the Draft Determination	Yes, subject to standard conditions
Aboriginal Cultural Heritage	A search of notified Aboriginal objects and declared Aboriginal places in NSW revealed no Aboriginal sites are recorded at the site of the proposed development. As such, it is found that the site is not identified as containing any Aboriginal cultural heritage, practices or places. This aligns with the fact that no concerns were raised as part of the consultation process with local Aboriginal organisations as part of the pre-assessment process required by the SEARs. A precautionary condition would be recommended to apply during site works should Aboriginal cultural heritage be found, subject to standard conditions ensure compliance. Refer Condition 17 within Part F of the Draft Determination	Yes, subject to standard conditions (Part F)



Generic Chapters	Achieved
G1: Site Analysis, Sustainable Design and Building Materials	
The proposal is in respects of coastal protection works related to the protection and enhancement of the natural attributes of the site. The rock revetment modification works will serve to prevent further erosion.	
The proposed works will maintain and protect views and provide an improved foreshore area to surrounding residents.	
G2: Sustainable Stormwater Management and Erosion/Sediment Control	
The provisions of this chapter have been considered and given there are no physical structures proposed which require disposal via a legal point of discharge, it is found that there are no conditional requirements relating to stormwater disposal.	
G4: Tree and Vegetation Management	
The applicant has amended the proposal to minimise impacts to marine vegetation species	Yes

The applicant has amended the proposal to minimise impacts to marine vegetation species found to inhabit Pig Island and its immediate surrounding area including Acacia, mangroves, saltmarsh, seagrasses, swamp oak, and non-native species.

A 25m buffer is proposed between the edge of the dredge area and any existing known aquatic vegetation species.

To ensure the proposal does not impact upon aquatic vegetation it is noted that as part of their issued GTAs, the DPI – Fisheries as also requested that no dredging is to take place to the west of the below marked line:



It was further noted by DPI Fisheries that:

The distribution of seagrass can change and fluctuate in response to flood events and between El Nino and La Nina weather patterns. Section 3.1.4 of the Flora and Fauna Assessment for this proposal conducted in 2019 by Dalmazzo provides a good summary of research that shows seagrass distribution in the Shoalhaven can vary following flood events and then recover.

Further, a desktop assessment of historical aerial photography shows that over time mangrove colonisation has occurred along Pig Island and saltmarsh has established adjacent to the north-western corner of Pig Island.



Noting the ability for marine vegetation to change and redisperse over time, DPI Fisheries has correctly noted that a permit to harm marine vegetation is required should there be a redistribution that results in vegetation being present within the proposed extractive area. Such a condition would be imposed within any consent. Refer DPI – Fisheries GTAs referenced as Condition 7 within Part B of the Draft Determination.

The applicant subsequently submitted an amended Dredging Area Plan which limited the extent of proposed dredging. The dredge area has been modified to reflect the abovementioned requirements imposed by the DPI – Fisheries and also to minimise impacts to coastal intertidal sandflats / habitat for migratory shorebirds. The modified and reduced dredge extent has therefore been assessed as being complaint with Chapter G4.

G5: Biodiversity Impact Assessment

In accordance with Chapter G5 of the SDCP 2014, compliance is required to be demonstrated | Yes with the following acceptable solutions:

A.1.1 Native vegetation and threatened species habitats are retained in perpetuity on sites identified with high ecological value.

A.2.1 Where possible avoid either directly or indirectly impacting threatened species, populations and TECs.

As detailed in the referral response provided by the DPE – BCD, threatened species habitats (in the form of State and Commonwealth listed species of migratory shorebirds) are not proposed to be retained. It was found that the area of mudflat to be removed at Pig Island is 9.04 ha, with the total area of mudflat in the Shoalhaven estuary mapped as 26.80 ha, represents a significant loss of habitat. While it is acknowledged that shorebirds utilise a range of habitats, the proportion of mudflat to be removed (34%) is concerning and is not accepted.

To address this matter, the applicant has submitted a Statement of Intentions prepared by Lodge Environmental. The Statement was reviewed by Council's EAO.

The EAO has found, following review of the Statement submitted by Lodge Environmental, that the concerns expressed by the DPE – Biodiversity Conservation Division have now been suitably addressed and results in compliance with the provisions of Chapter G5 being achieved.

This position has been founded based upon the following:

- The Statement of Intentions submitted by Lodge Environmental.
- Referral response from Council's EAO finding that the Statement sufficiently addresses the requirements of the Biodiversity Conservation Act 2016.
- Entry into the Biodiversity Offsets Scheme is not triggered by the proposed development.
- Modifications and reductions to the dredge footprint area has been made to protect and maintain a large area of intertidal sandflats previously proposed for extraction s part of the initial submitted documentation.

G7: Waste Minimisation and Management Controls

As indicated by the applicant in the submitted documentation, waste from the sand extraction process would continue to be disposed via existing means including physical removal from the site and disposal within the approved sedimentation tranches and dam. However in addition, disposal of fines via stock mounds are also proposed.

Yes, subject to conditions.

Consideration of the acceptability of this method of disposal has been considered in other Sections of this Report.

G9: Development on Flood Prone Land

The site is located within the 'Lower Shoalhaven River' Flood Prone land area and formed part of the recently released Lower Shoalhaven River Flood Study. The Study found that Pig Island

Compliant



is predominantly within a High Hazard Floodway and partially within a High Hazard Flood Storage Area.

An amended Flood Study was submitted by Martens Consulting Engineers dated 27th February 2023 (Ref No. P1806743JC06V01). It was reviewed in detail by Council's Natural Resources and Floodplain (NR&F Section).

Following a review of the likely impacts of the proposal by the NR&F Section, an amended Stock Mound Plan would be required to be submitted as a deferred commencement condition, whereby all stock mounds are wholly contained within the High Hazard Flood Storage Areas and not within the High Hazard Floodway Area.

The purpose of this requirement is to ensure that the proposal complies with the matrix depicted within Schedule 2, with the following specific commentary being provided:

The applicant has reduced the number, footprint, and top level of the proposed mounds when compared with the original mound extent. Fill mounds are presently proposed in Lot 2, Lot 3 and Lot 4 DP 1184790 on Pig Island. The proposed fill mounds in Lot 2 and Lot 3 are partially located in areas mapped with some minor High Hazard Flood Storage areas, however the proposed fill mound for Lot 4 is fully located in a High Hazard Floodway area.

As noted in previous referrals and meetings between the applicant and Council officers, the Shoalhaven DCP Chapter G9 requires High Hazard Floodway areas to be kept free of fill and/or obstructions (Performance Criteria P2). As there are no exemptions from this performance criteria, construction of stock refuge mounds in High Hazard Floodway areas, as proposed, are non-compliant with the Performance Criteria included in DCP Chapter G9.

Noting the above, it is pertinent for a deferred commencement condition be imposed which requires all stock refuge mounds be removed from areas mapped within a hazard category of High Hazard Floodway via an amended Plan to areas of High Hazard Flood Storage only.

G26: Acid Sulphate Soils and Geotechnical (Site Stability) Guidelines

The site is identified as being Class 1, 2, 3, and 4.

