ATTACHMENTS TO

Commercial Services Committee Meeting Business Paper

2 December 2024

Table of Contents

Stage 1 - Pre Community Consultation Plans - 15 Dwellings

1. Cash Flow Forecast

Estimated Development Cost (incl. int.)		$7,356,000																				
Less : Council equity contribution (cash)		$1,749,000																				
Development Loan (principal & interest)		$5,607,000																				
interest Rate		5.20%																				
Year Ending	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**Totals**
Rent growth factor	2.00%																					
Rent		457,600	466,752	476,087	485,609	495,321	505,227	515,332	525,639	536,151	546,874	557,812	568,968	580,347	591,954	603,793	615,869	628,187	640,750	653,565	666,637	11,118,476
Loan Payments		457,600	457,600	457,600	457,600	457,600	457,600	457,600	457,600	457,600	457,600	457,600	457,600	457,600	457,600	457,600	457,600	457,600	457,600	457,600	457,600	9,152,000
Def/Surplus		0	9,152	18,487	28,009	37,721	47,627	57,732	68,039	78,551	89,274	100,212	111,368	122,747	134,354	146,193	158,269	170,587	183,150	195,965	209,037	1,966,476
Capital growth factor	2.00%																					
Capital Value Growth	$11,750,000	11,985,000	12,224,700	12,469,194	12,718,578	12,972,949	13,232,408	13,497,057	13,766,998	14,042,338	14,323,184	14,609,648	14,901,841	15,199,878	15,503,875	15,813,953	16,130,232	16,452,837	16,781,893	17,117,531	17,459,882	

2. Analysis

Forecast Cash Surplus		
Total rental received		$11,118,476
Less : total loan payments		$9,152,000
Cash surplus after 20 years		$1,966,476
Total Return to Council (asset value + cash surplus)		
Estimated capital value on completion of construction		$11,750,000
Capital value growth rate over 20 years @	2.00% p.a.	
Forecast Capital Value (20 years @ 2% p.a.)		$17,460,000
Add surplus cash received		$1,966,476
Total return to Council (if dwellings are sold after 20 years)		$19,426,476
Council Equity Contribution		
Equity/cash invested		$1,749,000
Land - 5 lots @ $450,000/lot (excl. GST)		$2,250,000
Total equity/funds/assets applied)		$3,999,000
Return on Concil Equity Contribution		
Total return to Council (if dwellings are sold after 20 years)		$19,426,476
Less: Initial Council Equity Contribution (equity/funds/assets applied)		$3,999,000
Net Return to Council		$15,427,476
ROI (Total return to Council divided by initial equity/funds/assets applied)		385.78%

Stage 1 - Post Community Consultation Plans - 13 Dwellings

1. Cash Flow Forecast

Estimated Development Cost		$5,966,000																				
Less : Council equity contribution (cash)		$1,939,000																				
Development Loan (principal & interest)		$4,027,000																				
interest Rate		5.20%																				
Year Ending	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**Totals**
Rent growth factor	2.00%																					
Rent		328,640	335,213	341,917	348,755	355,731	362,845	370,102	377,504	385,054	392,755	400,610	408,623	416,795	425,131	433,634	442,306	451,152	460,175	469,379	478,766	7,985,088
Loan Payments		328,640	328,640	328,640	328,640	328,640	328,640	328,640	328,640	328,640	328,640	328,640	328,640	328,640	328,640	328,640	328,640	328,640	328,640	328,640	328,640	6,572,800
Def/Surplus		0	6,573	13,277	20,115	27,091	34,205	41,462	48,864	56,414	64,115	71,970	79,983	88,155	96,491	104,994	113,666	122,512	131,535	140,739	150,126	1,412,288
Capital growth factor	2.00%																					
Capital Value Growth	$9,350,000	9,537,000	9,727,740	9,922,295	10,120,741	10,323,156	10,529,619	10,740,211	10,955,015	11,174,116	11,397,598	11,625,550	11,858,061	12,095,222	12,337,126	12,583,869	12,835,546	13,092,257	13,354,102	13,621,184	13,893,608	

2. Analysis

Forecast Cash Surplus			
Total rental received			$7,985,088
Less : total loan payments			$6,572,800
Cash surplus after 20 years			$1,412,288
Total Return to Council (asset value + cash surplus)			
Estimated capital value on completion of construction			$9,350,000
Capital value growth rate over 20 years @	2.00%	p.a.	
Forecast Capital Value (20 years @ 2% p.a.)			$13,894,000
Add surplus cash received			$1,412,288
Total return to Council (if dwellings are sold after 20 years)			$15,306,288
Council Equity Contribution			
Equity/cash invested			$1,939,000
Land - 5 lots @ $450,000/lot (excl. GST)			$2,250,000
Total equity/funds/assets applied)			$4,189,000
Return on Concil Equity Contribution			
Total return to Council (if dwellings are sold after 20 years)			$15,306,288
Less: Initial Council Equity Contribution (equity/funds/assets applied)			$4,189,000
Net Return to Council			$11,117,288
ROI (Total return to Council divided by initial equity/funds/assets applied)			265.39%

Key Worker Housing Feaso Analysis - Pre & Post Comm. Consult. Nov 24.xlsx 22/11/2024

All Stages - Pre Community Consultation Plans - 38 Dwellings

1. Cash Flow Forecast

Estimated Development Cost		$18,245,000
Less : Council equity contribution (cash)		$4,582,000
Development Loan (principal & interest)		$13,663,000
interest Rate		5.20%

Year Ending	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**Totals**
Rent growth factor	2.00%																					
Rent		1,115,000	1,137,300	1,160,046	1,183,247	1,206,912	1,231,050	1,255,671	1,280,785	1,306,400	1,332,528	1,359,179	1,386,362	1,414,090	1,442,371	1,471,219	1,500,643	1,530,656	1,561,269	1,592,495	1,624,344	27,091,567
Loan Payments		1,115,000	1,115,000	1,115,000	1,115,000	1,115,000	1,115,000	1,115,000	1,115,000	1,115,000	1,115,000	1,115,000	1,115,000	1,115,000	1,115,000	1,115,000	1,115,000	1,115,000	1,115,000	1,115,000	1,115,000	22,300,000
Def/Surplus		0	22,300	45,046	68,247	91,912	116,050	140,671	165,785	191,400	217,528	244,179	271,362	299,090	327,371	356,219	385,643	415,656	446,269	477,495	509,344	4,791,567
Capital growth factor	2.00%																					
Capital Value Growth	$29,050,000	29,631,000	30,223,620	30,828,092	31,444,654	32,073,547	32,715,018	33,369,319	34,036,705	34,717,439	35,411,788	36,120,024	36,842,424	37,579,273	38,330,858	39,097,475	39,879,425	40,677,013	41,490,553	42,320,365	43,166,772	

2. Analysis

Forecast Cash Surplus	
Total rental received	$27,091,567
Less : total loan payments	$22,300,000
Cash surplus after 20 years	$4,791,567

Total Return to Council (asset value + cash surplus)		
Estimated capital value on completion of construction		$29,050,000
Capital value growth rate over 20 years @	2.00% p.a.	
Forecast Capital Value (20 years @ 2% p.a.)		$43,166,772
Add surplus cash received		$4,791,567
Total return to Council (if dwellings are sold after 20 years)		$47,958,339

Council Equity Contribution	
Equity/cash invested	$4,582,000
Land - 12 lots @ $450,000/lot (excl. GST)	$5,400,000
Total equity/funds/assets applied)	$9,982,000

Return on Concil Equity Contribution	
Total return to Council (if dwellings are sold after 20 years)	$47,958,339
Less: Initial Council Equity Contribution (equity/funds/assets applied)	$9,982,000
Net Return to Council	$37,976,339
ROI (Total return to Council divided by initial equity/funds/assets applied)	380.45%

All Stages - Post Community Consultation Plans - 32 Dwellings

1. Cash Flow Forecast

Estimated Development Cost		$14,431,000																			
Less : Council equity contribution (cash)		$4,236,000																			
Development Loan (principal & interest)		$10,195,000																			
interest Rate		5.20%																			
Year Ending	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**Totals**
Rent growth factor	2.00%																					
Rent		832,000	848,640	865,613	882,925	900,584	918,595	936,967	955,706	974,821	994,317	1,014,203	1,034,487	1,055,177	1,076,281	1,097,806	1,119,762	1,142,158	1,165,001	1,188,301	1,212,067	20,215,412
Loan Payments		832,000	832,000	832,000	832,000	832,000	832,000	832,000	832,000	832,000	832,000	832,000	832,000	832,000	832,000	832,000	832,000	832,000	832,000	832,000	832,000	16,640,000
Def/Surplus		0	16,640	33,613	50,925	68,584	86,595	104,967	123,706	142,821	162,317	182,203	202,487	223,177	244,281	265,806	287,762	310,158	333,001	356,301	380,067	3,575,412
Capital growth factor	2.00%																					
Capital Value Growth	$23,450,000	23,919,000	24,397,380	24,885,328	25,383,034	25,890,695	26,408,509	26,936,679	27,475,412	28,024,921	28,585,419	29,157,128	29,740,270	30,335,075	30,941,777	31,560,613	32,191,825	32,835,661	33,492,375	34,162,222	34,845,466	

2. Analysis

Forecast Cash Surplus		
Total rental received		$20,215,412
Less : total loan payments		$16,640,000
Cash surplus after 20 years		$3,575,412
Total Return to Council (asset value + cash surplus)		
Estimated capital value on completion of construction		$23,450,000
Capital value growth rate over 20 years @	2.00% p.a.	
Forecast Capital Value (20 years @ 2% p.a.)		$34,845,466
Add surplus cash received		$3,575,412
Total return to Council (if dwellings are sold after 20 years)		$38,420,878
Council Equity Contribution		
Equity/cash invested		$4,236,000
Land - 12 lots @ $450,000/lot (excl. GST)		$5,400,000
Total equity/funds/assets applied)		$9,636,000
Return on Concil Equity Contribution		
Total return to Council (if dwellings are sold after 20 years)		$38,420,878
Less: Initial Council Equity Contribution (equity/funds/assets applied)		$9,636,000
Net Return to Council		$28,784,878
ROI (Total return to Council divided by initial equity/funds/assets applied)		298.72%

New South Wales

Ballina Local Environmental Plan 2012 (Amendment No 56)

under the

Environmental Planning and Assessment Act 1979

The following local environmental plan is made by the local plan-making authority under the *Environmental Planning and Assessment Act 1979*.

.....

Craig Diss
Acting Director, Hunter and Northern Region
Department of Planning, Housing and Infrastructure

As delegate for the Minister for Planning and Public Spaces

Dated: 21 October 2024

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Ballina Local Environmental Plan 2012 (Amendment No 56)

under the

Environmental Planning and Assessment Act 1979

1 Name of plan

This plan is *Ballina Local Environmental Plan 2012 (Amendment No 56)*.

2 Commencement

This plan commences on the day on which it is published on the NSW legislation website.

3 Land to which plan applies

This plan applies to the following land at 540 Gap Road, Alstonville—

(a) Lot 3, DP 1130300,

(b) Lots 21 and 22, DP 1243105.

4 Maps

The maps adopted by *Ballina Local Environmental Plan 2012* are amended or replaced, as the case requires, by the maps approved by the local plan-making authority on the making of this plan.

Schedule 1 Amendment of Ballina Local Environmental Plan 2012

[1] Clause 2.1 Land use zones

Insert "Zone SP4 Enterprise" in appropriate order under the heading **Special Purpose Zones**.

[2] Land Use Table

Insert in appropriate order—

Zone SP4 Enterprise

1 Objectives of zone

- To provide for development and land uses that support enterprise and productivity.
- To provide opportunities for new and emerging creative and high technology industries and recreational land uses.

2 Permitted without consent

Environmental protection works

3 Permitted with consent

Artisan food and drink industries; Building identification signs; Business identification signs; Car parks; Community facilities; Creative industries; High technology industries; Plant nurseries; Recreation areas; Recreation facilities (outdoor); Roads; Take away food and drink premises

4 Prohibited

Any development not specified in item 2 or 3

[3] Clause 5.4 Controls relating to miscellaneous permissible uses

Insert "Zone SP4 Enterprise," after "Zone E5 Heavy Industrial," in clause 5.4(10).

[4] Part 7 Additional local provisions

Insert at the end of the part, with appropriate clause numbering—

Development at 540 Gap Road, Alstonville

(1) This clause applies to the following land at 540 Gap Road, Alstonville in Zone SP4 Enterprise—
  (a) Lot 3, DP 1130300,
  (b) Lots 21 and 22, DP 1243105.

(2) In deciding whether to grant development consent on land to which this clause applies, the consent authority must consider the following—
  (a) the potential for development to create conflict with any adjoining agricultural land uses,
  (b) whether the development achieves a high standard of architectural design, materials and detailing and incorporates sustainable design principles, including the following—
    (i) sunlight,

(ii) natural ventilation,
(iii) reflectivity,
(iv) visual and acoustic privacy,
(v) safety and security,
(vi) resource, energy and water efficiency,
(vii) durability and adaptability.

(3) Development for the following purposes is permitted with development consent on land to which this clause applies if the development is associated with creative industries or high technology industries—
(a) hotel or motel accommodation,
(b) serviced apartments.

TUCKOMBIL QUARRY SITE OPPORTUNITIES ASSESSMENT

PHASE 1 – BYRON STUDIOS OPTION

BALLINA SHIRE COUNCIL
SEPTEMBER 2021

DOCUMENT CONTROL

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Job Name:	Tuckombil Quarry Site Opportunities Assessment
Client:	Ballina Shire Council
Client Contact:	Tony Partridge
Project Manager:	Fred Ibrahim
Email:	fred.ibrahim@aecgroupltd.com
Telephone:	(02) 9283 8400
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Final v2.0	12/10/21	CY	FI

EXECUTIVE SUMMARY

BACKGROUND

The Tuckombil Quarry ('the Site') is located at 540 Gap Road, Alstonville within Ballina Shire Council (Council) Area. It is positioned north-east of existing residential development and surrounded predominately by non-urban land. The quarry was previously operated by Lismore Council under lease from Council until August 2016. All quarrying activities has ceased on the Site with the termination of the lease. Currently located within the Site are two leased areas being used for asphalt processing and materials storage.

Due to the increasing concerns and complaints about the Site from residents, expansion for the purpose of increased quarrying remains unlikely. Council has also resolved not to renew the existing lease to Boral where asphalt processing occurs, which is due to expire 31 December 2024. As such, Council is looking for viable opportunities for the Site for future planning, with alternate options being more complementary to its close location to residential areas.

AEC Group ('AEC') and ATC Williams (ATCW) were engaged by Council to undertake an Opportunities Assessment for the Tuckombil Quarry Site that will identify options that are technically feasible and financially viable, while delivering maximum value for the community given its proximity to residential areas. The assessment will provide a recommendation for Council to adopt as a preferred approach for the future use of the Site.

The assessment will be undertaken in two phases:

- **Phase 1,** considers the proposal put forward by Byron Studios for use of the Site as headquarters for their filming operations under a long-term ground lease with progressive staged occupation.
- **Phase 2,** identifies alternative uses to the Site and assesses the options with an evaluation framework developed in collaboration with Council to determine the preferred use for the Site.

This report represents Phase 1 of the Opportunities Assessment.

KEY FINDINGS

Byron Studios is Byron Bay's first and only film studio, with facilities that comprise of stages, edit suites, production offices and screen theatres. Byron Studios has expressed strong interest in the potential for studios to be constructed at the Tuckombil Quarry Site.