Yes

A recommendation has been made by the EHO for inclusion of the requirement for an Acid Sulfate Soils Management within any consent as follows:

An Acid Sulfate Soil Management Plan (ASSMP) must be developed specifically addressing excavation of acid sulfate soil, or potential acid sulfate soils by a qualified environmental consultant with experience in the assessment of acid sulfate soils. The report must be submitted to Shoalhaven City Council's Environmental Health Unit for review and acceptance.

iiia) Any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4

None applicable.

iv) Environmental Planning and Assessment Regulation 2021

Clause	Comment
cl. 23 Persons who	In accordance with Clause 23(6), the applicant is a lessee of Crown Land
may make	who has made the Development Application with the owner's consent of the
development	Crown.
applications	

v) REPEALED



(b) The Likely impacts of that development, including environmental impacts on the natural and built environments, and social and economic impacts in the locality

Heads of Consideration	Comment
Natural Environment	Following consideration of the likely impacts of the development and subject to recommended conditions, the site and surrounding estuarine environment is capable of being monitored, managed, and rehabilitated to not have an adverse impact upon the natural environment. Potential impacts upon the natural environment would be managed in an ongoing manner following implementation of: The Adaptive Management Strategy (required in accordance with the Deferred Commencement Section of the Consent). Implementation of the Adaptive Management Strategy - Biodiversity at all stages of the life cycle of the development – refer Conditions 10, 21, and 31. Requirements within the Ongoing Section (Part I) of the Draft Determination being implemented.
Built Environment	A consideration of the likely impacts of the proposal has revealed that the application would be unlikely to have an adverse impact upon the surrounding built environment, most notably the community of Terara, subject to implementation of deferred commencement condition requirements relating to managing flooding and geomorphology within the Shoalhaven River, to prevent afflux and impacts to Levee Banks (condition recommended for inclusion in the Deferred Commencement Section of any consent)
Social Impacts	The proposal will not be likely to have an adverse social impact upon the surrounding locality, noting that the method of operation would largely remain the same as the present operations, including that the same extraction rate has been applied for.
Economic Impacts	The proposal has the potential to generate a positive economic impact to the surrounding locality through the provision of a resource to the wider surrounding locality, noting that there are minimal similar operations within the region capable of providing the product.

(c) Suitability of the site for the development

For the reasons outlined in the assessment of this Report above, the Council finds that the proposed development is likely to be suitable for the site.

(d) Submissions made in accordance with the Act or the regulations

The proposed development was notified and advertised in accordance with the requirements for Designated Development in accordance with the EP&A Act and Regulations. It was advertised between 6 October and 5 November 2021. A total of three (3) unique submissions were received which has raised the following issues:

- Water Quality.
 - The Environmental Protection Authority have imposed conditional requirements to ensure ongoing monitoring of water quality as part of the operating requirements of the development.

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- Flood afflux upon Lower Shoalhaven Floodplain communities.
 - Subject to relocation of stock mounds to 'High Hard Flood Storage Areas, monitoring and mitigation of potential impacts to the Flood Levee Banks', and proposed conditions from the Natural resources & Floodplain Section, the proposal would be managed to avoid adverse flood afflux to the community of Terara and associated and nearby communities (Deferred Commencement Section).
 - Condition to be imposed requiring a Flood Emergency Evacuation Plan as a Prior to Works Commencing requirement (refer Condition 14 of Part C of the Draft Determination).
- Significance of impacts upon threatened species of migratory shorebirds and the 'Swamp Oak and Salt Marsh' EEC.
 - As detailed in the response from Council's EAO, the dredge area has been offset to void impacts to EECs and in co junction with the area restriction imposed by DPI Fisheries, the dredge area was reduced to avoid and minimise impacts to the EECs.
- Management of the coastal environment.
 - An adaptive management strategy relating to geomorphology would be required to be prepared before any operational approval is issued. The purpose is to ensure that coastal infrastructure is not adversely impacted by the proposed development.
- Long term scouring and bank erosion impacts upon the Terara Levee.
 - As Above. An adaptive management strategy relating to geomorphology would be required
 to be prepared before any operational approval is issued. The strategy would detail ongoing
 monitoring requirements and frequency, and trigger points for operations to be ceased in the
 event that the monitoring procedures reveal that the operations have caused impacts to
 levees.
- Acid sulfate soils.
 - Conditional requirements to manage potential for acid sulfate soils would be imposed within any consent as recommended by Council's EHO(Part C).

(e) The Public Interest

The public interest has been taken into consideration, including assessment of the application against applicable planning controls, public notification to the proposed development, internal referrals, and consideration of relevant policies. Having regard for the outcomes of the assessment as described above, it is found that the proposal would be within the public interest.

9. Delegations

Guidelines for use of Delegated Authority

The Guidelines for use of Delegated Authority have been reviewed and the assessing officer does not have the Delegated Authority to determine the Development Application.

Given the proposal is regionally significant development under Schedule 6 of SEPP (Planning Systems) 2021, the application must be determined by the Southern Regional Planning Panel.

10. Recommendation

This application has been assessed having regard for section 4.15 (Matters for consideration) under the *Environmental Planning and Assessment Act 1979*. As such, it is recommended that Development Application No. RA21/1000 be granted deferred commencement development consent, subject to the recommended conditions in the attached Draft Determination Notice.





Address all correspondence to: The Chief Executive Officer, PO Box 42, Nowra NSW 2541 Australia

shoalhaven.nsw.gov.au/contact | 1300 293 111

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NOTICE TO APPLICANT OF DETERMINATION OF APPLICATION BY WAY OF DEFERRED COMMENCEMENT DEVELOPMENT CONSENT

Environmental Planning and Assessment Act, 1979 RA21/1000

TO:

SAM 8888 Pty Ltd

being the applicant(s) for RA21/1000 relating to:

Terara Rd, TERARA - Lot 1 DP 1184790

Terara Rd, TERARA - Lot 2 DP 1184790

Terara Rd, TERARA - Lot 3 DP 1184790

Terara Rd, TERARA – Lot 4 DP 1184790

Bed of the Shoalhaven River below the Mean High Water Mark

APPROVED USE AND OR DEVELOPMENT:

Extractive Industry (Extension to existing Sand Mining Extraction Area)

DETERMINATION DATE: To Be Confirmed

Pursuant to the Section 4.18 of the Act, notice is hereby given that the above application has been determined by granting consent, subject to the conditions listed below.

CONSENT TO OPERATE FROM: Date of Satisfaction of the Deferred

Commencement Conditions

CONSENT TO LAPSE ON: To Be Confirmed

This consent is valid for five years from the date hereon.

In accordance with Section 4.53 of the Act, development consent for the use of the land or the erection of a building does not lapse if building, engineering or construction work relating to the building or work or the use is physically commenced on the land to which the consent applies before the lapse date.

DETAILS OF CONDITIONS:

The conditions of consent and reasons for such conditions are set out as follows:



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DEFERRED COMMENCEMENT

Pursuant to s 4.16(3) of the *Environmental Planning and Assessment Act 1979*, the applicant must satisfy the following deferred commencement condition of consent prior to this development consent becoming operative:

a) Biodiversity Adaptive Management Plan

A Biodiversity Adaptive Management Plan must be prepared by a suitably qualified ecological consultant and be submitted to the Council for approval.

The plan must, as a minimum:

- Elaborate on the commitments made in the approved Letter of Undertaking relating to an Adaptive Management Strategy prepared by Lodge Environmental, dated 17th February 2023.
- ii) Address all items listed in Section 8.4 and Section 8.5 of the Biodiversity Assessment Method (DPIE, 2020).
- iii) Review management actions and monitoring required by Conditions 32 and 44 of DS15/1297 and incorporate these into the Plan.
- iv) Set clear objectives and measurable performance indicators for management and monitoring.
- v) Define the study area.
- vi) Describe the activity and current baseline conditions of the study area.
- vii) Identify links to legislation, other plans and documents.
- viii) Describe the threats and processes that influence the objectives with reference made to biodiversity values identified by Council (Environmental Assessment Officer referrals 1 and 2, as well as DPE's Biodiversity Conservation Division referral and DPIE Fisheries GTA).
- ix) Detail all management actions to be considered and how these will be implemented. Management actions must include education to all contractors and workers.
- x) Describe how the management actions and monitoring program will achieve objectives. Monitoring must include observational techniques (such as systematic bird point counts, photopoint monitoring and GPS vegetation mapping) as well as assessment of modelling (such as preparation of bathymetric maps).
- xi) Monitoring to assess of the effectiveness of management actions.
- xii) Describe the responsibilities and detail who will carry out the implementation and monitoring plans.
- xiii) Detail the procedure to analyse and evaluate monitoring data against measurable performance indicators.
- xiv) Provide procedures to respond and adapt management actions and monitoring if performance indicators are exceeded.

A summary of the results of the implementation of the above must be provided to Council as part of the six-monthly Audit to continue operation of the approved works. If the six-monthly Audit report is not provided, all works must cease.

b) Adaptive Management Plan - Geomorphology

An Adaptive Management Plan – Geomorphology must be prepared by a suitably qualified consultant and be submitted to Council for approval.



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The plan must, as a minimum:

- Elaborate on the commitments made in the approved Letter of Undertaking for an Adaptive Management Strategy – Geomorphology prepared by Fluvial Systems, dated 27 February 2023.
- Be developed in collaboration with Shoalhaven City Council and the NSW Department of Planning and Environment.
- iii) Set clear purpose and objectives to avoid significant impact to geomorphic processes and forms in the Lower Shoalhaven River. This includes but is not limited to the existing P1L1 Riverview Road and P1L2 Terara flood levees.
- iv) Detail performance measures and specific measurement methodologies for monitoring. This will include but not be limited to regular river bed and bank surveys.
- v) Detail frequency of monitoring and reporting.
- vi) Define the study area and monitoring extent.
- vii) Describe the activity and current baseline conditions of the monitored area.
- viii) Define triggers for the adaptive management strategy and outline relevant response mechanisms. This includes the immediate cessation of extraction if these triggers are reached or exceeded.
- ix) Define the extent of liability for damages and repairs to infrastructure and property as a result of potential significant adverse impacts from the activity.
- c) Flooding Filling within High Hazard Floodway Areas

A professional engineer, (as defined in the National Construction Code) must submit for approval by Council, evidence that the following item is detailed on the relevant plans:

 All proposed filling is kept outside of areas mapped as High Hazard Floodway in the Lower Shoalhaven River Flood Study (Cardno, 2022) for the 2050 scenario 1% AEP event.

Evidence that will sufficiently enable Council to be satisfied as to the compliance of these matters must be submitted to Council within 12 months of the date of determination of this deferred commencement consent, failing which, this deferred development consent will lapse pursuant to s 4.53(6) of the *Environmental Planning and Assessment Act 1979*.

This development consent will not become operative until such time that the Council notifies the applicant in writing that the requirements of deferred commencement have been satisfied.

PART A: GENERAL CONDITIONS

1. General

The consent relates to Extractive Industry (Extension to existing Sand Mining Extraction Area) as documented on the stamped plans/documentation, or as modified by the conditions of this consent. The development must be carried out in accordance with this consent. If there is inconsistency between the stamped plans/documentation and the conditions of consent, the conditions prevail to the extent of that inconsistency.

Stamped Plans/Documents	Ref/Sheet No.	Prepared by	Dated
Proposed Extraction Area Plan	RA21-1000-1	Mac Drafting	27.02.2023
Letter of Undertaking – Adaptive			
Management Strategy -	-	Fluvial Systems	27.02.2023
Geomorphology			



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Letter of Undertaking – Adaptive Management Strategy – Biodiversity	LE1637	Lodge Environmental	17.02.2023
Estuarine & Surface Water Quality Monitoring Plan	P1806743JR05V04	Martens Consulting Engineers	Feb 2023

Note: Any alteration to the plans and/or documentation must be submitted for the approval of Council. Such alterations may require the lodgement of an application to amend the consent under section 4.55 of the Environmental Planning and Assessment Act, or a new development application.

2. Prescribed Conditions

The development must comply with the <u>Prescribed Conditions of Development Consent</u>, Division 2 Subdivision 1, Environmental Planning and Assessment Regulation 2021, as applicable.

3. Occupation / Use

The development must not be occupied or used before an Occupation Certificate has been issued by the Principal Certifier. If an Occupation Certificate is not required, the use must not commence until all conditions of development consent have been met or other satisfactory agreements have been made with Council (i.e. a security).

4. Dredging Area

Dredging of sand must occur at all times within the approved extraction area depicted on the approved Extraction Area Map prepared by Mac Drafting.

5. Biodiversity Habitat - Intertidal Sandflats

This approval allows for the removal of up to 2.09 ha of isolated intertidal sandflats in Zone 1 shown on the approved plans and assessed in the *Letter of Undertaking relating to an Adaptive Management Strategy* prepared by Lodge Environmental, dated 17 February 2023. This approval does not allow for any works in the area referred to as Zone 2 on the plans.

6. Biodiversity Habitat - Native Vegetation and Habitat on Pig Island

The removal and/or disturbance of native vegetation and habitat on Pig Island is not permitted with this consent. Native vegetation includes canopy trees, understorey and groundcover vegetation. Any activities on Pig Island must be completed in accordance with the approved plans.

PART B: INTEGRATED DEVELOPMENT AND CONCURRENCE CONDITIONS

7. Department of Primary Industries (Fisheries)

The General Terms of Approval issued by the Department of Primary Industries, Reference No: DOC21/860087-35, dated 25th November 2022. Fisheries are included as conditions of this consent and must be complied with.



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8. Environment Protection Authority

The General Terms of Approval issued by the Environment Protection Authority, (Reference No: IDA21/131, dated 14th December 2022) are included as conditions of this consent and must be complied with.

PART C: PRIOR TO THE COMMENCEMENT OF WORKS

9 Runoff and Frosion Controls

Prior to the commencement of site works, runoff and erosion controls must be implemented and maintained during construction to prevent soil erosion, water pollution or the discharge of loose sediment on the surrounding land by:

- a) diverting uncontaminated runoff around cleared or disturbed areas.
- b) erecting a silt fence and providing any other necessary sediment control measures that will prevent debris escaping into drainage systems, waterways or adjoining properties.
- c) preventing the tracking of sediment by vehicles onto roads
- d) stockpiling topsoil, excavated materials, construction and landscaping supplies and debris within the lot.

10. Biodiversity Adaptive Management Plan - Prior to Works

Prior to the commencement of works, the pre-commencement or baseline measures specified in the approved Biodiversity Adaptive Management Plan must be implemented.

11. Project Ecologist - Engagement

Prior to the commencement of any work, a suitably qualified and licensed ecological consultant must be engaged to guide management actions and undertake monitoring required by the Biodiversity Adaptive Management Plan. Evidence of engagement must be submitted to Council.

12. Tree and Vegetation Protection - Pig Island and surrounds

Stock mounds must be located outside areas of native vegetation as mapped in Figure 1 of the Flora and Fauna Additional Information prepared by Peter Dalmazzo, dated 27 September 2022.

Prior to the commencement of any works the developer must physically mark out the boundary of the proposed stock mounds and areas where spoil is stored.

Best practice sediment and erosion control measures must be in place prior to the deposition of any spoil material.

Only existing roads can be used to transport spoil material across Pig Island. The establishment of new roads or access is not permitted by this consent.

13. Acid Sulfate Soil Management Plan (ASSMP)

An Acid Sulfate Soil Management Plan (ASSMP) must be developed specifically addressing excavation of acid sulfate soil, or potential acid sulfate soils by a qualified environmental consultant



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with experience in the assessment of acid sulfate soils. The report must be submitted to Shoalhaven City Council's Environmental Health Unit for review and acceptance.

14. Flood Emergency Evacuation Plan

Prior to the commencement of dredging works, a flood emergency evacuation plan must be prepared by a suitably qualified consulting engineer and submitted to Shoalhaven City Council. The plan must identify how the operator will inform themselves of potential flood warnings and the range of actions to be implemented by the applicant prior to a flood occurring including but not limited to:

- a) Storing of potential chemicals and fuels above flood levels;
- b) Flood evacuation procedures;
- Securing or relocation of machinery and the like to make sure they won't become floating debris.

15. Crown Land Licence

Prior to the commencement of dredging works, a new licence must be issued by NSW Crown Lands to cover the extraction area approved by this development consent. A copy of the new Crown Lands Licence must be provided to Shoalhaven City Council within 1 month of it being issued.

PART D: PRIOR TO THE ISSUE OF A CONSTRUCTION CERTIFICATE

NIL

PART E: PRIOR TO THE ISSUE OF A SUBDIVISION WORKS CERTIFICATE

NIL

PART F: DURING WORKS

16. Hours for Construction

Construction may only be carried out between 7.00am and 5.00pm on Monday to Saturday and no construction is to be carried out at any time on a Sunday or a public holiday. Proposed changes to hours of construction must be approved by Council in writing.