An assessment was undertaken to evaluate Byron Studio's proposal, which includes multiple stages to accommodate for the existing leases on the Site. The proposal includes stages for construction of studio spaces, offices, temporary accommodation, theatre, and the use of the quarry pit for filming.

Key Risks and Considerations

The key risks and considerations identified for this option include:

- Rezoning of the Site will be required for the proposed uses of Byron Studios to be legally permissible. Although commercial uses are permissible (with development consent) under the 1(e) zoning of the BLEP 1987 as an advertised development, it conflicts with the primary objectives of the zone.
- Timing is a key risk. Byron Studio's license agreement at the Alstonville Cultural Centre ends in December 2022. Planning approvals will need to be obtained to enable Byron Studios to move onto the Site (area marked as Stage 1). Construction of a new studio space and access road will also be required prior to the cessation of Byron Studios license agreement to minimise disruption of Byron Studio's operations.
- Boral will still be in operation until the cessation of their lease in December 2024. Given Stage 1, 2 and 3 is proposed to be taken over by Byron Studios during this period, safety and security issues may arise if not properly managed.
- It is recommended that all remedial works to stabilise the quarry void are undertaken prior to the occupation of the Site, or at least prior to Stage 1A being occupied.

- Byron's proposed Stage 2A and Stage 4A developments are positioned in 'high risk' zones and are recommended be relocated elsewhere within the Site. Any proposed development close to the edges of the highwall will require detailed geotechnical investigation and analysis to provide information for design of remedial works and development infrastructure. The development may also require additional fencing and barriers to separate the Site users from fall risks.
- The area leased to Ron Southon Pty Ltd is used for the storage and maintenance of drilling plant and equipment, as well as the storage of hazardous materials. Ron Southon has advised that a buffer zone of 240 metres is required to store the current quantity of licensed explosives. This buffer zone could potentially reduce to 68 metres if a reduced quantity of explosives is stored on the site (Safework NSW, AS 2187.1 Separation Distances 1.1 Explosives). The 240-metre buffer zone requirement covers the majority of the Site, and could potentially impact the leasable area for all stages of the Byron Studios option, in particular Stage 2 where temporary accommodation for workers is proposed. If the buffer area is limited to a 68-metre requirement, the Byron Studios stages will be less restricted in its future use. Council staff have liaised with Ron Southon and note that he has advised that he is capable and willing to reduce the quantities of explosives stored on site in order to achieve the reduced buffer zone of 68 metres.

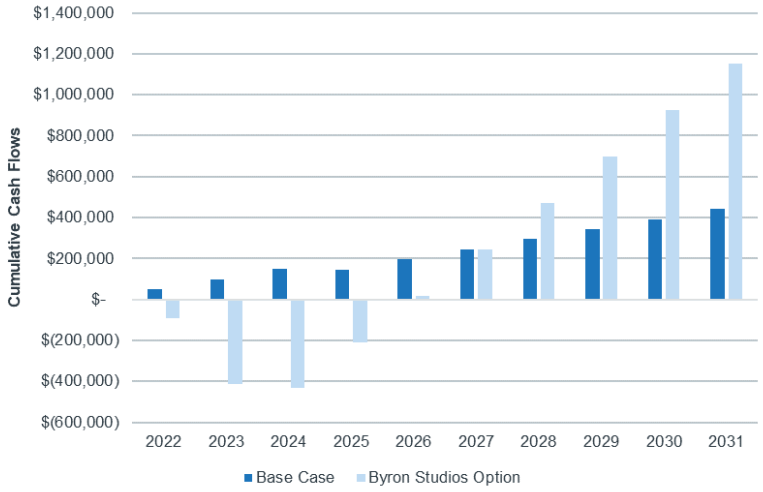
Financial Assessment

Modelling was undertaken to assess the financial implications of the Byron Studios option compared to the base case scenario (i.e. 'As-Is' scenario) over a 50-year period.

Overall, the Byron Studios options presents a net benefit of $6.2m (real terms) over a 50-year period, which is $4.65m of financial benefit in excess of the base case scenario.

The cumulative net cash flows over a 10-year period are presented below.

Figure ES. 1. Cumulative Net Cash Flows, Base Case vs. Byron Studios Option, 10-Year Period



Source: AEC.

Council has indicated that the allocation of quarry rehabilitation costs is approximately $700,000. This is sufficient to cover the rehabilitation works required for the Byron Studios option, which is estimated to cost $441,600, including project management fees and project contingency of 30%.

Other significant costs include rezoning costs of $150,000 and the construction of a new access road for Ron Southon $250,000. Factoring all these costs, it is estimated that the discounted payback period to Council will be 5.03 years, assuming all stages proposed by Byron Studios progress.

Economic, Social and Environmental Benefits

The Bryon Studios option presents a number of positive social, economic and environmental benefits, including:

- The operations of Byron Studios in the Ballina Shire will contribute significantly to the film and production industry within the region and the local economy. The studio employs local workers, and its plans for expansion is likely to create more local jobs and benefit other local businesses in ancillary industries.
- The change in use of the Site to a filming studio will be viewed positively by local residents. Council has indicated that there has been increasing complaints from community within the neighbouring residential areas, who have voiced their concerns about the operations of the quarry and the asphalt processing plant, including noise, pollution and traffic congestion.
- The Byron Studios option is likely to have fewer negative impacts on the environment, when compared to the existing use as an asphalt processing plant. There have been concerns raised about the potential health effects on local residents, as well as impact on the environment as a result of the pollution and noise from the bitumen plant operations. The use as a filming studio is likely to be more environmentally friendly than the bitumen plant.

TABLE OF CONTENTS

1. INTRODUCTION

1.1 BACKGROUND

The Tuckombil Quarry ('the Site') is located at 540 Gap Road, Alstonville within Ballina Shire Council (Council) Area. It is positioned north-east of existing residential development and surrounded predominately by non-urban land. The quarry was previously operated by Lismore Council under lease from Council until August 2016. All quarrying activities ceased on the Site with the termination of the lease to Lismore Council. Currently located within the Site are two leased areas being used for asphalt processing and materials storage.

Due to the increasing concerns and complaints from residents in adjoining areas relating to the quarry operations that were occurring on the Site, future expansion for the purposes of increased quarrying activity remains unlikely to be supported by Council. Council has also resolved not to renew the existing lease to Boral where asphalt processing occurs, which is due to expire 31 December 2024. As such, Council is looking for viable opportunities for the Site for the purposes of future planning. Alternate land use options considered more acceptable to Council and the community are likely to be complementary in nature to the surrounding residential neighbourhoods.

Adaptive re-use of disused quarries is not a new idea and has been undertaken successfully in both national and international cases. It is not uncommon for quarries to be located close to urban environments and with the footprints of residential communities and urban cities expanding into rural areas, the land in which former quarry sites occupy become more valuable in making places more attractive and liveable. Rehabilitation of quarries can yield many positive social, economic and environmental benefits however there is a financial cost to be considered as part of the evaluation process.

AEC Group ("AEC") and ATC Williams ("ATCW") were engaged by Council to undertake an Opportunities Assessment for the Tuckombil Quarry Site to identify options that are technically feasible and financially viable, while delivering maximum value for the community given its proximity to residential areas. This assessment provides a recommendation for Council to adopt as a preferred approach for the future use of the Site.

1.2 PURPOSE

The purpose of this report is to identify viable opportunities for the Tuckombil Quarry Site to enable Council to determine the future use of the Site.

The assessment will be undertaken in two phases:

- **Phase 1,** considers the proposal put forward by Byron Studios for use of the Site as headquarters for their filming operations under a long-term ground lease with progressive staged occupation. This scenario also assumes the Ron Southon tenancy of part of the Site continues. Two new and separate vehicular access roads connecting the designated tenancy areas to a public road are assumed to be constructed to allow access to the Byron Studios tenancy area and Ron Southern tenancy area.
- **Phase 2,** identifies alternative uses to the Site and assesses the options with an evaluation framework developed in collaboration with Council to determine the preferred use for the Site.

This report represents Phase 1 of the Opportunities Assessment.

1.3 APPROACH

The following tasks were undertaken for Phase 1:

- **Site Analysis and Inspection** – Overview of the Site including property details, locational context, relevant planning considerations, historical and existing uses and summary of the existing leases on the Site. An inspection of the Site was undertaken by AEC and ATCW, accompanied by a Council representative, on 16 July 2021.

- **Planning & Strategic Context** - Review of existing policies, strategies and studies to obtain an understanding of the objectives for the Site and Ballina Local Government Area (LGA) across relevant state and local strategies. This is summarised in Appendix A.
- **Hazard Identification and Risk Assessment** – Desktop review of existing information pertaining to the Site, including site inspection to observe current conditions of the quarry sidewalls to assess the risk of instability and geohazards.
- **Byron Studios Option Assessment** – Review of the option proposed by Byron Studios including the proposed staging, key risks and considerations, estimate of rehabilitation costs and financial implications for Council. Financial modelling was undertaken to compare the 'Base Case' and 'Byron Studios Case' options in order to measure the financial benefits that the Byron Studios occupation may potentially deliver over a 50-year period.
- **Phase 1 Findings** – Summary of the findings from the preceding sections and provides a high-level assessment of the Byron Studios option, including social, economic and environmental benefits to the community, financial considerations and alignment with Council objectives.

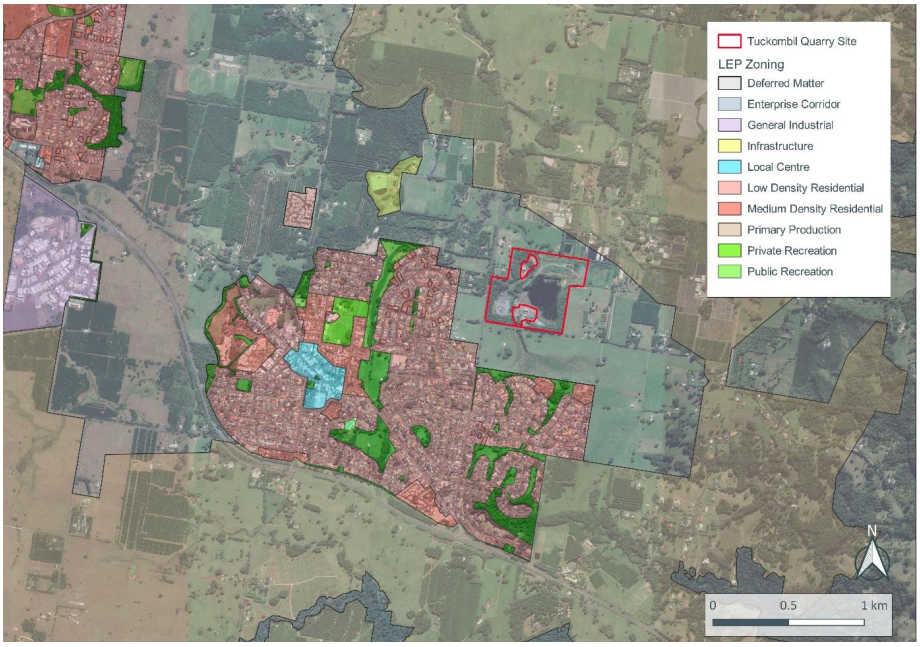
Phase 1 of the assessment is intended to provide Council with an initial assessment on the viability of the Byron Studios option. As part of Phase 2 of the assessment, alternate uses will also be developed and evaluated for the Tuckombil Quarry Site.

2. SITE ANALYSIS

2.1 LOCATION

The Tuckombil Quarry ("the Site") is located at 540 Gap Road, Alstonville within Ballina Shire Council (Council) Area. The Site is positioned north-east of existing residential development and surrounded predominately by non-urban, primary production land. The nearest residential areas to the Site are located approximately 200 metres to the west and 300 metres to the south.

Figure 2.1. Tuckombil Quarry Site Location



Source: AEC.

2.2 PROPERTY DETAILS

The Site is primarily contained within Lot 22 DP1243105, which extends to approximately 23 hectares with quarry production and ancillary uses also on-site occupying additional land. The Site also includes Lot 21 DP 1243105 and Lot 3 DP1130300, which are leased to Boral Asphalt and Ron Southon, respectively. The total land area of the Site is approximately 25.5 hectares. Vehicular access to the Site is via a driveway entrance on the northern side of Gap Road, about 250 metres east from the Teven and Gap Roads intersection. The land leased to Ron Southon (Lot 3 in DP 1130300) benefits from a right of carriageway 8 metres wide which travels through the Bitupave tenancy area and shares the same driveway entrance from Gap Road.

The quarry has been in existence since 1908 and operated by Lismore City Council under lease from Ballina Shire Council until August 2016. All quarrying activities ceased on the site with the termination of the lease.

The operation of the quarry is governed by development consent DA1995/276. The development consent does not specify a maximum time period for the quarries continued operation. Condition 9 of the consent enables the extraction of a maximum of 450,000m^3 (1.3 million tonnes).

Figure 2.2. Tuckombil Quarry Site, Property Lot Information

Source: AEC.

2.2.1 Planning Considerations

The Site, including the quarry pit and leased areas, is currently identified as a 'Deferred Matter' zoning under the Ballina Shire Local Environmental Plan (BLEP) 2012. The preceding BLEP 1987 continues to apply to 'Deferred Matter' land, which identifies the Site's zoning as **1(e) Rural (Extractive and Mineral Resources)**.

The primary objectives of the 1(e) zoning under the BLEP 1987 are:

(a) to identify land which are extractive or mining industry potential,
(b) to prohibit development which would result in the withdrawal of actual or potentially productive mineral resources land, and
(c) to prohibit development which would be adversely affected by the operations of extractive or mineral resources development, particularly adverse affects from noise, vibration or dust.

The permissible and prohibited uses are outlined in Table 2.1.

Table 2.1. Permissible and Prohibited Uses, Zone 1(e), BLEP 1987

Category	Uses
Permissible without development consent	Agriculture; forestry.
Permissible only with development consent	Bush fire hazard reduction; dwelling-houses; extractive industries; home industries; industries (other than offensive or hazardous industries); mines; open space; roads; telecommunications facilities; utility installations.
Advertised development – only with development consent	Any purpose other than a purpose specified in item 2, 3 or 5.
Prohibited development	Brothels

Source: BLEP (1987).

The area surrounding the quarry site is zoned 7(i) Environmental Protection (Urban Buffer) under the provisions of Ballina LEP 1987 and remains in place today as the area is deferred from the Ballina LEP 2012. The primary objective of the zone is to "*create a rural buffer in the locality of Alstonville and Wollongbar and to prevent development of an urban character within any part of the zone which is likely to be seen by existing or likely future residents of the villages of Alstonville and Wollongbar or from a major road in the locality.*"

The Ballina Development Control Plan (DCP) 2012 – Chapter 2 General and Environmental Constraints, Part 3, contains guidance regarding minimum required buffer distances for extractive industries and mining. A buffer of 500 metres is nominated between residential uses, or 1,000 metres if blasting occurs.

2.2.2 Existing Leases

The Site is currently subject to two leases, comprising:

- Bitupave Ltd (Boral Asphalt or 'Boral'), and
- Ron Southon Pty Ltd.

Figure 2.3. Leased Areas of the Tuckombil Quarry

Source: AEC.

Boral Asphalt leases a portion of the Site at the front of the quarry for the purposes of operating an asphalt batching plant. The plant has been in operations since 1978, contributing to major highway and local road projects. Boral announced that regular operations ceased at the end of July 2020 and is no longer open for sales. The plant currently operates on an infrequent basis to support any major customer projects until the expiry of the lease with Council.