17. Aboriginal Objects Discovered During Excavation

If an Aboriginal object (including evidence of habitation or remains) is discovered during the course of the work:

- a) All excavation or disturbance of the area must stop immediately.
- b) Additional assessment and approval pursuant to the National Parks and Wildlife Act 1974 may be required prior to works continuing the affected area(s) based on the nature of the discovery.



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- c) Work may recommence in the affected area(s) if Heritage NSW advises that additional assessment and/or approval is not required (or once any required assessment has taken place or any required approval has been given).
- d) The Heritage NSW must be advised of the discovery in accordance with section 89A of the National Parks and Wildlife Act 1974.

18. Archaeology Discovered During Excavation

If any object having interest due to its age or association with the past is uncovered during the course of the work:

- a) All work must stop immediately in that area.
- b) Work may recommence in the affected area(s) if Heritage NSW advises that additional assessment and/or approval is not required (or once any required assessment has taken place or any required approval has been given).
- c) In accordance with the Heritage Act 1997, the Heritage NSW must be advised of the discovery.

19. Waste Management Plan

All waste must be contained within the site during construction and then be recycled in accordance with the approved Waste Management Plan (WMP) or removed to an authorised waste disposal facility. Waste must not be placed in any location or in any manner that would allow it to fall, descend, blow, wash, percolate or otherwise escape from the site. Compliance with the WMP must be demonstrated by the submission of tip receipts to the Certifier.

Note: "Waste" is defined in the Dictionary to the Protection of the Environment Operations Act 1997 (POEO Act).

20. Maintenance of Site and Surrounds

During works, the following maintenance requirements must be complied with:

- a) All materials and equipment must be stored wholly within the work site unless an approval to store them elsewhere is held.
- b) Where tree or vegetation protection measures are in place, the protected area must be kept clear of materials and / or machinery.
- c) The developer must maintain the approved erosion and sediment control measures to the satisfaction of the Certifier for the life of the construction period and until runoff catchments are stabilised.
- d) During construction:
 - i) all vehicles entering or leaving the site must have their loads covered, and
 - ii) all vehicles, before leaving the site, must be cleaned of dirt, sand and other materials, to avoid tracking these materials onto public roads.
- e) At the completion of the works, the work site must be left clear of waste and debris.

21. Biodiversity Adaptive Management Plan

All works must be undertaken in accordance with the approved Biodiversity Adaptive Management Plan.



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22. Marine Weed Hygiene Protocol

Prior to use at the site, machinery brought from another waterway is to be cleaned, degreased and serviced.

If the machinery has previously been used in a waterway where the macroalga weed *Caulerpa taxifolia* is present, the contractor shall:

- a) inspect anchors, ropes and chains for pieces of Caulerpa
- b) inspect diving equipment such as wetsuits, bags and other gear before and after use
- c) inspect trailers, propellers and engine intakes
- d) inspect all equipment and materials
- e) use dedicated 'wash-down' facilities where available, ensuring that vessel and equipment is thoroughly free of all matter before leaving the area
- f) collect any fragments of Caulerpa that may have been picked up, seal the pieces in a plastic bag and dispose of them in a bin where they cannot re-enter the waterway.

23. Working in Proximity to Sensitive Biodiversity Habitat

Workers shall be informed of their obligations and possible offences under the NSW *Biodiversity Conservation Act* and Australian *Environmental Protection and Biodiversity Conservation Act* with respect to threatened and migratory species.

All workers shall be made aware that they are potentially working in or near the habitat of threatened and migratory species, and what to do if they identify a threatened or migratory species on site, as per the approved Biodiversity Adaptive Management Plan.

24. Unexpected Finds - Fauna

If any wildlife is unexpectedly located, disoriented or injured during works, works must stop immediately, and the Project Ecologist is to make arrangements for an ecologist experienced in wildlife handling and rescue to advise and responsibly rescue and/or relocate the animal(s).

25. Parking and Storing of Equipment and Materials

The parking of machinery and vehicles or the storing of equipment or materials, soil, spoil, or rubbish, within the areas of native vegetation, as mapped in Figure 1 of the *Flora and Fauna Additional Information* prepared by Peter Dalmazzo, dated 27 September 2022 is prohibited.

26. Timing of Works

To protect adjoining Endangered Ecological Communities and sensitive aquatic and semi-aquatic habitats, works involving soil disturbance or deposition must not take place during heavy rainfall periods, other than work necessary to stabilise the site.

PART G: PRIOR TO THE ISSUE OF AN OCCUPATION CERTIFICATE

NIL



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PART H: PRIOR TO THE ISSUE OF A SUBDIVISION / STRATA CERTIFICATE

NIL

PART I: ONGOING USE OF THE DEVELOPMENT

27. Limits

The operation of the approved development must not exceed the processing limits as specified in the submitted Environmental Impact Statement (i.e. 100,000 tonnes per year).

28. Management Audit Plan (MAP)

The consent holder/operator must submit a Management Audit Plan (MAP) relating to the operation of the approved development for the previous 12 months period to Shoalhaven City Council. The MAP must be prepared by a suitably qualified person and must be submitted within 30 days of the twelve month anniversary of the issue of this development consent and subsequently, every twelve months for the life of the development. The MAP shall address, but not be limited to, the following:

- a) Record/log of all complaints made for the period.
- b) Quantity of material produced/obtained by the plant represented as tonnes per day and tonnes per year;
- An assessment by a suitably qualified air quality consultant that the air quality levels comply with the NSW EPA requirements and any associated recommendations;
- d) Annual monitoring of the extent of sea grass beds in the vicinity of the dredging operations (i.e. within 25m of the outside of the buffer) with this information to be shown on the surveys discussed in point f);
- e) Annual survey of the dredging area to indicate the extent, depth and location of dredging, location of approved dredging area as well as cross sections to test assumptions relating to angle of repose and buffer slope readjustment;
- f) Annual independent auditing and reporting of compliance against consent conditions and associated license conditions (i.e. NSW EPA, Department of Primary Industries - Fisheries);
- g) Ongoing targeted monitoring during dredging operations relating to water quality impacts (including the establishment of background levels) so as to capture the spatial and temporal variability of water quality; and
- h) Details on addition measures to implemented (including a timeframe for implementation) to address all identified issues and/or concerns, where applicable.

29. Recording of Complaints

The owner/operator must keep a legible record/log book of all complaints made to the owner/operator or any employee or agent of the business in relation to the operation of the approved use.

The record must include details of the following:

- a) The date and time of the complaint;
- b) The method by which the complaint was made;



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- Any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
- d) The nature of the complaint;
- e) The action taken by the operator in relation to the complaint, including any follow-up contact with the complainant; and
- f) If no action was taken by the licensee, the reasons why no action was taken.

The record of a complaint must be kept for at least 4 years after the complaint was made and must be made available to Council at any time upon request.

30. Approved Adaptive Management Plan - Geomorphology

All works and activities associated with this approval must be in accordance with the approved Adaptive Management Plan – Geomorphology.

31. Approved Biodiversity Adaptive Management Plan

All works and activities associated with this approval must be in accordance with the approved Biodiversity Adaptive Management Plan.

32. Habitat Modification, Removal and Management - Pig Island

This consent does not permit removal or disturbance of native vegetation on Pig Island, including but not limited to, canopy trees, understorey and groundcover vegetation mapped in Figure 1 of the *Flora and Fauna Additional Information* prepared by Peter Dalmazzo, dated 27 September 2022.

33. Habitat Modification, Removal and Management - Pig Island

This consent does not permit removal or disturbance to intertidal mudflats beyond the area mapped as Zone 1 in *Letter of Undertaking relating to an Adaptive Management Strategy* prepared by Lodge Environmental, dated 17 February 2023. Any dredging works beyond the extent of Zone 1 is prohibited unless development consent is granted.

34. Grasses to stabilise Refuge Mounds

To protect adjoining Endangered Ecological Communities and sensitive aquatic and semi-aquatic habitats:

- a) no exotic perennial grasses listed on the Final Determination of the NSW Scientific Committee for the key threatening process *Invasion of native plant communities by exotic perennial* grasses, are to be sown.
- b) where grass is required to be sown to stabilise the refuge mounds, it must be native grasses.

35. Compliance with Approved Environmental Noise Impact Assessment

Use of the site must be in accordance with the recommendations of the acoustic report – Environmental Noise Impact Assessment – Shoalhaven Sands – River Dredging Expansion – 14th March 2019 - Ref: 1808009E-R, specifically:

a) Operating Hours: The dredge should only be operated during day time hours as follows:



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- i) Between 7am and 6pm Monday to Saturday, and
- ii) Between 8am and 6pm Sundays and Public Holidays.
- b) Minimum allowable distances:
 - The dredge should not operate any closer than 120 metres from any residential receptor location.
 - ii) Based on the proposed expansion area, this will be achieved for every residential receptor location with the exception of receptor R1 at 43 Ferry Lane, Nowra. The receptor at 43 Ferry Lane is approximately 100 metres from the southern-most boundary of the demarcated extension area, as such:-
 - A. When operating opposite this receptor, the dredge should remain at 20 metres from the southern boundary of the demarcated area at all times.

Maintenance – Stock Piles and Road Conditions

Monitoring of stockpiles and road conditions must be undertaken as part of the development. This must include but not be limited to:

- Management and monitoring of stockpiles to prevent air pollution or dust nuisance to sensitive receptors;
- ii. implementation and/or maintenance of watering systems (whether truck or sprinklers) to be utilised and allowing application of moisture to road surfaces and stockpiles;
- iii. Maintenance and/or implementation of a meteorological station.

PART J: OTHER COUNCIL APPROVALS AND CONSENTS

NIL

PART K: REASONS FOR CONDITIONS

The application has been assessed as required by section 4.15 of the *Environmental Planning and Assessment Act 1979* and has been determined by the granting of conditional development consent.

Statutory requirements

The development proposal, subject to the recommended conditions, is consistent with:

- a) the objects of the Environmental Planning and Assessment Act, 1979.
- b) the aims, objectives and provisions of the applicable environmental planning instruments,
- c) the aims, objectives and provisions of Shoalhaven Development Control Plan 2014 (SDCP 2014).
- d) the aims, objectives and provisions of relevant Council policies.



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Public notification

The application was publicly notified in accordance with the *Environmental Planning and Assessment Regulation 2000* and Council's Community Consultation Policy for Development Applications (Including Subdivision) and the Formulation of Development Guidelines and Policies (POL 16/230).

Submissions

Any submissions received during the public notification period are available on DA Tracking

Community views

Issues and concerns raised by the community in submissions have been considered in the assessment of the application and, where appropriate, conditions have been included in the determination to mitigate any impacts.

Suitability of the Site

The application has been approved because the development proposal is considered to be suitable for the site.

The relevant public authorities and the water supply authority have been consulted and their requirements met, or arrangements made for the provision of services to the satisfaction of those authorities.

The increased demand for public amenities and services attributable to the development has been addressed by the requirement to pay contributions in accordance with section 7.11 of the *Environmental Planning and Assessment Act 1979* and Council's Contribution Plan 2019. Contributions under Section 307 of the Water Management Act 2000 have been applied as required.

Impacts of the Development

The application was considered to be suitable for approval. Conditions have been imposed to ensure that:

- a) the development will not result in unacceptable adverse impacts on the natural and built environments.
- b) the amenity and character of land adjoining and in the locality of the development is protected.
- c) any potential adverse environmental, social or economic impacts of the development are minimised.
- d) all traffic, car parking and access arrangements for the development will be satisfactory.
- e) the development does not conflict with the public interest.

PART L: RIGHTS OF REVIEW AND APPEAL

Determination under Environmental Planning and Assessment Act, 1979

Division 8.2 of the EP&A Act, 1979 confers on an applicant who is dissatisfied with the determination a right to request the council to review its determination. The request and determination of the review must be undertaken within the prescribed period.



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Division 8.3 of the EP&A Act, 1979 confers on an applicant who is dissatisfied with the determination of a consent authority a right of appeal to the Land and Environment Court which can be exercised within the prescribed period.

An appeal under Division 8.3 of the EP&A Act, 1979 by an objector may be made only within the prescribed period.

Approvals under Local Government Act, 1993

Section 100 of the Local Government Act, 1993 provides that an applicant may request Council to review its determination of an application.

Section 176 of the Local Government Act, 1993 provides that an applicant who is dissatisfied with the determination of the Council may appeal to the Land and Environment Court. The appeal must be made within the prescribed period.

PART M: GENERAL ADVICE

In this consent the term developer means any person or corporation who carries out the development pursuant to that consent.

Disability Discrimination Act 1992

This application has been assessed in accordance with the Environmental Planning & Assessment Act, 1979. No guarantee is given that the proposal complies with the Disability Discrimination Act 1992.

The applicant/owner is responsible to ensure compliance with this and other anti-discrimination legislation.

The Disability Discrimination Act 1992 covers disabilities not catered for in the minimum standards called up in the Building Code of Australia which references AS1428.1 - "Design for Access and Mobility".

Disclaimer - Conveyancing Act 1919 - Division 4 - Restrictions on the Use of Land

The applicant should note that there could be covenants in favour of persons other than Council restricting what may be built or done upon the subject land. The applicant is advised to check the position before commencing any work.

Under Clause 1.9A of Shoalhaven Local Environmental Plan 2014 agreements, covenants or instruments that restrict the carrying out of the proposed development do not apply to the extent necessary to enable the carrying out of that development, other than where the interests of a public authority is involved.

DBYD Enquiry - 'Dial Before You Dig'

In order to avoid risk to life and property it is advisable that an enquiry be made with "Dial Before You Dig" on 1100 or www.dialbeforeyoudig.com.au prior to any excavation works taking place to ascertain the location of underground services. You must also contact your Local Authority for locations of Water and Sewer Mains.





NOVEMBER 2022







PAGE 01

AIM

The Shoalhaven Community Led Plan for Homelessness (The Plan) aims to address homelessness in the Shoalhaven Local Government Area (LGA) through a range of collaborative actions that will be implemented by the community and homelessness sector. The desired outcomes and actions included in this Plan are based on ideas and initiatives identified through the collaborative efforts of stakeholders from across Shoalhaven who are committed to addressing homelessness issues in this area.

MISSION

Prevent, reduce and manage homelessness in Shoalhaven and improve the wellbeing of those at risk.





PAGE 02



Systemic Response:

Focus on a systemic response to homelessness and take an early intervention and prevention approach whilst also being able to respond to crisis.

Informed by Lived Experience:

Consider the views and perspectives of people who are or have experienced homelessness in the design and implementation of each action. Involve people with lived experience of homelessness in action design and implementation where possible

Client-Centred:

Adopt a client-centred, culturally appropriate and trauma informed approach in the design and implementation of actions

Multidisciplinary and Coordinated:

Work collaboratively and utilise multidisciplinary partnerships and approaches to achieve quality outcomes

Quality and Outcomes Focused:

Focus on the delivery of highquality outputs and achieving positive, sustainable outcomes

Respectful:

Adopt a considered and respectful approach that seeks to empower and retain or restore dignity for people experiencing homelessness, increases understanding and reduces stigma around homelessness.

Acknowledging the Multi-faceted Causes of Homelessness

Acknowledge that alongside structural and environmental factors there are various personal circumstances that can lead to an individual or family becoming homeless. These personal factors that may lead to homelessness include: relationship breakdown, domestic and family violence, death in the family, financial breakdown, addiction, illness or accidents, mental health, and leaving care or prison.



PAGE 03

DESIRED OUTCOMES

- Enhanced local homelessness sector response to the housing and homelessness crisis through efficient collaborative efforts and effective use of community assets.
- People experiencing disadvantage or homelessness in Shoalhaven have increased access to a range of outreach services to improve wellbeing and protective factors against homelessness and prevent or reduce time spent homeless.
- · Better understanding of the extent and nature homelessness in Shoalhaven, including through information and data collection and learning people with experience of homelessness.
- There is reduced stigma surrounding homelessness and increased community understanding and participation in response to homelessness.