The second area is leased to Ron Southern for the purpose of storage and maintenance of drilling plant and equipment and the storage of hazardous materials. This use was approved in 1998 pursuant to the conditions contained within development consent DA1998/252.

Table 2.2 outlines the key details of the Boral and Ron Southon leases.

Table 2.2. Tuckombil Quarry Site, Lease Details

Details	Boral Asphalt Lease	Ron Southon Lease
Lessor	Ballina Shire Council	Ballina Shire Council
Lessee	Bitupave Ltd (ACN. 000 102 376)	Ron Southon Pty Limited (ACN. 067 549 339)
Premises	Lot 21 in DP1243105	Lot 3 in DP1130300
Term	Five (5) years	Five (5) years
Commencement Date	1 January 2020	1 January 2020
Terminating Date	31 December 2024	31 December 2024
Option to Purchase / Renew	Nil / Nil	Nil / Nil
Base Rent	$47,745.23 per annum plus GST	$16,000 per annum plus GST
Rent Review	Subject to an annual increase of CPI Adjustment	Subject to an annual increase of CPI Adjustment
Percentage of Outgoings	Lessee liable for 100% of outgoings	Lessee liable for 100% of outgoings
Permitted Use	Asphalt batching plant, storage of related bulk materials, storage and repairs of plant and equipment, and stockpiling of quarry product	Depot for storage and maintenance of drilling plant and equipment and storage of hazardous materials
Development Consent	DA No. 1995/27 dated 30 March 1995	DA No. 1998/252 dated 26 August 1998
Other Notable Clauses	Clause 31(a) requires the Lessee to remove any fixtures and fittings from the Property, and complete any required rehabilitation works prior to the cessation of the lease.	Clause 31(a) requires the Lessee to remove any fixtures and fittings from the Property, and complete any required rehabilitation works prior to the cessation of the lease.

Source: Ballina Shire Council.

Both leases are due to expire on 31 December 2024. Council has resolved to not renew Boral's lease on the Site upon expiry. Council has indicated that Boral intend to continue operating the plant and remaining in their tenancy arrangement until the end of the lease term.

Ron Southon has expressed a strong preference to remain on the Site due to significant investment (both infrastructure and employment) made since commencing on the Site in 1999. This business was relocated to this site by Council in 1998, to support the business to be able to operate. The requirement to relocate this operation again will likely result in the cessation of their business.

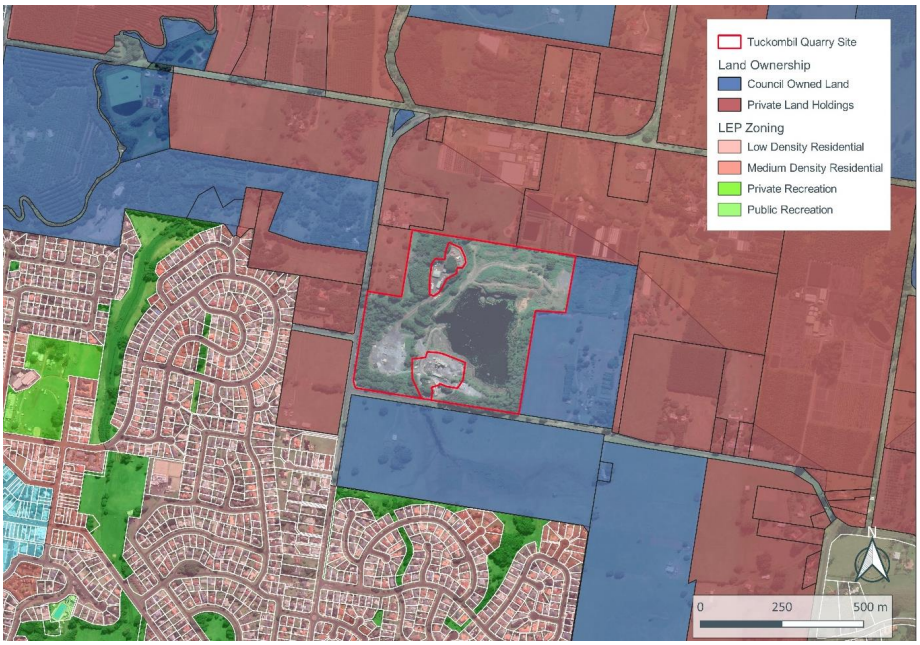
2.2.3 Adjoining Land

Figure 2.4 illustrates the ownership of the land immediately adjoining the Site (either public or private ownership).

The surrounding area to the east, north and west comprise farm properties including avocado and nut tree orchards. To the south, across Gap Road is additional open fields owned by Council surrounding the Alstonville Scout Hall on 485 Gap Road. A dwelling adjoins the western boundary of the Site. Residential zoned areas are located approximately 200 metres to the west and 300 metres to the south of the Site.

The land immediately adjoining the eastern boundary of the Site are hockey fields, and a nursery operated by Council. In the Tuckombil Quarry Development Plan commissioned by Council (Ausrocks, 2015), it was identified that 50% of this lot (Lot 4, DP1130300) would be ideal if an expansion of the quarry was to occur.

Figure 2.4. Land Adjoining the Tuckombil Quarry Site, Council and Private Ownership



Source: PriceFinder, AEC.

3. HAZARD IDENTIFICATION AND RISK ASSESSMENT

An overall project goal is to rehabilitate the quarry to make it safe to humans and wildlife, be non-polluting, be stable and be able to sustain complementary long-term land uses. This section outlines the work undertaken by ATC Williams, which includes an analysis of the current condition of the quarry and identifies the potential hazards and associated risks.

The approach included the following:

- **Desktop review** of existing background information to the quarry (e.g. geological maps, borehole logs, topographic survey data, hydrogeological reports, geotechnical data, etc).
- **Site walkover**, consisting of a visit to the quarry to carry out visual inspection for collation of a photographic record and to observe current conditions, particularly at the quarry sidewalls.
- **Risk Assessment,** identifying the potential risks of occurrence of instability and geohazards (e.g. rockfalls, toppling and/or wedge failures, subsidence etc. and providing an assessment the level of risk (low, medium, high).

3.1 DESKTOP REVIEW

The Site comprises Lot 22 of DP 1243105, with the quarry void (approximately 5.8 ha) located in the central and eastern part of the lot. It is understood from Council that quarrying activity ceased and that there are currently two tenants occupying the area surrounding the void. Upon cessation of quarrying, pumping to remove water inflows was stopped and the void has become water filled. The depth of water to the floor of the void is not currently known. It is also not known if the void completely fills with water, if there is a controlled spillage point, or if water drains away when a specific level is reached.

Natural topography in Lot 22 of DP 1243105 is gently undulating with topographic highs of approximately RL 140 m AHD close to the western and eastern site boundaries, falling to around RL 120 m AHD at the northern end. Branch Creek, a minor watercourse, flows from south to north through the Site. Rural properties surround the Site on all sides, with Teven Road running along the western boundary and Gap Road along the southern boundary.

It was found that the Tertiary-aged Lismore Basalt of the Lamington Volcanics exist beneath the Site. These rocks typically consist of basalt and agglomerate that were erupted from widespread volcanic activity through the eastern part of NSW over the last 65 million years.

The Ausrocks report (2015) also suggested that Jurassic-aged sedimentary rocks (i.e. mudstone, siltstone, sandstone and coal) of the Kangaroo Creek Sandstone, Walloon Coal Measures and Bundamba Group exist below the Lismore Basalt. No known geological faults occur within the Site.

3.2 SITE INSPECTION

On 16 July 2021, a senior engineering geologist from ATCW carried out a site inspection to assess the existing conditions at the quarry, particularly at the void sidewalls. Photographs from the inspection are presented in the Appendix B.

Weather conditions at the time of the visit were changeable with periods of rainfall, sunny spells and high winds occurring. Due to the water-filled nature of the void, the condition of the sidewalls was mainly observed from the crest of the opposite sidewall, although an access road running down into the southwest corner of the quarry enabled localised closer inspection. In addition, some drone photography (illustrated in Figure 3.1) was collected out as part of the inspection, however this was cut short due to inclement weather conditions.

Figure 3.1. Drone Views of Quarry Void

View of Northern Part of Quarry Void	View of Southern Part of Quarry Void
	
View of Eastern Part of Quarry Void	**View of Western Part of Quarry Void**
	

Source: ATCW.

3.2.1 Northern Sidewall

The northern sidewall runs from east to west, is approximately 150 m long and consists of a series of benches which extend towards the north. Three benches were observed in the west, increasing to four benches in the east. A near vertical rockface of estimated slightly weathered to fresh, medium strength dark grey columnar basalt was observed on the lower part of the face. This is in the order of approximately 8 m to 10 m high in the west, falling to approximately 6 m high in the east.

In general, this sidewall comprised fractured to highly fractured basalt and some loose blocks were observed during the inspection. The rockface was relatively bare, with sparse vegetation noted comprising occasional shrubs and saplings. Two densely vegetated stockpiles (partially submerged) were recorded in the quarry void (i.e. at the base of the central part of the rockface).

In general, moderately to highly weathered, estimated very low strength orange-brown basalt and very stiff to hard sandy clay residual soil (derived from weathering of the basalt) was observed in the benches above the dark grey basalt. These benches extended vertically for a total of approximately 10 m to 15 m in height. In the eastern part of the sidewall, an approximately 5 m high near-vertical face was observed and this appeared stable at the time of the inspection. Vegetation (i.e. grasses, shrubs, saplings, bamboo) has established at the crest of the benches, and occasional ponds of water were noted.

3.2.2 Western Sidewall

The western sidewall is approximately 200 m long and generally extends southwest to northeast across the central portion of the site. An access road runs down into the southwest corner of the void into the only area that was not water-filled at the time of the site visit. This allowed for close-up inspection of the sidewalls locally. Therefore, the western sidewall is discussed in two subsections, as follows.

Central to Northern Portion

The central to northern part of the western sidewall comprises an approximately 8 m to 10 m high near vertical rockface of estimated slightly weathered to fresh, medium strength dark grey columnar basalt. The rock mass was generally blocky and folded at the northern end of the wall with some patches of vegetation (mainly grasses) on the face.

Most of the central part of the sidewall was obscured by dense vegetation including grasses, ferns, shrubs, saplings, and mature trees. Where vegetation was absent, loose blocks and fractured rock were noted at the transition zone between the northern and central portions.

Southwest Corner

An existing access ramp runs down into the void from the southwest corner. An approximate 6 m to 8 m high (near vertical) rock face was observed on the western side (i.e. above the road). The rock mass was highly fractured and blockier towards the crest where overhanging loose blocks and open joints were. Relatively massive zones were noted towards the base.

The rockface downslope of the road was also approximately 6 m to 8 m high at the southern end, falling to approximately 2 m height towards the north. In general, the basalt along this rockface was massive. Occasionally, more fractured zones were observed with some overhanging and loose blocks noted, particularly at the upper parts of the rockface. Recently fallen rock blocks were observed on the ground.

3.2.3 Southern Sidewall

The southern sidewall is approximately 250 m long and extends from west-northwest to east-southeast. The rockface comprises an approximately 8 m to 10 m high near vertical wall at the western end and appeared to generally consist of slightly weathered to fresh, medium strength dark grey columnar basalt. The existing Boral infrastructure has been constructed on the surface of the bench (crest) of this sidewall. At the eastern end, an approximately 6 m to 8 m high face was noted set back on this bench. Dense trees and shrubs were observed at

the crest of the upper face (estimated to be approximately 5 m high and comprise weathered rock and residual soil).

On the rockface below the Boral infrastructure, zones of blocky basalt, loose blocks and open joints were noted on the upper parts of the rockface, whilst the rock tended to be more massive (and less blocky) on the lower down areas. At the time of the visit, water was observed emanating into the void through fractures in the upper part of the west end of the face. In general, the lower rockface was more vegetated in the west, with bare rock and sparse vegetation observed to the east.

3.2.4 Eastern Sidewall

The eastern sidewall is approximately 300 m long and runs from north to south. It was not possible to access the crest above the sidewall due to the presence of dense vegetation, therefore most of the observations were made at distance i.e. from the crest of the western sidewall, at the northern end of the eastern sidewall and from the eastern end of the southern sidewall.

Two approximately 6 m to 8 m high near vertical rockfaces were observed at the eastern sidewall separated by a relatively narrow bench. These faces are overlain by an estimated 10 m to 15 m high, steep residual soil slope containing dense vegetation and mature trees.

In general, the rock mass at the southern end of the two faces tended to comprise more zones of massive and less fractured basalt. The northern end of the sidewalls appeared to have a blockier appearance, suggesting that this rock mass is more fractured with a higher potential for instability. No signs of instability were evident in the overlying soil slopes, however, if present, these would be hidden from view by the dense vegetation.

3.3 RISK ASSESSMENT

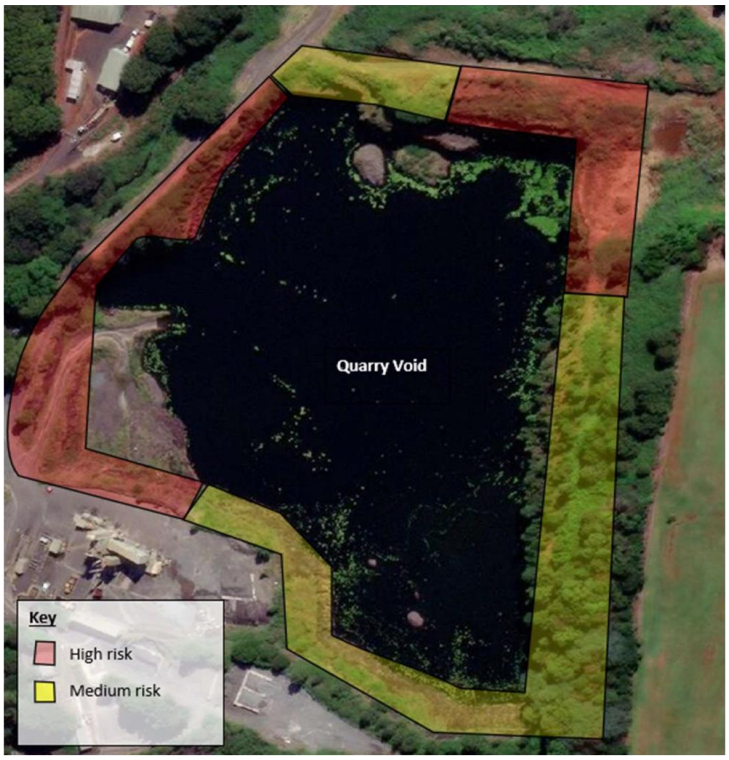
It is noted that rockfall instability has occurred from the quarry void sidewalls in the past and will occur again in the future, particularly given the columnar nature and fracture sets of the basalt rock encountered.

However, with reference to observations made during the site inspection, it is considered that the quarry void in its current condition is generally stable, and although no ongoing failures were observed, there are some ‘high risk’ zones of relatively minor instability which will need to be addressed in the short term. This geohazard includes the potential for rockfalls at areas where blocky and/or loose, fractured rock exists (particularly at the northeast and southwest corners of the void).

From the site inspection, zones of detached fractured rock are generally present on the lower benches of the void (and these are likely to be more accessible by people working nearby) based on the current water level. Therefore, it is recommended that scaling is carried out to remove loose rocks in areas where personnel are likely to be. In particular, the rockface above the access ramp in the southwest corner of the void will require remedial treatment to ensure people entering and exiting the void from this location are not at risk of injury from falling rocks.

Outside of the ‘high risk’ areas, the rest of the sidewalls are classed as a ‘medium risk’ (refer to Figure 3.2) until a more detailed assessment can be undertaken. Although there is a risk of rockfall in the ‘medium risk’ areas, these are considered to be from relatively discrete zones and the entire quarry sidewalls are not considered to be susceptible to this geohazard. In addition, dense and mature vegetation is growing and established at the crest of, and on the faces of, many of the void sidewalls. This vegetation is considered to be beneficial to the ongoing stability of the sidewalls.

Figure 3.2. Risk Assessment Plan



Source. ATCW (2021).

4. BYRON STUDIOS OPTION ASSESSMENT

4.1 BACKGROUND

Byron Studios is a film and production company with facilities that comprise of stages, edit suites, production offices and screen theatres. It's significance as Byron Bay's first and only film studio, and their intention to create a future destination and media precinct has potential to catalyse future economic growth in the Ballina Shire and establish the locality as a regional hub for the national and international film industry.

Since 2018, Council had been engaging with Byron Studio on the potential establishment of a film studio on Council owned land, located within the Southern Cross Industrial Estate, adjacent to the Ballina-Byron Gateway Airport in Ballina ("Innovation Precinct"). However, due to the delays in progressing with the rezoning, master plan and civil works required at the Innovation Precinct, Byron Studios was granted a license to operate at the Alstonville Cultural Centre for a period of two years, until December 2022.

Since operating at the Alstonville Cultural Centre, Byron Studios identified that the proposed lots at the Innovation Precinct will not be large enough, and noise levels not compatible with filming due to the proximity to the Ballina Airport. As an alternative, Byron Studios has expressed strong interest in the potential for studios to be constructed at the Tuckombil Quarry Site.

4.2 PROPOSED STAGING OF OPTION

The proposed stages for the Byron Studios option is detailed in Table 4.1.

Table 4.1. Byron Studios Option, Proposed Stages

Stage	Description	Proposed Timeframe
Stage 1	Construction of buildings, shed and carpark area • Studio space equivalent to Alstonville Cultural Centre. • 1,000 sqm shed. • Establishment of onsite parking	Oct – Dec 2022
Stage 1A	Use of quarry pit for filming	
Stage 2	Construction of offices and temporary accommodation for workers.	July – Sep 2023
Stage 3	Construction of one larger size studio space (to support expansion requirements)	Jan – Mar 2024
Stage 4	Construction of a creative precinct / education art space	Jan – Mar 2025
Stage 4A	Establishment of a Theatre	Jan – Mar 2026
Stage 5	Future planning expansion	If Ron Southon moves out

Source: Ballina Shire Council.

As a preliminary first step, Byron Studios are seeking support from Council to access the front part of the Site (not currently leased by Boral) to park vehicles. This is to reduce the current impact on traffic movement in the residential area adjacent to the Alstonville Cultural Centre.

Current access to this part of the Site is through Boral's leased area. To enable the use of this part of the Site for carparking, Byron Studios will need to construct a new access point to not interfere with Boral's operations. Council has indicated in their report that this should be at the cost of Byron Studios. This separate access will support future Stages.

The subsequent stages will be progressed following the cessation of the licence agreement at the Alstonville Cultural Centre, subject to rezoning and planning approvals.

Stage 5 has been identified as a future planning expansion area, subject to the relocation of Ron Southon's operations. However, Ron Southon has requested the ability to remain on this Site. Preliminary investigations by Council has identified that there may be potential for Ron Southon to continue operations, and co-exist with other approved uses on the Site, subject to being able to change their access to the site from Gap Road to Teven Road as indicated by the yellow block shading within Figure 4.1.

The proposed staging is illustrated in Figure 4.1.

Figure 4.1. Tuckombil Quarry Site – Byron Studios Option, Proposed Stages

Source: Ballina Shire Council.

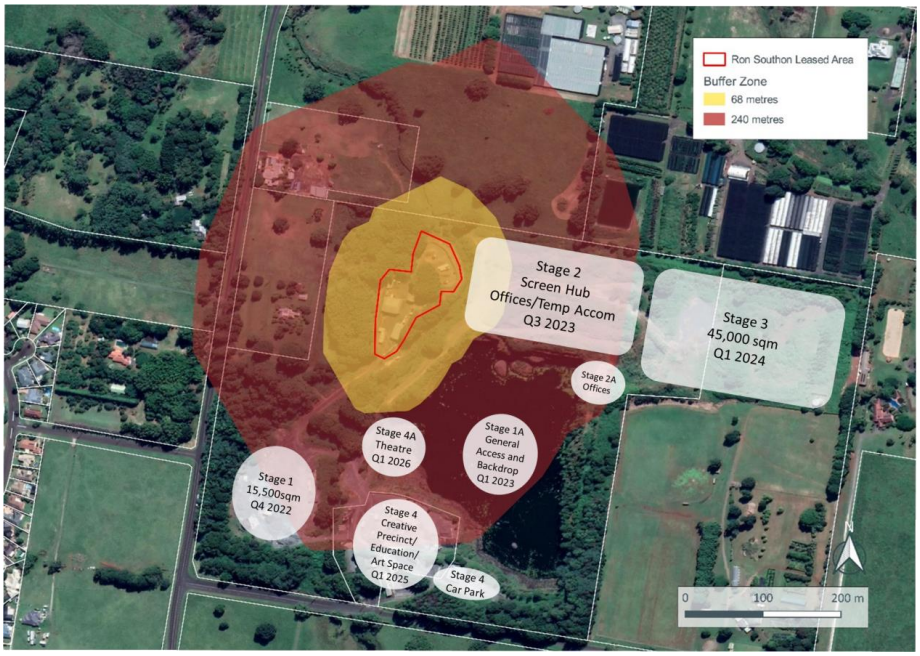
Key Risks and Considerations

- Rezoning of the Site will be required for the proposed uses of Byron Studios to be legally permissible. Although commercial uses are permissible (with development consent) under the 1(e) zoning of the BLEP 1987 as an advertised development, it conflicts with the primary objectives of the zone.
- Timing is a key risk. Byron Studio's license agreement at the Alstonville Cultural Centre ends in December 2022. Planning approvals will need to be obtained to enable Byron Studios to move onto the Site (area marked as Stage 1). Construction of a new studio space and access road will also be required prior to the cessation of Byron Studios license agreement to minimise disruption of Byron Studio's operations.
- Boral will still be in operation until the cessation of their lease in December 2024. Given Stage 1, 2 and 3 is proposed to be taken over by Byron Studios during this period, safety and security issues may arise if not properly managed.
- It is recommended that all remedial works to stabilise the quarry void are undertaken prior to the occupation of the Site, or at least prior to Stage 1A being occupied.
- Stage 2A and Stage 4A developments are positioned in 'high risk' zones (as illustrated in Figure 3.2) and are recommended be relocated elsewhere within the Site. Any proposed development close to the edges of the highwall will require detailed geotechnical investigation and analysis to provide information for design of remedial works and development infrastructure. However, it is anticipated that the costs associated with such

work would be very high, compared to simply relocating the proposed development. It should also be noted that additional hazards may be encountered upon completion of geotechnical investigation works. The development may also require additional fencing and barriers to separate the Site users from fall risks.

- The area leased to Ron Southon Pty Ltd is used for the storage and maintenance of drilling plant and equipment, as well as the storage of hazardous materials. Ron Southon has advised that a buffer zone of 240 metres is required to store the current quantity of licensed explosives. This buffer zone could potentially reduce to 68 metres if a reduced quantity of explosives is stored on the site (Safework NSW, AS 2187.1 Separation Distances 1.1 Explosives). The buffer zones are illustrated in Figure 4.2. The 240-metre buffer zone requirement covers the majority of the Site, and could potentially impact the leasable area for all stages of the Byron Studios option, in particular Stage 2 where temporary accommodation for workers is proposed. If the buffer area is reduced to a 68-metre requirement, the Byron Studios stages will be less restricted in its future use.
    - Council staff have liaised with Ron Southon and note that he has advised that he is capable and willing to reduce the quantities of explosives stored on site in order to achieve the reduced buffer zone of 68 metres.
    - It is noted that an existing residential property is located within 200 metres of Ron Southon. The separation distance requirement is 240m between the storage of hazardous materials and populated structures such as residences.

Figure 4.2. Buffer Zones for Ron Southon Leased Area



Source: AEC.

5. FINANCIAL ASSESSMENT

Modelling was undertaken to assess the financial implications of the Byron Studios option compared to the base case scenario (i.e. 'As-Is' scenario) over a 50-year period.

5.1 KEY ASSUMPTIONS

General financial inputs:

- **Base Year:** All costs are based in 2022 real terms.
- **Timeframe:** The financial analysis spans over a 50-year period, from the 2022 calendar year to 2071 calendar year.

5.1.1 Scenario Assumptions

For the **Base Case scenario**, the following assumptions were made:

- Boral's lease will not be renewed after its expiry on 31 December 2024. A vacancy period of 12 months is assumed, after which a new tenant will take up the same area at the same rent rate as Boral's current lease.
- Ron Southon is assumed to continue operating on the Site.

The **Byron Studios option** assumes the following:

- Boral's lease will not be renewed after its expiry on 31 December 2024.
- Ron Southon is assumed to continue operating on the Site. A new access road from Teven Rd at the western side boundary into Ron Southon property is assumed to be funded by Council. The estimated cost of this new access road is estimated to be $250,000 and is to be incurred in 2024.
- Rezoning of the Site will be required for the proposed uses of Byron Studios. Council estimates this to cost approximately $150,000.
- The Byron Studios option is staged into multiple phases. The estimated site areas for each stage and timing is outlined in Table 5.1. Site areas that have been calculated by roughly measuring the area as indicated in the proposed staging plan using mapping software.

Table 5.1. Estimated Site Areas and Timing of Stages

	Site Area (sqm)	Timing
Stage 1	15,000	Q4 2022
Stage 1A	-	Q1 2023
Stage 2	30,000	Q3 2023
Stage 2A	2,000	Q3 2023
Stage 3	45,000	Q1 2024
Stage 4	18,000	Q1 2025
Stage 4A	3,500	Q1 2026

Source: AEC, Byron Studios.

- A rental rate of $2.00/sqm has been adopted for the purposes of this assessment.
- Estimated outgoings is approximately $0.12/sqm of leased area.
- ATC Williams has provided an estimate of the quarry rehabilitation costs, as discussed below.

Estimate of Quarry Rehabilitation Costs

Stage 1A of the Byron Studios' option proposes the use of the quarry pit for filming purposes. On the basis that the void is to be redeveloped for use by Byron Studios, and with the focus on making the quarry sidewalls safe to humans working in the water-filled pit, then drilling, blasting and remedial treatment would be necessary as part of

the remedial works. Alternatively, areas of risk can be stabilised by the use of fill pushed over the quarry high wall to stabilise the face. This may be appropriate in selected areas such as the south-west to avoid losing available property to the void.

It is assumed that the eastern high walls are not required to be remediated as this is close to the eastern boundary and therefore access is not required.

The rehabilitation costs relate to the remedial works for the entire quarry void. The approximate dimensions of the void (shown in Table 5.2) have been used in the cost estimate calculations.

Table 5.2. Approximate dimensions quarry void

Area	Approximate Dimensions			
Pitt Area	5.8 ha			
Northern Sidewall	**Length (m)**	150	**Depth (m)**	28
Southern Sidewall	**Length (m)**	250	**Depth (m)**	23
Eastern Sidewall	**Length (m)**	300	**Depth (m)**	35
Western Sidewall	**Length (m)**	200	**Depth (m)**	16

Source: ATCW

For development of preliminary cost estimates for rehabilitation of the quarry void, reference has been made to the Rehabilitation Cost Estimation Tool and Handbook published by the NSW Department of Planning and Environment, and experience of similar projects.

It is estimated that approximately **$320,000** would be required as a minimum to carry out rehabilitation of the quarry faces to reduce to an acceptable grade (refer Table 5.3).

Table 5.3. Estimated Costs for Rehabilitation for Sidewalls

Activity	Quantity	Unit	Unit Rate	Total (Ex. GST)
Mobilisation/demobilization of D6 dozer to site	1	-	$10,000	$10,000
Drill and blast high wall faces to flatten slop (assumes perimeter length of 500m required)	50,000	m^3	2	$100,000
Bulk reshaping	50,000	m^3	2	$100,000
Dozing to form safety bund	300	m	100	$30,000
Guard Rail or Log Barrier, where safety bund is not feasible	200	m	400	$80,000
Total Estimated Costs (ex. GST)				**$320,000**

Source: ATCW.

These costs exclude GST and have been estimated assuming works commence in 2021. Should works start after 2021, an appropriate consumer price index (CPI) should be applied. This is currently estimated to be in the order of approximately 2% per year.

These costs considers rehabilitation of the pit for the proposed change in land use by Byron Studios. The existing DA consent (dated 13 August 2013) and associated Environmental Management Plan (EMP) relates to the continued operation of the hard rock quarry and associated crushing plant. Planning advice may be required to assess if a new DA and EMP would be necessary for the proposed change to the site use.

Project Management and Contingency Cost Allowances

Recommended minimum cost allowances in addition to the capital cost estimate in Table 5.3 are as follows:

- A project management fee of 8% of the capital costs.
- Due to the preliminary nature of the cost estimate, a project contingency cost allowance of at least 30% of the capital cost should be adopted.
- A $15,000 allowance for ongoing maintenance costs in the form of annual geotechnical inspections and minor remedial works.

Due to the low material requirements, the potential for cost variance over time is low. Barriers, depending on adopted construction, may have some risk in price changes for supply of steel and timber.

5.1.2 Summary of Key Assumptions

The key assumptions applied in the financial assessment are summarised below.

Table 5.4. Financial Assumptions, Base Case and Byron Studios Option

Assumption	Base Case	Byron Studios
General		
Base Calendar Year	2022	
Real Discount Rate	2.0%	
Cash Inflows		
Boral Rent	$48,127 p.a.	$48,127 p.a.
Boral Outgoings	$2,958 p.a.	$2,958 p.a.
Ron Southon Rent	$16,128 p.a.	$16,128 p.a.
Ron Southon Outgoings	$2,960 p.a.	$2,960 p.a.
Byron Studios Rent	-	$2/sqm
Byron Studios Outgoings	-	$0.12/sqm
Cash Outflows		
EPA Licence Fee	$17,827 p.a.	$17,827 p.a.
Road and Site Maintenance Costs	$3,000 p.a.	Paid by Byron Studios
Rezoning Costs	-	$150,000
Quarry Rehabilitation Costs	-	$320,000
Project Management Fee (8%)	-	$25,600
Project Contingency (30%)	-	$96,000
Ongoing Quarry Maintenance Costs	-	$15,000 p.a.
Access Road for Ron Southon	-	$250,000
Access Road for Byron Studios	-	Paid by Byron Studios

Source. AEC

5.2 FINANICAL RESULTS

Table 5.5 contains the projected cash flows for the base case and Byron Studios option over a 10-year period.