- · An increase in the capacity of community homelessness sector to provide alternative housing and shelter options to encompass housing needs, focusing on emergency, transitional and supported housing options.
- · All levels of Government are made aware of in homelessness crisis Shoalhaven and this awareness leads to sufficient legislative changes and budget increases.
- · Help advocate for an increased supply of social and affordable housing in Shoalhaven, leading to an increased overall available amount of appropriate housing.





PAGE 04

HOMELESSNESS and HOUSING CONTEXT

Homelessness continues to be a growing problem in all communities throughout Australia. Homelessness is defined under Australian federal law as "Inadequate access to safe and secure housing." This exists where the only housing to which a person has access to:

- Is likely to damage the person's health
- · Threaten the person's safety
- Marginalises the person by failing to provide access to adequate personal amenities or the normal economic and social support of a home, or
- Places the person in circumstances that threaten or adversely affect the adequacy, safety, security and affordability of that housing.



Primary homelessness

Applies when a person lives on the street, sleeps in parks, squats in derelict buildings, or uses cars or railway carriages for temporary shelter. The term 'rough sleeper' is often used to describe people who fall into this category of homelessness. In Shoalhaven, rough sleepers are often located on beaches and beach carparks, bushland and around Showgrounds and camping facilities.

Secondary homelessness

Is used to describe people who move frequently from one form of temporary shelter to another. Secondary homelessness applies to people using emergency accommodation, people residing temporarily with relatives or with friends, and people using boarding houses on an occasional or intermittent basis.

Tertiary homelessness

Is used to describe people who live in premises where they do not have the security of a lease guaranteeing them accommodation, nor access to basic private facilities (such as a private bathroom, kitchen or living space). It can include people living in boarding houses on a medium to long term basis (more than 13 weeks) or in caravan parks.



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Shoalhaven, there are number a contributing to the increase in homelessness in the LGA, including, but not limited to:

Impact from natural disasters, most predominantly the 2020 Bushfires:

Bushfires affected 80% of the Shoalhaven LGA and displaced many residents. Many of whom have still not been able to return to their homes or re-build.

Impact of Covid19 Pandemic on population employment and migration:

According to the Regional Australia Institute, as of March 2022, there is a 6.5% population migration rate from Capitals to regional towns, as opposed to the 4.5% migration from regional towns to Capitals.

High Unoccupancy Rate:

2021 census data indicates that 23.1% of dwellings in Shoalhaven were unoccupied on census night, this is significantly higher than the average NSW rate of 9.4% and 10.1% nationally. In Shoalhaven holiday homes are a large factor in this statistic.

High level of unemployment and underemployment:

2021 census data indicates 37.1% of the Shoalhaven population earned a low income, compared with 33.7% for Regional NSW.

Vulnerable populations:

Census data indicates Shoalhaven has higher numbers of vulnerable populations experiencing, or at risk of, homelessness, this includes Aboriginal and Torres Strait Islanders, young people, and the senior age population which increased substantially in recent years.

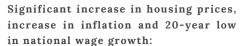
Strained emergency and transitional housing options:

With hugely limited social and affordable housing there is major pressure placed on temporary and transitional accommodation providers with little to no exit options for the people they assist.





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The average weekly household income Shoalhaven is \$1250, this is \$496 less than the national average. University of NSW and the Australian Council of Social Service showed 70% of people in the federal electorate of Gilmore, which includes the Shoalhaven LGA, are in rental stress. In Shoalhaven, 42.3% of renter households have rental payments greater than 30% of their household income, this is far greater than the national rate of 32.2%. Additionally, 16.2% homeowners have mortgage repayments greater than 30% of the household, whilst the national rate is 14.5%.

Critical shortage in public and private affordable rental properties:

There are only five regional NSW towns that have over 5% rate of public housing – the Shoalhaven region is not one of them. High home ownership in regional towns means there is lower rental market stock with just 20% of total NSW rental housing stock being in regional NSW. The state of NSW the vacancy rate is at 1.10%, but for Shoalhaven that vacancy rate is even tighter, currently sitting at 0.36%.

OTHER RELEVANT PLANS IN THE SHOALHAVEN REGION

- Shoalhaven Anti-Poverty Committee 2022-2025
 Action Plan
- Foundation for Rural Regional Renewal (FRRR) Roadmaps (Ulladulla, Bay & Basin, and Nowra)
- Shoalhaven Affordable Housing Strategy



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STAKEHOLDER INVOLVEMENT

State and Federal Government

Commonwealth and State government hold the primary role of funding and providing services to assist people who are homeless or at risk of homelessness.

The National Housing and Homelessness Agreement (NHHA) commenced on 1 July 2018 and provides funding to states and territories to improve Australians' access to secure and affordable housing across the housing spectrum. The NHHA also includes funding set aside for homelessness services.

The NSW Department of Communities and Justice - Housing (DCJ Housing) provides a range of housing options/solutions for both the private rental market and Public Housing, Community Housing and Aboriginal Housing.

DCJ Housing works with service agency partners to provide a range of housing and homelessness solutions. Southern Cross Housing are the primary Social Housing and Affordable Housing provider operating in Shoalhaven and are funded on behalf of DCJ Housing to manage and provide social housing across the Shoalhaven, Illawarra, Eurobodalla and Snowy Monaro Local Government Areas.

Local Government

Shoalhaven City Council is not a housing provider and is not funded to deliver or fund housing or homelessness services. The role of Council in addressing homelessness is to assist and complement the work of other tiers of government and the community sector, as facilitators of solutions to homelessness and crisis accommodation.

Council's role within The Plan is that of facilitator; Council has supported the community collaboration and creation through the facilitation of Community Workshops. Council also facilitates the Shoalhaven Homelessness Taskforce which is the reporting and evaluation platform for The Plan. Council will participate in actions from The Plan where they relate to Council core business however The Plan is primarily a community developed and led plan.



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Community Stakeholders

Community are the key lead and participant stakeholders involved in the creation and implementation of The Plan. Key community stakeholders involved in the development of The Plan and be involved in its implementation include:

- Community organisations and service providers, including specialist homelessness services and other crisis and support services
- · Community housing providers
- · Peak bodies and advocacy groups
- Community groups and individual community members, including people experiencing, at risk or with lived experience of homelessness
- · Local corporate and business sectors

This Plan will be jointly and collectively led by all key stakeholders listed above, with support from Council through Homelessness Taskforce. The actions included in The Plan are based on initiatives identified through the collaborative efforts of stakeholders from across Shoalhaven and provides platform for a collective approach from all stakeholders, to deliver the most efficient outcomes. Community stakeholders mentioned above will take on the 'lead' and 'participant' stakeholder positions involved in the actions of The Plan's focus areas.





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SHOALHAVEN AFFORDABLE HOUSING STRATEGY

There are significant opportunities for local government to support the creation and maintenance of affordable housing through core planning legislation and policies in NSW, and a statutory requirement for local government to consider this issue. Local government has an implicit role in affordable housing and an impact on affordability through land use zoning, controls, the timing of land release, location of services and facilities, and the levying of rates and development contributions. Local government can also choose to play a more proactive role in the creation and retention of affordable housing through active intervention in the market through the development of appropriate planning mechanisms and strategies.

The 'Shoalhaven Affordable Housing Strategy' (Strategy) was adopted by Shoalhaven City Council in late 2017 and released in early 2018. The current Strategy provides a range of effective policy solutions to facilitate additional affordable housing across Shoalhaven. This Strategy has been designed to be implemented through a number of key stages over ten years with short, medium and long-term strategies. The initial focus is on strategies that are most likely to have a practical impact on the supply of affordable housing, particularly the development of surplus or underutilised Council land in partnership with a community housing provider. The Strategy also provides for ongoing and sustainable engagement of Council in affordable housing through long-term strategies related to relevant planning mechanisms and amendments to relevant planning instruments. The current Strategy is mentioned throughout this Plan where it relates to the relevant focus areas, particularly in the housing and accommodation focus area. The current Strategy can be found on the Shoalhaven City Council Website.