Table 5.5. Net Cash Flows, Base Case vs. Byron Studios Option, 10-Year period

SUMMARY	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Base Case										
Cash Inflows	$70,173	$70,173	$70,173	$19,088	$70,173	$70,173	$70,173	$70,173	$70,173	$70,173
Cash Outflows	$20,827	$20,827	$20,827	$20,827	$20,827	$20,827	$20,827	$20,827	$20,827	$20,827
Net Cash Flows	**$49,346**	**$49,346**	**$49,346**	**-$1,739**	**$49,346**	**$49,346**	**$49,346**	**$49,346**	**$49,346**	**$49,346**
Byron Studios Option										
Cash Inflows	$78,134	$135,984	$265,482	$252,610	$260,040	$260,040	$260,040	$260,040	$260,040	$260,040
Cash Outflows	$167,827	$459,427	$282,827	$32,827	$32,827	$32,827	$32,827	$32,827	$32,827	$32,827
Net Cash Flows	**-$89,693**	**-$323,443**	**-$17,345**	**$219,783**	**$227,213**	**$227,213**	**$227,213**	**$227,213**	**$227,213**	**$227,213**
Net Benefit/(Cost) Assessment	**-$139,039**	**- $372,789**	**-$66,691**	**$221,522**	**$177,867**	**$177,867**	**$177,867**	**$177,867**	**$177,867**	**$177,867**

Source: AEC.

The Byron Studios Option is estimated to be at result in an annual net cash outflow in the first three years until the end of 2024. This is due to the upfront costs to Council for rezoning and quarry rehabilitation, and the staged approach proposed for leasing the Site. The cash outflows for the first three years are detailed in Table 5.6. Cash outflows after this period comprise of the ongoing maintenance costs and EPA licence fees.

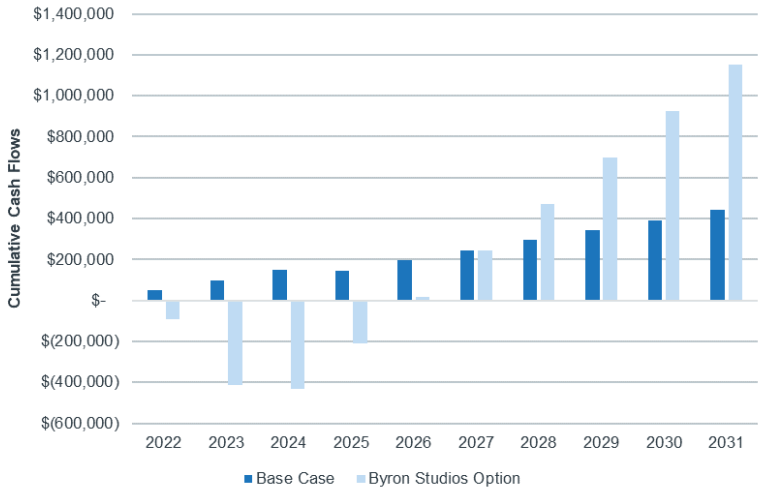
Table 5.6. Cash Outflows, 2022 - 2024

Cash Outflows	2022	2023	2024
Rezoning Costs	$150,000	-	-
Site Preparation Works	-	$320,000	-
Project Management Fee	-	$25,600	-
Project Contingency	-	$96,000	-
New Access Road for Ron Southon	-	-	$250,000
Ongoing Maintenance Costs	-	-	$15,000
EPA License Fees	$17,287	$17,287	$17,287
Total Cash Outflows	**$167,827**	**$459,427**	**$282,827**

Source: AEC.

The cumulative net cash flows are illustrated in Figure 5.1.

Figure 5.1. Cumulative Net Cash Flows, Base Case vs. Byron Studios Option, 10-Year Period



Source: AEC.

5.2.1 NPV Assessment

The net present value (NPV) of the Byron Studio option compared to the Base Case scenario is presented in the following table.

Table 5.7. NPV Assessment, Base Case vs Byron Studios Option, 50-Year Period

NPV Outcomes	Base Scenario	Byron Studios Option	Net Benefit/(Cost) Assessment
5 years	$189,104	-$6,450	-$195,554
10 years	$403,983	$982,951	$578,968
20 years	$774,880	$2,690,734	$1,915,854
30 years	$1,079,145	$4,091,711	$3,012,567
40 years	$1,328,748	$5,241,001	$3,912,253
50 years	$1,533,509	$6,183,818	$4,650,309

Source: AEC.

Over a 50-year period, the Byron Studios option will provide a net benefit of $4.65m over the base case scenario, assuming all stages of the Site are taken up by Byron Studios.

The discounted payback period for the Byron Studios option is estimated to be 5.03 years., i.e. it will take 5.03 years for Council to get back its initial investment which includes rezoning and quarry rehabilitation costs.

6. PHASE 1 FINDINGS

6.1 EVALUATION OF BYRON STUDIOS OPTION

In evaluating the different options for the Tuckombil Quarry site, an evaluation framework will be developed as part of Phase 2 of the Opportunities Assessment, with the criteria workshopped with Council project staff to ensure the objectives for the Site and the LGA are captured. In the absence of specific evaluation criteria, a high-level assessment of the Byron Studios option is undertaken below.

6.1.1 Public Benefits for the Community

Public benefit is defined in general as a material positive impact on society and the environment. Government decisions should focus on achieving positive social, environmental and economic benefits and outcomes for their community, while offering money for value to government. The Bryon Studios option presents a number of positive social, economic and environmental benefits, including:

Economic Benefits

The retail, hospitality and entertainment sector (including media) is identified in the Economic Development Strategy (EDS) as the largest industry of employment in the Ballina Shire, with a greater prevalence of creative occupations compared to other regional areas.

The operations of Byron Studios in the Ballina Shire contributes significantly to the film and production industry within the region. It is Byron Bay's first and only film studio, and employs workers who are local to the area. It's plans for expansion include creating a future destination and media precinct, which could assist in establishing the Ballina Shire as a regional hub for national and international film industry.

The economic benefits that could result from the establishment of the Byron Studios film and media precinct aligns to the vision for the Ballina Shire, as set out in the EDS, noting that relevant key objectives include:

- Support the development of a strong entrepreneurial culture, and
- Attract key anchor industries and talent to help anchor innovation and support local jobs growth.

The establishment of the Byron Studios headquarters at the quarry site presents a unique and innovative opportunity, which will contribute to the largest employment industry in the Shire and further improve the Shire's ability to attract new businesses and additional investment into the Shire. This opportunity may also benefit other ancillary industries such as food catering, local contractors for set constructions, equipment hire etc. The proposed creative precinct / education art space in Stage 4 may create more jobs for local employment.

The Alstonville town centre, which is located 2.3 km from the Site, may also experience an increase in activity once Byron Studios is in full operation. This option could also deliver economic benefits to the retail and hospitality businesses located in the town centre.

Social Benefits

The use of the Site as a filming studio will be viewed positively by local residents. Council has indicated that there has been increasing complaints from community within the neighbouring residential areas, who have voiced their concerns about the operations of the quarry and the asphalt processing plant, including noise, pollution and traffic congestion.

The proposed creative precinct / education art space may also potentially provide the community with a new facility for services and recreation, if made available to the public. This yields positive social outcomes as it promotes community engagement and social interaction.

Environmental Benefits

In the past, there have been concerns raised about the potential health effects on local residents as a result of the pollution and noise from the bitumen plant operations (although these concerns have not been scientifically

proven). The Byron Studios option is likely to have fewer negative impacts on the environment, when compared to the existing use as an asphalt processing plant. The environmental benefits will also extend to the adjoining farmlands with the replacement of the asphalt plant with the studio use.

The uses proposed by Byron Studios are also designed around the current environmental features of the Site, i.e. Byron Studios proposes to keep the quarry pit as is to be used as a filming location.

6.1.2 Financial Considerations

Overall, the Byron Studios options presents a net benefit of $6.2m over a 50-year period, which is $4.65m of financial benefit in excess of the base case scenario.

Council has indicated that the allocation of quarry rehabilitation costs is approximately $700,000. This is sufficient to cover the rehabilitation works required for the Byron Studios option, which is estimated to cost $441,600, including project management fees and project contingency of 30%.

Other significant costs include rezoning costs of $150,000 and the construction of a new access road for Ron Southon $250,000. Factoring all these costs, it is estimated that the discounted payback period will be 5.03 years, assuming all stages proposed by Byron Studios progresses.

6.2 OTHER CONSIDERATIONS

A traffic report will also be required to investigate the ideal location for the new access roads by considering existing and predicted traffic counts, movement conflicts, sight distance, statutory requirements etc. Costs for the adopted option will depend on the extent of earthworks, drainage and pavement required and whether there is a need for an intersection upgrade or turning lane.

It is also recommended that a security fence is installed around the site boundary to stop the public from entering the quarry area. Currently, a fence does not exist past the eastern side of the sporting fields. Costs for a basic chain link fence (i.e. off-the shelf) is estimated at approximately $100 per metre, subject to access conditions. This would further ensure the safety of the public and enhance security on the Site.

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APPENDIX A: STRATEGIC PLANNING FRAMEWORK

Council has a number of documents which have been developed through community engagement which identify strategic directions, planning themes and priorities for the Shire and the Alstonville locality. These strategic documents have been reviewed to identify relevant directions and priorities that are applicable for this assessment.

North Coast Regional Plan 2036

The North Coast Regional Plan 2036 is a 20-year strategy, prepared by the NSW Department of Planning, Industry and Environment (DPIE) to guide land use planning decisions for the North Coast region. The NSW Government's vision for the North Coast is to create the best region in Australia to live, work and play thanks to its spectacular environment and vibrant communities.

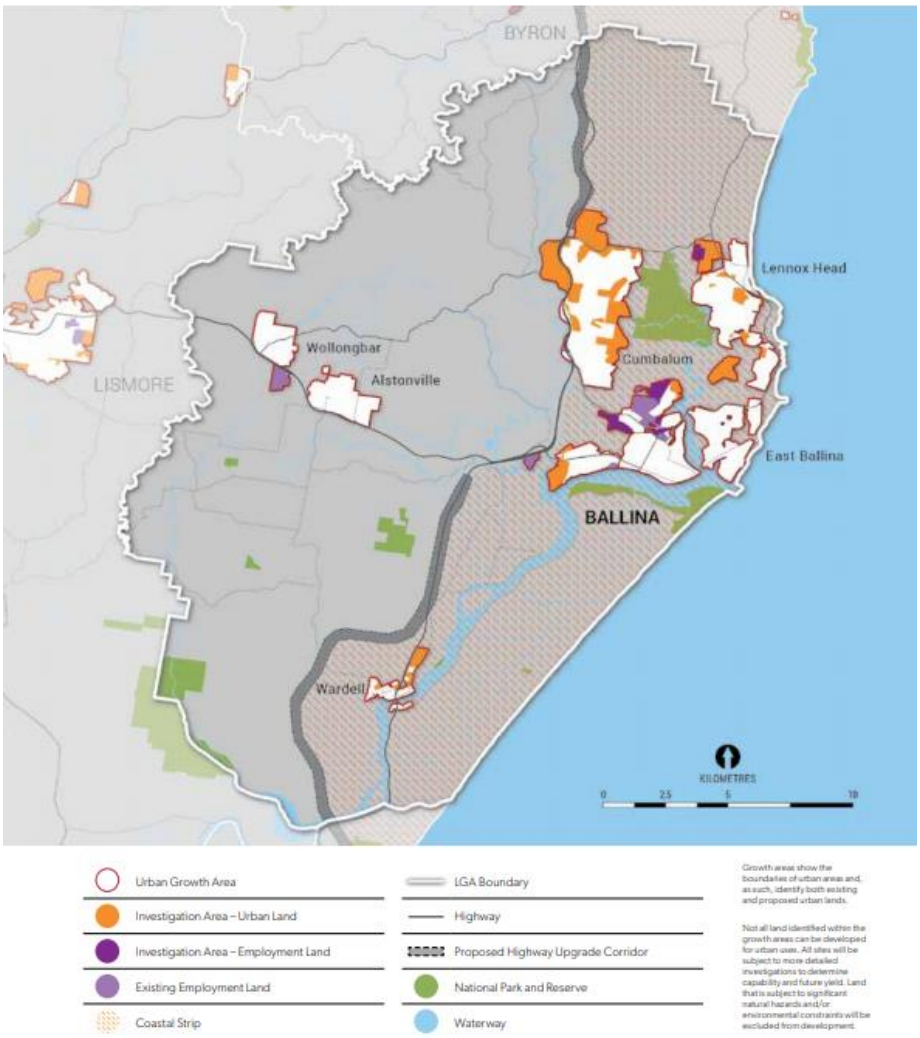
The region is made up of a network of cities and centres linked by the Pacific Highway and interconnected to vibrant coastal, hinterland and rural communities. Tweed Heads and Lismore are identified as Regional Cities in the hierarchy, and are the primary growth anchors to deliver new jobs, more housing and essential services.

Ballina is one of two strategic centres in the region (other centre being Grafton), recognising the growing regional importance of Ballina in terms of residential development, transport, tourism, retail, health and financial and professional services.

Relevant priorities for the Ballina LGA include:

- Support economic growth associated with the Ballina-Byron Gateway Airport.
- Enable opportunities for strategic identification of freight facilities, warehousing and distribution centres, and encourage clustering of associated industries given its advantageous location at the junction of the Pacific and Bruxner highways.
- Support employment lands and jobs at Ballina, Wollongbar and Lennox Head.
- Protect important farmland areas at Wollongbar, Alstonville, Rous Mill, Empire Vale, Wardell and Fernleigh, and support the development of the agricultural sector and agribusiness
- Identify opportunities to expand nature-based, adventure and cultural tourism places, and enhance visitor experiences in areas such as Alstonville and Lennox Head or major events spaces in Ballina.
- Support the delivery of greater housing diversity in appropriate locations, including higher housing density in Ballina.

Figure A. 1. Urban growth area map for Ballina Local Government Area



Source: DPIE (2017).

Ballina Shire Economic Development Strategy (2018)

The Ballina Economic Development Strategy (EDS) identifies key drivers for economic development in Ballina Shire and actions Council will pursue for entrepreneurship and innovation over the next 10-years.

The vision for the Shire as outlined in the EDS is: "*Ballina Shire is a vibrant and engaging place, built on its beautiful natural amenity and lifestyle character, where Council leadership and strong business networks support entrepreneurial opportunities that contribute to the shire's prosperity and quality of life*".

The following objectives underpin the vision:

- **Support the development of a strong entrepreneurial culture**, to welcome new ideas and enable entrepreneurs to identify and pursue business opportunities.

- **Build confidence through leadership**, to provide business owners and entrepreneurs with confidence to invest, take a risk on establishing a new business or relocate to the Shire.
- **Attract key anchor industries and talent**, and promote innovation and support jobs growth by increasing export income, deepening the local talent pool and driving the development of new businesses through spin-offs and associated service industries.
- **Provide proactive community engagement and communication,** engaging with the local resident and business community on council projects and programs and promoting the activities and attractions of the Shire.

The EDS outlines a range of possible actions that Council could take to support the economic development of the Shire.

Ballina's key strengths are mainly centred around its environmental qualities. The EDS also identifies the economic opportunities with respect to various tourism markets to leverage these strengths, including sport tourism; nature-based tourism; rural tourism; health, spa and retreat tourism; adventure tourism; conference and event tourism; and accessible tourism.

Ballina Growth Management Strategy 2012-31

The purpose of the Ballina Shire Growth Management Strategy is to provide the framework for managing population and employment growth in Ballina Shire over the planning period of 2012-2031. The Strategy outlines 23 growth principles for the Ballina Shire. Relevant principles to the Site and Alstonville are identified below, which include:

- Support the desired identity, character and amenity of the shire and its communities.
- Facilitate greater housing choice through an adequate mixture of dwelling types.
- Provide for a variety of education and learning, public meeting and performance and exhibition facilities, and flexible use of community spaces.
- Minimise the exposure of new and existing residential areas to environmental hazards.
- Avoid and mitigate the potential for land use conflicts to occur between urban land uses and between urban and non-urban land uses.
- Identify potential future urban growth areas.
- Provide for a functional urban environment that is compatible with environmental characteristics and community expectations.
- Identify potential future urban growth areas.
- Limit the opportunity for land use conflict in relation to industrial and commercial operations and surrounding land uses.
- Provide for affordable housing stock.

The Tuckombil Quarry Site is identified in the Growth Management Strategy as an 'Identified Resource Area' with the adjacent areas named 'Transition Areas'. Lands that fall into these categories are affected by Ministerial Direction No.1.3 which seeks to: *"to ensure that the future extraction of State or regionally significant reserves of coal, other minerals, petroleum and extractive materials are not compromised by inappropriate development."* This land cannot be rezoned without consultation with the NSW Government agencies responsible for mineral resources.

The Strategy also identifies Strategic Urban Growth Areas, where Council considers warrant further detailed investigation to determine their urban suitability. The vision for the localities, objectives and strategic actions are expanded upon in the local strategies (i.e. Alstonville Strategic Plan).

Ballina Shire Local Strategic Planning Statement 2020 – 2040

The Ballina Shire Local Strategic Planning Statement (LSPS) outlines priorities and actions that will guide the Ballina community's economic, social and environmental land use needs over the next 20 years.

The LSPS aligns relevant Directions and Actions within North Coast Regional Plan 2036 with local planning priorities and builds on the community's values and aspirations as expressed in Ballina Shire Community Strategic Plan (CSP) 2017 - 2027. The planning priorities in the LSPS are categorised under themes consistent with the CSP and will guide Council's land use decisions over the next 10-year period. Relevant themes are discussed below.

Prosperous Community

- **Planning Priority 3:** Stimulate economic activity, and provide improved access to local services and facilities, by reviewing planning controls around major Shire infrastructure such as Ballina Hospital, Ballina Byron Gateway Airport, and education facilities.
- **Planning Priority 4:** Encourage activities within the rural hinterland that stimulate economic activity by value adding to farm-based production and that promote rural tourism.
- **Planning Priority 5:** Maintain a supply of suitably located employment land, close to population centres at Alstonville – Wollongbar, and Ballina – Lennox Head, so as to foster local employment opportunities and to reduce journey to work travel distances.
- **Planning Priority 6:** Incorporate housing choice options such as attached dual occupancy when preparing placed based strategic plans.

Housing and employment are viable options for the alternate uses on the Site. The LSPS and other planning documents identify the need for suitable housing options and employment lands which are close to population centres. The Site is also surrounded by rural lands which have the potential to contribute to rural tourism.

Healthy Environment

- **Planning Priority 12:** Protect and enhance productive agricultural lands through the development of a Ballina Shire Agricultural Land Use Strategy
- **Planning Priority 14:** Focus development to areas of least biodiversity sensitivity and least exposure to natural hazards such as flooding and bush fire risk.

The LSPS notes that the agricultural, forestry and fishing sector is one of the three strongest growing sectors in the local economy, and previous consultation undertaken has revealed conflicting pressures in the rural hinterland between those that wanted greater dwelling opportunities and those that wanted to safeguard the land for agricultural production. The LSPS also indicates that future development potential and planning controls in the Strategic Urban Areas (SUGA) will need to be reviewed on an ongoing basis in light of new information becoming available to meet environmentally sustainable growth principles.

Alstonville Strategic Plan 2017 – 2037

The Alstonville Strategic Plan (ASP) was adopted in December 2017 and guides Council's strategic planning and future development relating to the Alstonville Village and surrounds to 2037. The ASP contains 19 recommendations under five themes which forms the elements for the vision for the future of Alstonville Village, which includes:

1 Ensuring that the village's character, sense of community and quiet lifestyle is maintained.

2 Providing new housing opportunities that are affordable and provide choice for people to meet changing life needs.

3 Enhancing village connectivity through the provision of walking paths, cycle ways and a town square.

4 Fostering employment opportunities.

5 Maintaining and enhancing our natural environment.

Figure A. 2. Alstonville Locality Map

Source: BSC (2017).

The actions in the ASP are developed in response to identified issues, and community comments received during the pre-study consultation period, outlined in the Alstonville Planning and Environmental Study (APES) 2017. This Study is summarised below.

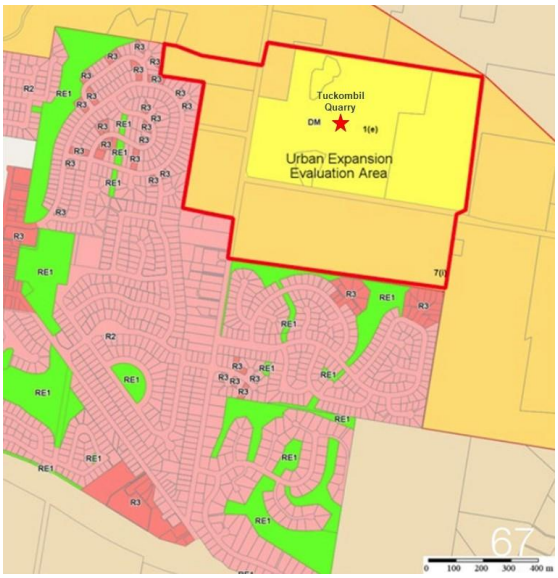
Alstonville Planning and Environmental Study 2017

The Alstonville Planning and Environmental Study 2017 (APES) accompanies the ASP, and examines the issues and opportunities related to Alstonville following consultation with the community to identify the community's future aspirations for their village.

The APES provides an overview of the Alstonville population and environmental characteristics, and summarises the findings of community consultation that informed the five themes of the vision as outlined in the ASP.

Vision Element Two (per ASP) includes providing affordable housing choice opportunities. The APES examines the potential to expand the current footprint of the Alstonville urban area in various directions. This includes an expansion in a northerly direction along Teven Road from the Panorama Estate, identified as '**Area 2 – North along Teven Road** ', illustrated in Figure A. 3. This area occupies a total land area of approximately 75 hectares of which 38.3 hectares is Council owned land associated with the Tuckombil Quarry site and the adjoining hockey fields and nursery.

Figure A. 3. Alstonville Village Urban Expansion Evaluation Area



Source: BSC (2017a).

Under the Ballina DCP 2012, there are minimum required buffer distances for extractive industries and mining of 500m, or 1,000m if blasting occurs. These buffers are expected to be maintained for the life of the quarry. For urban development to occur in this area, it is likely buffer distances will need to be reduced to take place in closer proximity to the quarry site.

The APES indicates that subject to the closure of the quarry and the cessation of existing uses of the bitumen plant and materials storage, there is long-term merit in expanding Alstonville's urban area into Area 2. Due to the close proximity of infrastructure (water, sewer and electricity), areas connectivity with existing residential areas and availability of land. The APES estimates that if private land holdings in this area were to be developed for housing, there is potential to yield up to 550 additional dwellings.

At the date of preparation of the APES, there was the potential for an expansion of the Tuckombil Quarry. However Council's current position is that due to increasing concern and complaints about the quarry site from residents, expansion for the purpose of increased quarrying remains unlikely. As such, alternative uses are being sought by Council that can provide social, environmental and/or economic benefits to the community.

North Coast Destination Management Plan 2018 - 2021

The North Coast Destination Management Plan (North Coast DMP) applies to the region which stretches from MidCoast to Tweed, including Lorde Howe Island and comprises coastal destinations and rural and hinterland towns and villages. The aim of the North Coast DMP is to help sustainably grow the North Coast visitor economy and plan for the development and marketing of tourism for the North Coast of NSW to 2021.

The Ballina LGA is described as "a popular holiday destination with water-based activities on the river and surf beaches and over 25 kms of cycle paths. The nearby hinterland area makes for scenic explorations." Key tourism products for Ballina include the Big Prawn and Ballina Prawnfest, Ballina Byron Gateway Airport, its quaint villages and hamlets.

Ballina Coast and Hinterland Destination Management Plan 2021- 2030

The 2021 – 2030 Ballina Coast and Hinterland Destination Management Plan (DMP) provides the vision and strategic direction for the future of the Ballina Coast and Hinterland visitor economy. The aim set out in the DMP is

to "*increase overnight visitor expenditure within the destination to $450 million by 2030 while keeping investment in recreational assets aligned to community values".* The DMP outlines three key priority areas, which include:

6 Strengthen coordination of destination management.

7 Raise the profile of the destination and its experiences.

8 Encourage investment into recreational assets, product development and access improvements.

Relevant actions

Under Priority 3, Action INV 01 Support nature-based embellishment that enables visitor experiences. Examples may include cycle trails and shared paths, viewing platforms, water-based play equipment, etc.

APPENDIX B: PHOTOGRAPHIC RECORD

The photos in this appendix were taken by ATC Williams at the site inspection on 16 July 2021.

Figure B. 1. Northern Wall (1 of 2)

Overview of Eastern Portion of Northern Wall	Weathered Basalt Over Fresher Basalt at Northeast Corner
	
Weathered Basalt Over Fresher Basalt at Northwest Corner	**Weathered Basalt at Crest**
	

Source: ATCW.

Figure B. 2. Northern Wall (2 of 2)

Western Corner of Northern Wall	Central Portion of Northern Wall
	
Eastern Corner of Northern Wall	**Fractured Columnar Basalt at Northeast Corner**
	

Source: ATCW.

Figure B. 3. Central to Northern Portion of Western Wall (1 of 2)

Central Part of Western Wall	Central Part of Western Wall
	
Central Portion of Western Wall	**Central Portion of Western Wall**
	

Source: ATCW.

Figure B. 4. Central to Northern Portion of Western Wall (2 of 2)

Overview of Western Wall	Fractured Columnar Basalt
	
Northern Portion of Western Wall	**Northwest Corner of Western Wall**
	

Source: ATCW.

Figure B. 5. Southwest Corner of Void (1 of 2)

View of Southwest Corner	Access Road (Looking South)
	
Fractured Rockface Above Road	**Fractured Rockface Above Road**
	

Source: ATCW.

Figure B. 6. Access Road at Southwest Corner of Void (2 of 2)

Access Road	Sidewalls Above and Below Access Road
	
Loose Blocks at Rockface Below Road	**Fractured Rockface Below Road**
	

Source: ATCW.

Figure B. 7. Southern Wall (1 of 2)

View of East End of Southern Wall	View of Central Portion of Southern Wall
	
View of West End of Southern Wall	**West Corner of Southern Wall**
	

Source: ATCW.

Figure B. 8. Southern Wall (2 of 2)

Fractured and Massive Basalt at Rockface	Fractured and Massive Basalt at Rockface
	
Water Ingress Through Fractures at Crest	**Fractured Rock and Loose Blocks at Crest**
	

Source: ATCW.

Figure B. 9. Eastern Wall (1 of 2)

Overview	Blocky Rock Mass at Northeast Corner
	
Central Portion of Eastern Wall	**Southeast Part of Eastern Wall**
	

Source: ATCW.

Figure B. 10. Eastern Wall (2 of 2)

Southeast Corner	Northern Part of Eastern Wall
	
Blockier Rock Mass at Northeast Corner	**Massive Basalt on Central Part of Eastern Wall**
	

Source: ATCW.

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AFFILIATED OFFICES:

BRISBANE
Level 5, 131 Leichhardt Street
Spring Hill QLD 4000
Australia
T: +61 (0)7 3831 0577

TOWNSVILLE
233 Flinders Street East
Townsville QLD 4810
Australia
T: +61 (0)7 4771 5550

SYDNEY
Level 14, 25 Bligh Street,
Sydney NSW 2000
Australia
T: +61 (0) 2 9283 8400

BANGKOK
2024/129-130 Sukhumvit 50
Prakanong Klongtoey,
Bangkok, Thailand 10260
T: +66 2 107 0189

DARWIN
Level 1, 48-50 Smith Street
Darwin NT 0800
Australia
T: 1300 799 343

MELBOURNE
Level 13, 200 Queen Street
Melbourne VIC 3000
Australia
T: +61 (0)3 8648 6586

PERTH
Level 2, 580 Hay Street
Perth WA 6000
Australia
T: +61 (0) 8 6555 4940

SHANGHAI
Level 35, 1st Building,
700 Liquan Road, Putuo District,
Shanghai, China 200333
T: +8618 516293312

aecgroupltd.com

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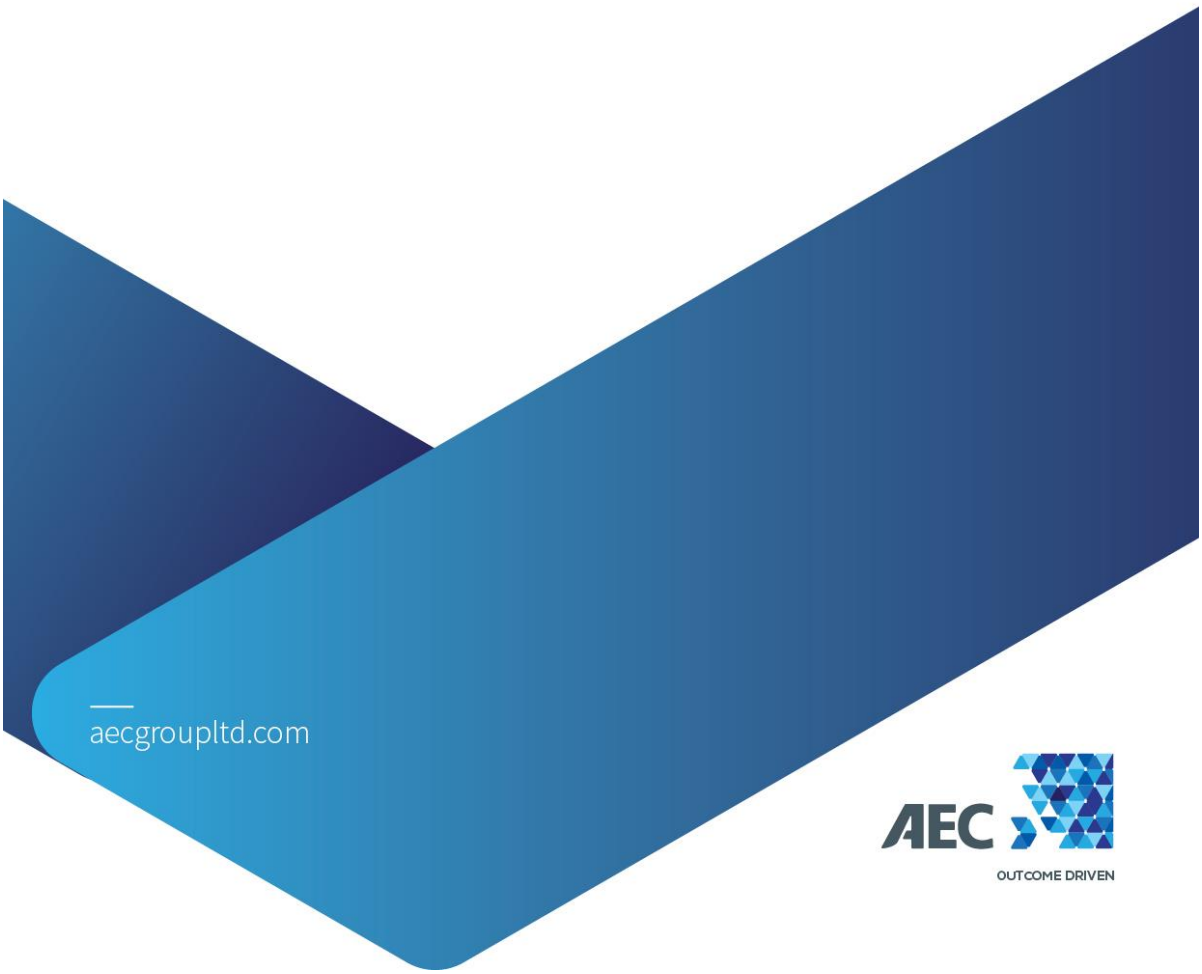
TUCKOMBIL QUARRY SITE OPPORTUNITIES ASSESSMENT

PHASE 2 REPORT

BALLINA SHIRE COUNCIL
DECEMBER 2021



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Client Contact:	Tony Partridge
Project Manager:	Fred Ibrahim
Email:	fred.ibrahim@aecgroupltd.com
Telephone:	(02) 9283 8400
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EXECUTIVE SUMMARY

BACKGROUND

The Tuckombil Quarry ('the Site') is located at 540 Gap Road, Alstonville within Ballina Shire Council (Council) Area. It is positioned north-east of existing residential development and surrounded predominately by non-urban land. The quarry was previously operated by Lismore Council under lease from Council until August 2016. All quarrying activities has ceased on the Site with the termination of the lease. Currently located within the Site are two separately leased areas being used for asphalt processing and materials storage.