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HOUSING CONTINUUM

The Housing Continuum refers to the type of housing people may move through and live in throughout their lifespan, depending on their personal circumstances. The current 'Shoalhaven Affordable Housing Strategy' covers the sections of the housing continuum that deal with the provision of affordable housing (both public and private) and the creation of new social housing stock, which is generally outside the scope of the community and homelessness sector. Thus the 'Housing and Accommodation' Focus Area of this Plan will include actions relating to homelessness, short-term emergency, medium-term transitional housing and supported accommodation. There is potential for the community and homelessness sector to help advocate to Federal and State government for additional social and affordable housing stock, in accordance with the 'Advocacy and Lobbying' Focus area of this Plan.

HOMELESSNESS SUPPORTED HOUSING TRANSITIONAL HOUSING SOCIAL HOUSING AFFORDABLE HOUSING PRIVATE RENTAL HOME OWNERSHIP

SHOALHAVEN COMMUNITY LED PLAN HOMELESSNESS SHOALHAVEN AFFORDABLE HOUSING STRATEGY





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ACTION TABLE DEFINITIONS

Lead Stakeholder

Lead Stakeholders will be assigned to a focus area and will be responsible for managing the administration of the group(s) and reporting working progress updates to the Shoalhaven Homelessness Taskforce. There may be multiple lead stakeholders with the groups who will be responsible for the delivery of specific action items.

Participant Stakeholder

Participant stakeholders will assist with specific action items within a focus area where required, consulted, assigned a task. Participant stakeholders may take on specific tasks, provide access to resources, provide information, and/or contribute ideas, suggestions and opinions in the planning and decision-making parts of the project.

Action

The Actions in each focus area were generated by community. This Plan consolidates all the actions from the community into Focus Areas and assigns them to various Desired Outcomes. This has been done to create a unified direction and encourage collaboration of resources.

Desired Outcomes

The Desired Outcomes in each focus area are what the community hopes to achieve through The Plan. The Actions that are undergone to achieve these desired outcomes may be evaluated yearly and can be changed, added, or removed, however the desired outcomes will not change until The Plan's five-year evaluation. The Desired Outcomes identify the real reason for the Actions and therefore enable the community to adapt the various Actions as required to achieve these outcomes.

Related Resource

The Related Resource to each Action item refers to any resource that can be used in the implementation of that action. This can include local, state, and federal programs and projects, grant opportunities, committees and interagency groups, online resources and websites, statistics and academic studies, field experts, physical assets (such as halls and office spaces), and more. The use of local resources to help solve local problems is key in the execution of any aspects of The Plan.



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Time Frames

Short term within 12 months

Medium term within 3 years

Long term within 5 years +



Evaluation Procedures

Council facilitates the Shoalhaven Homelessness Taskforce (SHT) which is the reporting and evaluation mechanism for The Plan and will ensure the continued implementation of the actions. The SHT meets on a quarterly basis and is a strategic advisory committee to advocate for and inform Council's decision-making process related to homelessness in the Shoalhaven. Lead stakeholders of each of The Plan's focus areas are to provide progress updates on their action items at regular SHT meetings. An evaluation of this Plan occur at the final SHT meeting of each year. This evaluation will include a review and update of action items as necessary. A full review of this Plan will occur on the five-year anniversary of its establishment and will continue every five years following this.



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EARLY INTERVENTION & COLLABORATIVE SUPPORT



The focus is to increase the capacity of the community to work collaboratively and utilize multidisciplinary approaches to achieve quality outcomes and systemic response to homelessness. The aim is to allow people experiencing disadvantage or homelessness in Shoalhaven to have increased access to a range of outreach services to improve wellbeing and protective factors against homelessness and prevent or reduce time spent homeless.

COMMUNITY AWARENESS & EDUCATION

2

It is important to reduce the stigma surrounding homelessness and increased community understanding and participation in response to homelessness. This focus area also includes building a better understanding of the extent and nature of homelessness in Shoalhaven, including through information and data collection, and learning from people with lived experience of homelessness.

ADVOCACY AND LOBBYING



This focus area aims to develop a unified approach to advocate and highlight to all levels of Government the homelessness crisis that is being experienced throughout Shoalhaven. The focus of the advocacy is to support legislative changes, budget increases to the homelessness sector, and ensure there are mechanisms in place to increase the supply of appropriate housing (emergency, social and affordable) in Shoalhaven. The working group for this focus area may also advocate for funding and support on behalf of projects working groups in other focus areas of The Plan are working on.



HOUSING AND ACCOMMODATION

This area of focus is to increase the capacity of the community and homelessness sector to provide alternative housing and shelter options, focusing on emergency, medium-term transitional and supported housing options.



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FOCUS AREA 1: EARLY INTERVENTION & COLLABORATIVE SUPPORT

No.	Desired Outcome	Action	Lead Stakeholder	Participant Stakeholders	Related Resources	Time Frame
1.1	Safe venues where people experiencing homelessness can enjoy leisure time and access resources and facilities	Tailor spaces and services at current or developing facilities to encourage inclusivity and participation		swcc	Libraries Youth Centres Neighbourhood Centres Community Gardens Blackseed	Short
1.2		Regular outreach service hubs at various locations in Shoalhaven		Waminda Uniting LAC SCH assertive outreach SCC	Thrive Together Neighborhood Resource Centres Shoalhaven Libraries	Short
1.3	Improve access pathways to resources and services across Shoalhaven, including accommodation services	Local Resource Directory: Doing it Tough Guide and Path2Home website	SCH	scc	Street Smart Grants	Short
1.4		Strengthen accommodation pathways for people exiting institutional care (correction centres and hospitals)	Achievable You Waminda	swcc sch	Corrective Services Inmate early release scheme	Long
1.5	Coordination of volunteers amongst services in Shoalhaven to assist in filling gaps in service provisions	Creation of volunteer register/pool, accessible by all organizations			Centrelink volunteer pool NSW Volunteering website Work Development Orders	Medium



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1.6		Appropriate training for local volunteers			Homelessness NSW Shoalhaven Interagency Wollongong Council volunteer model	Medium
1.7	Strengthen collaboration and flexibility of resources amongst service providers	Develop strong collaborative networks to understand the range of service providers and implement client centred approaches	Care South	All	End Street Sleeping Collaboration LLIAC Homelessness Interagency Ulladulla Interagency Police Youth Action Meetings	Short
1.8	Improve transport options for people experiencing disadvantage to assist access to services, employment, and education opportunities	Coordination of transport shuttle bus options across Shoalhaven		Focus Area 3 Working Group	Worker's bus Local Transport Committee Transport NSW has increased bus services	Long
1.9	Strengthen communities' education surrounding applying for rentals and tenancy rights	Education programs regarding applying for and maintaining rentals and tenancy rights		sсн	Keys to Rent Highschool welfare officers for early intervention Tenants Union Legal Aid Murramiya	Medium
1.10	Assist those experiencing	Pet minding and pet health assistance	swcc		SWCC pet minding Animal welfare league RSPCA	Short
1.11	homelessness to keep their pets and maintain the heath of their pet	Assisting Short- Term Emergency Accommodation to include facilities for pets	swcc	Focus Area 4 Working Group		Long



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FOCUS AREA 2: COMMUNITY EDUCATION AND AWARENESS

No.	Desired Outcome	Action	Lead Stakeholders	Participant Stakeholders	Related Resources	Time Frame
2.1	Strengthen collaboration between service providers and real estate agents to increase prospects of leaseholds and accommodation options	Arrange meetings and community forums with service providers and real estate agents to deliver Shoalhaven Homelessness Snapshot	Salt SWCC ISLHD - Partnerships and Projects Co-ordinator	ISLHD SCC Library Services Australia Headspace Keith Davis Mick Sweeny Real Estate Representative	Social Media - existing platforms including local community Faceboards. Community Consultative Bodies Local Libraries local Chamber of Commerce and CCB's	Short
2.2	Build community education and support of the Shoalhaven homelessness crisis and people experiencing disadvantage	Living Libraries and panel discussion events at the Library		ISLHD	Local community champions and people with lived experience Libraries	Short
2.3	Better understanding of the extent and nature of homelessness in Shoalhaven through information and data collection	Create Quarterly Homelessness Snapshot and website	Mick Sweeney (Shoalhaven Community Resident)	SCC Keith Davis (Shoalhaven Community Resident) ISLHD Mental Health	Peakbody Grants Profile ID Housing ID ABS Quickstats	Short