Due to the increasing concerns and complaints about the Site from residents, expansion for the purpose of increased quarrying remains unlikely. Council has also resolved not to renew the existing lease to Boral where asphalt processing occurs, which is due to expire 31 December 2024. As such, Council is looking for viable opportunities for the Site for future planning, with alternate options being more complementary to its close location to residential areas.

AEC Group (AEC) and ATC Williams (ATCW) were engaged by Council to undertake an Opportunities Assessment for the Tuckombil Quarry Site that will identify options that are technically feasible and financially viable, while delivering maximum value for the community given its proximity to residential areas. The assessment will provide a recommendation for Council to adopt as a preferred approach for the future use of the Site.

The assessment will be undertaken in two phases:

- **Phase 1,** considers the proposal put forward by Byron Studios for use of the Site as headquarters for their filming operations under a long-term ground lease with progressive staged occupation.
- **Phase 2,** identifies alternative uses to the Site and assesses the options with an evaluation framework developed in collaboration with Council to determine the preferred use for the Site. The following land uses were investigated as part of this assessment:
    - Residential Land Use.
    - Technology and Light Industrial Land Uses.
    - Public Recreation and Community Uses.
    - Adventure Tourism Uses.

This report represents Phase 2 of the Opportunities Assessment, with Phase 1 having already been completed and submitted Council.

This report should be read in conjunction with the Phase 1 report.

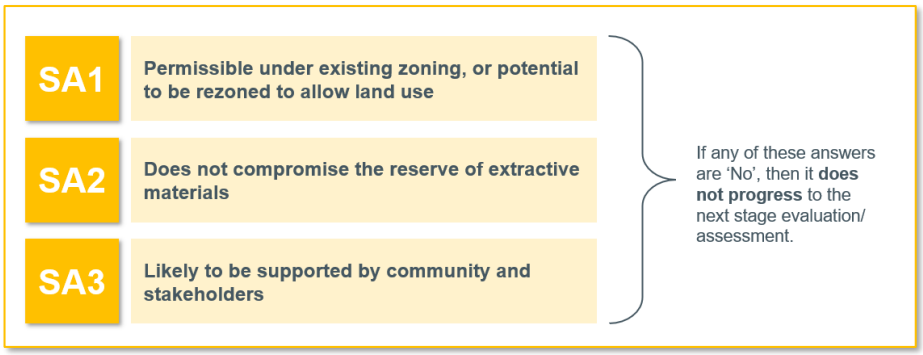
KEY FINDINGS

Preliminary Assessment to Shortlist Options

The four potential options were shortlisted using the Strategic Alignment criteria illustrated in Figure ES. 1. This criteria was developed in collaboration with Council to identify any planning or strategic considerations that would allow or prohibit development of the potential land use the Site.

Options that were shortlisted progressed to the full evaluation assessment which identifies the social, economic and environmental benefits, as well as financial considerations and risks of each option.

Figure ES. 1. Strategic Alignment Evaluation Criteria



Source: AEC.

The following potential options were shortlisted for further consideration and evaluation:

1 **Public Recreation and Community Use** – publicly accessible open space that provide a variety of passive and active activities, such as sporting fields, indoor and outdoor sport courts, picnic areas, as well as potentially including an outdoor venue which is owned and operated by Council and available for hire.

2 **Adventure Tourism** – this could include zip-lining, rock climbing (subject to rock stability assessment), outdoor obstacle courses (such as treetop adventures), archery, kayaking etc.

As well as the two shortlisted options outlined above, the following option from Phase 1 was also included in the full evaluation:

3 **Byron Studios Option** – headquarters for Byron Studios to establish film and production studios, and use of the quarry pit for filming.

Evaluation of Shortlisted Options

Decisions about future use of government land should focus on achieving positive social, environmental and economic benefits and outcomes for their community, while offering money for value to government and ensuring land use is in line with government strategic policies.

AEC has reviewed the relevant local and state strategic policies, and held a workshop with Council staff to develop the assessment indicators under each criteria in order to evaluate the potential land use options for the Site. This is detailed in Figure ES. 2.

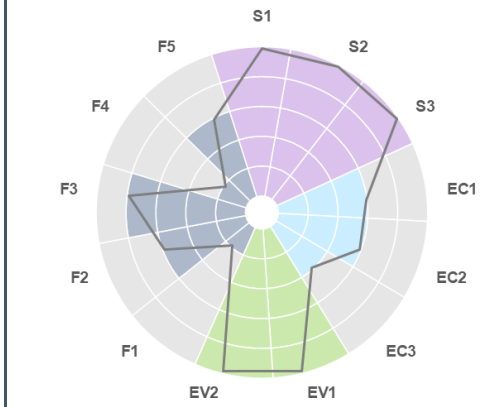
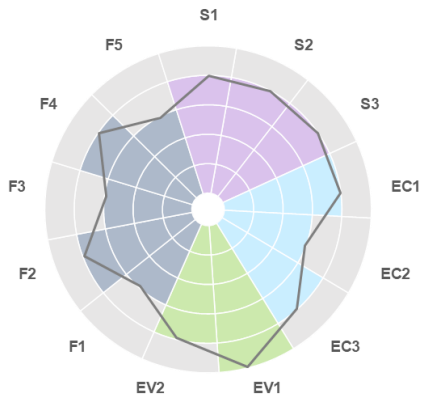
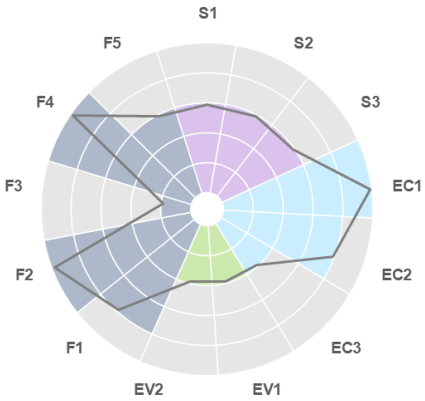
Figure ES. 2. Evaluation Criteria, Tuckombil Quarry Site

Preliminary Evaluation	Full Evaluation Assessment			
Strategic Alignment	**Social**	**Economic**	**Environmental**	**Financial**
• Permissible under existing zoning, or potential to be rezoned to allow land use • Likely to be supported by community and stakeholders • Does not compromise the reserve of extractive materials	• Improved access to local services and recreation. • Maintain village's character and lifestyle. • Encourages sense of community and social interaction.	• Creation of new jobs and employment opportunities. • Supports and attracts local businesses. • Enables tourism growth.	• Avoids land use conflicts and minimises impacts to the environment and community. • Enhances Ballina's environmental qualities and features.	• Minimal upfront costs to Council. • Financially sustainable business model. • Potential for government funding for redevelopment. • Ability to attract private investment. • Low risks associated with delivery.

Source: AEC.

The evaluation outcomes are presented in Figure ES. 3 overleaf.

Figure ES. 3. Evaluation Assessment Results

	Option 1: Public Recreation and Community	Option 2: Adventure Tourism	Option 3: Byron Studios
Evaluation Assessment			
Benefits	• **Most 'community and environmentally focused'** option, with the highest social and environmental outcomes. • Unique outdoor venue proposition that is currently not provided in the Shire.	• **Most 'balanced' option** – with moderately high social, economic, and environmental benefits. • Development will be partially funded by private operator.	• **Most 'commercially-focused' option**, with private investor already identified and willing to negotiate. • Highest economic benefits, with a new industry operating in the area.
Challenges	• **Funding risk** – project will have to be funded by Council, with no ability to attract private investment. • **Long-term realisation** – funding constraints may result in the development to be progressed in stages.	• **Private Operator** - May be difficulties with finding a private operator to develop the Site. • **Funding risk** – for the open space portion of the Site which is available for public use.	• **Scale of development** – The proposed option includes five stages, including north of the Site. This may compromise the future extraction of materials on the Site if permanent buildings are developed on this portion.

Social			Economic			Environment		Financial				
Improved access to local services and recreation.	Maintain village's character and lifestyle.	Encourages sense of community and social interaction.	Creation of new jobs and employment opportunities.	Supports and attracts local businesses.	Enables tourism growth.	Avoids land use conflicts & minimises environment/ community impact.	Enhances Ballina's environmental qualities and features.	Minimal upfront costs to Council.	Financially sustainable business model.	Potential for government funding for re-development.	Ability to attract private investment.	Low risks associated with delivery.
S1	S2	S3	EC1	EC2	EC3	EV1	EV2	F1	F2	F3	F4	F5

RECOMMENDATION

The evaluation assessment outlined the following with regards to each option:

- **Option 1 – Public Recreation and Community -** Most 'community and environmentally focussed' option.
- **Option 2 – Adventure Tourism** – Most 'balanced' option.
- **Option 3 – Byron Studios Option –** Most 'commercially focussed' option.

There is merit in exploring each option further, given each option has different benefits, risks and considerations. Council will need to assess their priorities for the Site and understand their risk tolerance level to undertake development on the Site.

Additional investigations are recommended to be undertaken for Council to make an informed decision on the future use of the Site. It is recommended that Council allocate further resources to explore these options in more detail. The evaluation assessment provides a mechanism for comparing the benefits and risks associated with each option, however further investigations will explore the practical feasibility of the options by revealing the barriers or points in which an option is considered unviable.

To assist Council, we have ranked the three options based on the social, economic and financial benefits and considerations:

Ranking of Options

1 Option 3 – Byron Studios Option.

2 Option 2 – Adventure Tourism.

3 Option 1 – Public Recreation and Community.

TABLE OF CONTENTS

1. INTRODUCTION

1.1 BACKGROUND

The Tuckombil Quarry ('the Site') is located at 540 Gap Road, Alstonville within Ballina Shire Council (Council) Area. It is positioned north-east of existing residential development and surrounded predominately by non-urban land. The quarry was previously operated by Lismore Council under lease from Council until August 2016. All quarrying activities ceased on the Site with the termination of the lease to Lismore Council. Currently located within the Site are two separately leased areas being used for asphalt processing and materials storage by .

Due to the increasing concerns and complaints from residents in adjoining areas relating to the quarry operations that were occurring on the Site, future expansion for the purposes of increased quarrying activity in the future remains unlikely to be supported by Council. Council has also resolved not to renew the existing lease to Boral where asphalt processing occurs, which is due to expire 31 December 2024. As such, Council is looking for viable opportunities for the Site to inform their future planning for the Site. Alternate land use options considered more acceptable to Council and the community are desired to be complementary in nature to the surrounding residential neighbourhoods.

Adaptive re-use of disused quarries is not a new idea and has been undertaken successfully in both national and international cases. It is not uncommon for quarries to be located close to urban environments and with the footprints of residential communities and urban cities expanding into rural areas, the land in which former quarry sites occupy become more valuable in making places more attractive and liveable. Rehabilitation of quarries can yield many positive social, economic and environmental benefits however there is a financial cost to be considered as part of the evaluation process.

AEC Group ("AEC") and ATC Williams ("ATCW") were engaged by Council to undertake an Opportunities Assessment for the Tuckombil Quarry Site to identify options that are technically feasible and financially viable, while delivering maximum value for the community given its proximity to residential areas. This assessment provides a recommendation for Council to adopt as a preferred approach for the future use of the Site.

1.2 PURPOSE

The purpose of this report is to identify viable opportunities for the Tuckombil Quarry Site to enable Council to determine the future use of the Site.

The assessment will be undertaken in two phases:

- **Phase 1,** considers the proposal put forward by Byron Studios for use of the Site as headquarters for their filming operations under a long-term ground lease with a progressive staged occupation. This scenario assumes the existing Ron Southon tenancy of part of the Site continues. Two new (and separate) vehicular access roads connecting the designated tenancy areas to a public road are assumed to be constructed to allow access to the Byron Studios tenancy area and Ron Southern tenancy area.
- **Phase 2,** identifies alternative uses to the Site and assesses the options with an evaluation framework developed in collaboration with Council to determine the preferred use for the Site. The potential land uses examined include:
  - Residential.
  - Technology and Light Industrial.
  - Public Recreation and Community.
  - Adventure Tourism.

This report represents Phase 2 of the Opportunities Assessment with Phase 1 having already been completed and submitted Council. This report should be read in conjunction with the Phase 1 report.

1.3 APPROACH

The following tasks were undertaken for Phase 2:

- **Socio-Economic Profile** – Overview of socio-economic profile of the Ballina Shire LGA to obtain an understanding of the demographics of the region, projected population and employment growth.
- **Preliminary Land Use Options –** A high-level assessment of the preliminary options for the Site, informed by market analysis, a number of national and international case studies of redeveloped quarries, and an analysis of key considerations if the potential land use was accommodated on the Site.
    - A **preliminary assessment** was undertaken to shortlist the potential options for further evaluation. This assessment considered the strategic alignment of the potential option to current planning policies and directions, and community and stakeholder expectations.
- **Evaluation of Shortlisted Options –** Assessment of the shortlisted options using evaluation criteria developed in collaboration with Council, including identification of the social, economic and environmental benefits to the community, financial considerations and risks of each option. This includes an evaluation of the Byron Studios option.
- **Recommendation** – Provides a final recommendation on the future land use on the Site and outlines the key considerations for the recommended option.

1.4 LIMITATIONS OF THE STUDY

- The Study is not intended to be a feasibility assessment or a business case to support a particular land use, but rather to guide Council in their decision making in relation to the future planning of the Site.
- AEC are not town planners or urban designers, and any representation within the Study of potential land uses are based on our professional interpretation of existing statutory planning controls and permissible zoning and land uses. Any potential land use or mix of land uses represented in this report should be verified for their suitability from an urban planning perspective with an appropriately skilled professional.
- The evaluation criteria is developed in collaboration with Council, and is supported by relevant local and state strategic planning documents. Only those objectives that are considered to be applicable on the Site were developed as evaluation criteria.
- Limited information will be available to undertake a full financial assessment for each option (similar to that undertaken for Byron Studios option in the Phase 1 report). Benchmarks will be used (where available) to get an understanding whether the proposed option is capital intensive or requires high ongoing management costs. The impact 'rating' is assigned by benchmarking against the other options to provide a means of comparison.
- ABS 2016 Census data is relied upon to undertake socio-economic analysis of the Ballina Shire. While five years has since elapsed since the last Census, it is understood the 2021 Census is underway and will not be available until mid-2022.