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FOCUS AREA 3: ADVOCACY & LOBBYING

No.	Desired Outcome	Action	Lead Stakeholders	Participant Stakeholders	Related Resources	Time Frame
3.1	Increased funding and support from state and federal government for	Develop a unified approach to advocate to State and Federal government for more social and affordable housing options for all of Shoalhaven	Erin Mulally - Shoalcoast Community Legal Centre Liv Todhunter - Legal Aid	SCC Nowra Community Mental Health Unions Shoalhaven CWA Shoalcoast Community Legal Centre Legal Aid NSW ADACAS St Vincent De Paul (Volunteer Group) My Best Life	Homelessness Taskforce Homelessness Interagency 'Everybody's Home Petition' Priority List data CWA information Tenants Union data	Short: 2023 NSW State Election s
3.2	homelessness services and increases in social and affordable housing	Develop a unified approach to advocate to State and Federal government for legislative changes	Erin Mulally - Shoalcoast Community Legal Centre Liv Todhunter - Legal Aid	SCC Nowra Community Mental Health Unions Shoalhaven CWA Shoalcoast Community Legal Centre Legal Aid NSW ADACAS St Vincent De Paul (Volunteer Group) My Best Life	Homelessness Taskforce Homelessness Interagency	Short: 2023 NSW State election



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FOCUS AREA 4: HOUSING & ACCOMMODATION

No	Desired Outcome	Action	Lead Stakeholders	Participant Stakeholders	Related Resources	Time Frames
4.1	Increase the supply of medium to long-term housing options through the use of currently vacant homes	Council to write to potential land owners re participation and accessing the outcome of the letter Partnering with homeowners to create affordable and/ supported rental housing options Lobbying for funding to support this action with wrap around services for those who need it	Salt SWCC SAHSSI-Hub	Patricia White SCCH SCC Focus Area 3 Working Group	Collective Homes Program (Salt)	Short
4.2	Increase the supply of	Create additional supported boarding houses*	SWCC Salt SCCH	SHS providers	Design Operation Success at helping people AHURI Common Ground Practice Manual Create resource to encourage involvement in delivery.	Long
4.3	emergency and transitional housing	Community organisations collaboratively invest in tiny homes, or similar concept, for emergency and/or transitional housing in appropriate location**	SWCC Better Life Salt		NSW Core and Cluster Domestic Violence Housing Program AHURI Common Ground Practice Manual Tiny Homes Foundation Cosford.	Medium



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4.3		Establish pilot 'meanwhile use' program for short- term housing through the use of private local vacant buildings***	SAHSSI Better Life Patricia White	NSW Government	NSW Legislative Inquiry: Options to access existing and alternate accommodation to address the social housing shortage (August 2022) AHURI Common Ground Practice Manual	Long	
Shoalhaven Affordable Housing Strategy relevant strategies: (Please refer to the full Shoalhaven Affordable Housing Strategy for more details)							
		Strategy 2: Council Owned site for affordable housing partnership (42-46 Coomea St, Bomaderry)		Strategy 16: Council will develop a 'Voluntary Planning Agreement Policy' regarding incentive-based approaches			
Increase supply of affordable housing			Strategy 14: Council will develop DCP guidelines consistent with state government policy and legislation to support development of 'New Generation' boarding houses.		Strategy 15: Council to develop guidelines to encourage higher proportion of permanent sites on caravan parks		
\$	stock through new developments		Strategy 17: Council will consider reduction of parking requirements [where smaller one and two- bedroom apartments are constructed]		Strategy 19: Council to consider inclusions to Shoalhaven Development Control Plan 2014 to incentives the creation of land for adorable housing.		
		Strategies 21 - 26: Council will mandate affordable and low-cost dwelling types in appropriate developments and locations					
	Create alternative routes for low to medium income earners to own or rent properties		Cooperative housing to be considered in the Affordable Housing Strategy Update		Strategy 5: Council to develop shared equity model in conjunction with a community housing provider		

*Similar goal as found in Shoalhaven Affordable Housing Strategy, Strategy 13 Council to actively promote and support the development of high quality 'new generation' boarding houses

** Similar goal as found in Shoalhaven Affordable Housing Strategy, Strategy 7: Council to facilitate the development of residential caravan park or MHE development on council or public owned land in partnership with community housing provider, providing opportunity for tiny homes model, subject to further feasibility assessment

*** Similar goal as found in Shoalhaven Affordable Housing Strategy, Strategy 6: Investigate and advocate for temporary housing opportunities on NSW government land that is awaiting future development



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GLOSSARY

Short-term Emergency Housing

Caters for people who are in immediate crisis or are at great risk of becoming 'Emergency Temporary homeless. Accommodation' is available through DCJ and allows up to three months of cost-free accommodation for people Australian citizens are permanent residents. This temporary accommodation is predominately in the form of hotel rooms or refuges run by specialist homelessness service providers. Specialist homelessness service providers and other nongovernment organisations may also provide short-term crisis housing through refuges where the cost and length of stay conditions may vary depending on each provider.

Medium-term Transitional Housing

Short to medium term subsidised rental housing for people who have been in crisis and are ready to move on to more stable accommodation whilst waiting for a permanent social housing property. Transitional Housing is accessed only through a nomination made by a Specialist Homelessness Service and a person must be on the Social Housing waiting list to be eligible. Non-government organisations may also provide medium-term housing through their own accommodation or housing programs and cost and length of stay conditions may vary depending on each provider.

Supported Accommodation

Is a type of housing that provides higher level care and support for people with particular needs. This includes assisted boarding houses accommodating two or more persons with additional needs, specialised housing such as shared supported accommodation or community residential units, known as Specialist Disability Accommodation (SDA), and Aged Care Homes which a residential care services providing support for older people that need care and can no longer live at home.

Affordable Housing

Is targeted for working people earning a low-to-moderate income and aims to fill the gap between social housing and the private rental market. Affordable housing is not the same as social housing; social housing properties are only offered to applicants on the NSW Housing Register, whereas affordable housing is open to all applicants and does not require a waiting list. Properties delivered as affordable housing are open to a broader range of household incomes than social housing, so tenants can earn more income and still be eligible. Rent is calculated differently and there are different tenancy arrangements. Community Housing Providers Specialist Homelessness Services often manage affordable housing properties on behalf of government, developers, and property investors.



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Social housing

Secure and affordable rental housing for people on low incomes who need accommodation. Social housing includes public housing properties owned or managed by NSW Land and Housing Corporation (LAHC), Department of Communities and Justice (DCJ), Aboriginal Housing Office, and community housing properties managed or owned by nongovernment registered Community Housing Providers, such as Southern housing Housing. Social applications are managed under the NSW Government Housing Pathways system, where you only have to complete one application to be on the state-wide waiting list. Social housing is considered permanent long-term housing.

Private Rental

Accommodation rented out directly by the owner or through a real estate agent. This includes a range of housing types including houses, rooms in share houses and caravan parks. Rent is dependent on market factors and set by the owner.

ABBREVIATION GLOSSARY				
ABS Quickstats	Australian Bureau Of Statistics Quickstats			
ADACAS	ACT Disability, Aged and Carer Advocacy Service Salt			
AHURI	Australian Housing and Urban Research Institute			
CWA	Country Women's Association			
ISLHD	Illawarra Shoalhaven Local Health District			
LLIAC	Local Implementation and Coordination Committee			
SAHSSI	Supported Accommodation & Homelessness Services Shoalhaven Illawarra			
SAHSSI-Hub	SAHSSI Homeless Hub			
SCC	Shoalhaven City Council			
SCCH	Shoalhaven City Council			
SHS	Specialist Homelessness Service			
SWCC	Safe Waters Community Care Inc			
Uniting LAC	Uniting Local Area Coordination			