2. SOCIO-ECONOMIC PROFILE

This section profiles the key statistical indicators for the Ballina Shire LGA, and outlines the projected growth in population and employment.

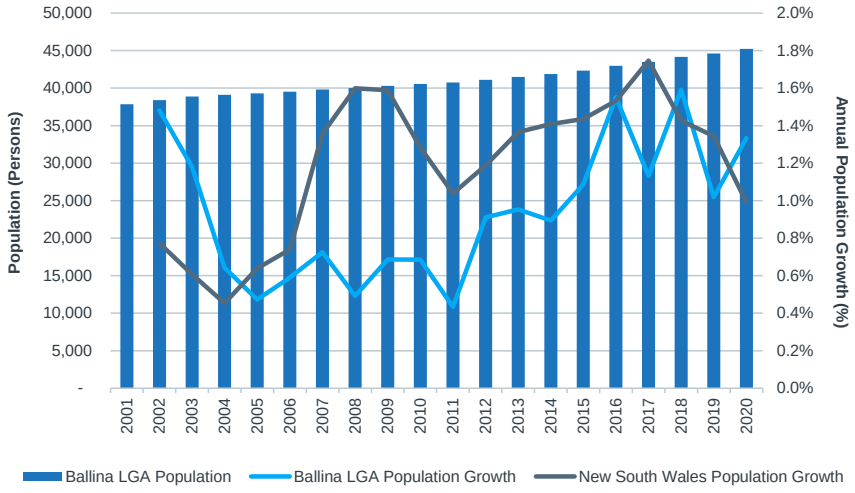
2.1 POPULATION PROFILE

Population

In 2020, the Ballina Shire LGA recorded an estimated resident population of approximately 45,200 persons. The LGA has recorded relatively volatile population growth by comparison with New South Wales. The rate of population growth in the LGA has consistently been lower than New South Wales, with an average annual growth rate of 0.9% over the past two decades, compared to New South Wales at 1.2%.

Over the past five years between 2016 and 2020, the Ballina Shire recorded an average annual growth rate of 1.3%, which is only slightly lower than New South Wales at 1.4%. The majority of population growth during this period is attributable to the net internal migration to the Ballina Shire from other regions within Australia.

Figure 2.1. Historical Population Growth, Ballina LGA (2001 – 2020)

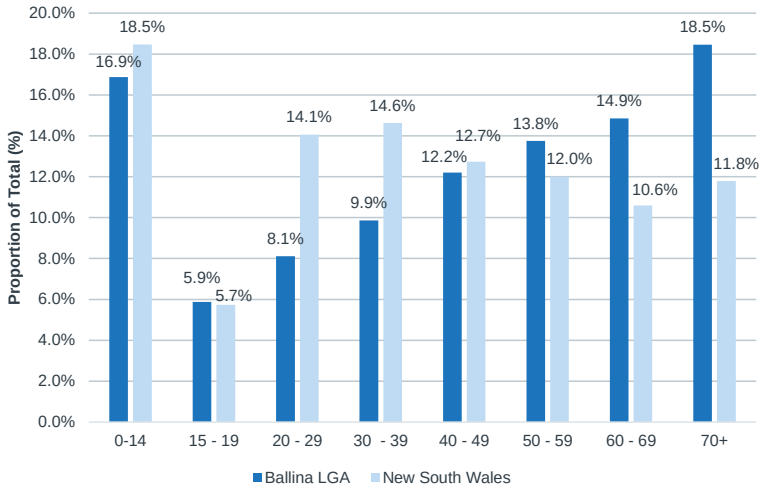


Source: ABS (2021).

Age Distribution

On average, Ballina Shire's population is older than New South Wales. The average age in Ballina Shire in 2020 is estimated to be 44.6 years, compared to 38.7 years in New South Wales. Ballina Shire has a higher proportion of residents over 60 years old compared to New South Wales, with approximately a third of the population (33.3%) over 60 years old in Ballina Shire compared to 22.4% in New South Wales.

Figure 2.2. Age Distribution, Ballina Shire LGA (2020)



Source: ABS (2021).

2.1.1 Household Indicators

Table 2.1 details the key household indicators from the ABS 2016 Census for the Ballina Shire LGA, compared to New South Wales.

Table 2.1. Key Household Indicators, Ballina Shire LGA

Indicator	Ref. Year	Units	Ballina Shire LGA	New South Wales
Household Income				
Median Household Income	2011	$	$48,360	$64,324
Median Household Income	2016	$	$60,112	$77,272
Household Composition				
Family Households	2016	%	63.1%	67.6%
Lone Person Households	2016	%	26.2%	22.4%
Group Households	2016	%	3.2%	3.9%
Visitors Only	2016	%	2.4%	1.3%
Other	2016	%	5.2%	4.8%
Average Persons per Household	2016	No.	2.3	2.6
Dwelling Type				
Occupied private dwelling	2016	%	91.6%	90.5%
Unoccupied private dwelling	2016	%	8.1%	9.3%
Non-private dwelling	2016	%	0.3%	0.2%
Dwelling Structure (Private)				
Separate house	2016	%	67.3%	65.3%
Semi-detached, terrace or townhouse	2016	%	23.1%	12.2%
Flat, unit or apartment	2016	%	5.4%	21.1%
Caravan	2016	%	2.2%	0.4%
Other	2016	%	2.1%	0.9%
No. of Dwellings	2016	No.	17,555	2,774,856
Tenure Type				
Owned	2016	%	69.6%	66.2%

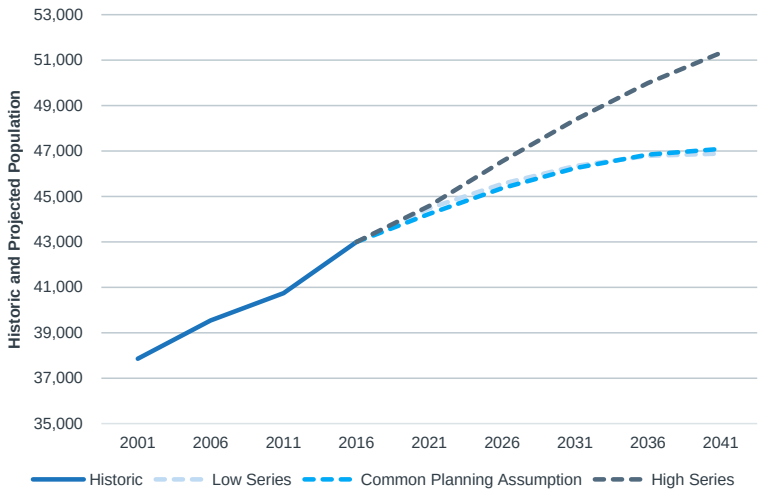
Indicator	Ref. Year	Units	Ballina Shire LGA	New South Wales
Rented	2016	%	28.0%	31.8%
Other	2016	%	2.4%	2.0%

Source: ABS (2017).

2.1.2 Projected Population

Ballina Shire's population is expected to grow to approximately 47,100 people by 2041, from an estimated 45,200 persons in 2020 (illustrated in Figure 2.3). This represents an average growth rate of 0.2% per annum over this period. This is lower than the rate of growth in the Ballina Shire over the past two decades (0.9% per annum).

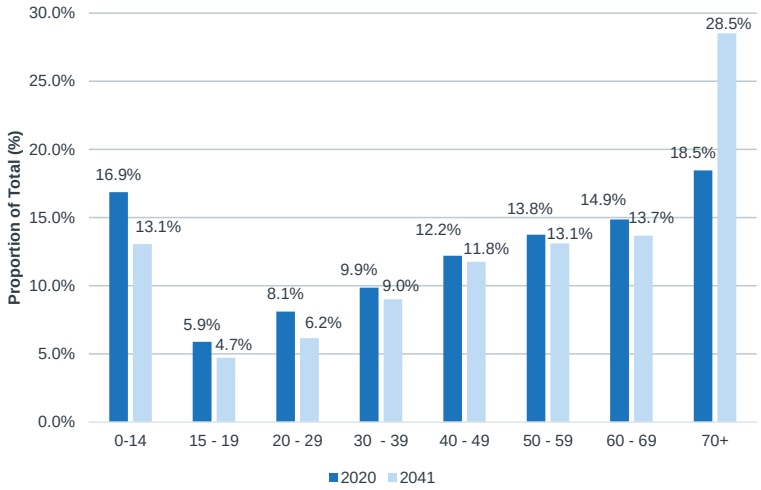
Figure 2.3. Historic and Projected Population, Ballina LGA (2001 – 2041)



Source: DPIE (2019).

Ballina is estimated to continue to grow as people move into the LGA, particularly those around retirement age. Figure 2.4 illustrates the age distribution of the projected population in 2041. The population aged 70 years and over is expected to increase significantly and represent almost a third of the total estimated population in 2041. All other age groups are expected to decline (as a proportion of total) over the next two decades.

Figure 2.4. Age Distribution of Projected Population, Ballina Shire LGA (2041)



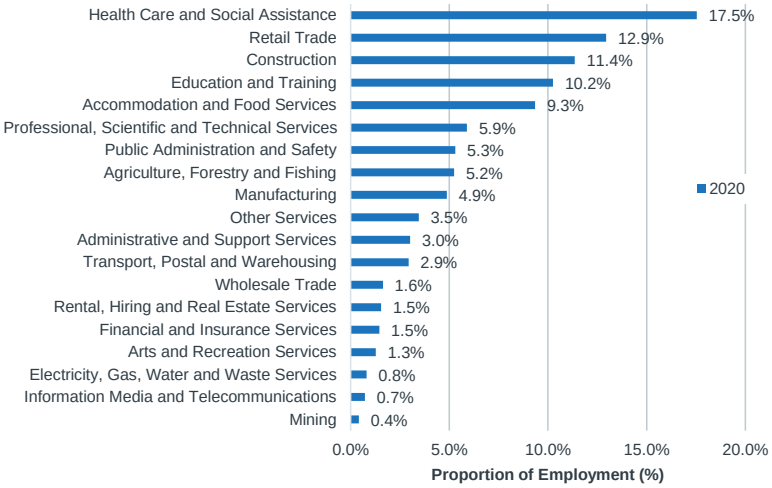
Source: DPIE (2019).

2.2 EMPLOYMENT PROFILE

Figure 2.5 illustrates the total employment by industry of those working in the Ballina Shire LGA.

In 2020, it is estimated that there were 17,206 people working in the Ballina Shire LGA. The most predominant industry in the Ballina Shire is Health Care and Social Assistance, accounting for 17.5% of total employment in 2016, followed by Retail Trade at 12.9% and Construction at 11.4%. The top three industries account for approximately 42% of the total employment in the LGA.

Figure 2.5. Employment by Industry (Place of Work), Ballina LGA (2016)



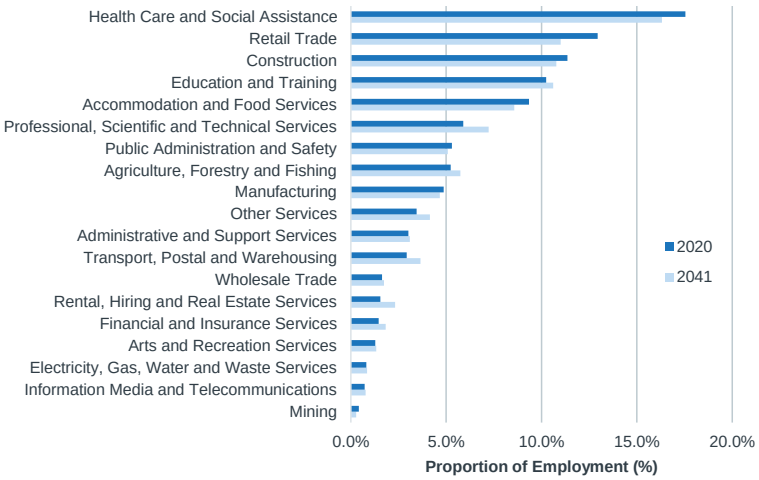
Source: AEC (unpublished).

2.2.1 Employment Projections

Employment in the Ballina Shire is expected to increase by 19.3% between 2016 and 2041. This is an average annual rate of 0.6% over the 25 years. Consistent with 2016, the main employment industries are expected to remain as 'Health Care and Social Assistance' at 16.3%, 'Retail Trade' at 11.0%, and 'Construction' at 10.8%.

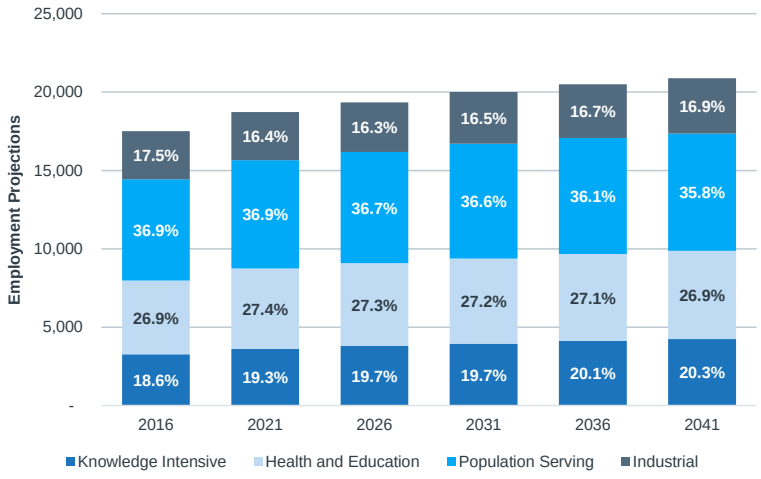
Declines (as a proportion of total employment) in the top two industries are projected (Health Care and Social Assistance, and Retail Trade), with the industries of 'Construction', 'Education and Professional', 'Scientific and Technical Services' increasing as a proportion of total employment between 2016 and 2041. This represents a shift from population serving jobs towards more knowledge intensive industries (as illustrated in Figure 2.7).

Figure 2.6. Employment Projections, Ballina Shire LGA (2020 and 2014)



Source: AEC (unpublished), TfNSW (2019).

Figure 2.7. Employment Projections by Broad Industry Sector, Ballina LGA (2016 – 2041)



Source: TfNSW (2019).

3. PRELIMINARY LAND USE OPTIONS

This section investigates and assesses the potential future uses for the Site. In developing the preliminary options, AEC included a range of uses and developments, including:

- Residential Land Use.
- Technology and Light Industrial Land Uses.
- Public Recreation and Community Uses.
- Adventure Tourism Uses.

The options are informed by the following:

- **Market Analysis** – A high-level assessment was undertaken to understand the local and regional market and demand for the land use and similar existing uses in the Ballina Shire.
- **Case Studies** - A number of national and international examples of redeveloped quarries were analysed as benchmarks. These ranged from minimal to high impact development, community and commercial focus, residential and tourism-related development.
- **Key Considerations for the Site –** An analysis of the key implications if the potential land use was accommodated on the Site, considering the market analysis and review of the case studies.

A **preliminary assessment** was undertaken to shortlist the potential options for further evaluation in Section 4. This assessment considers the **strategic alignment** of the potential option to current planning policies and directions, and community and stakeholder expectations.

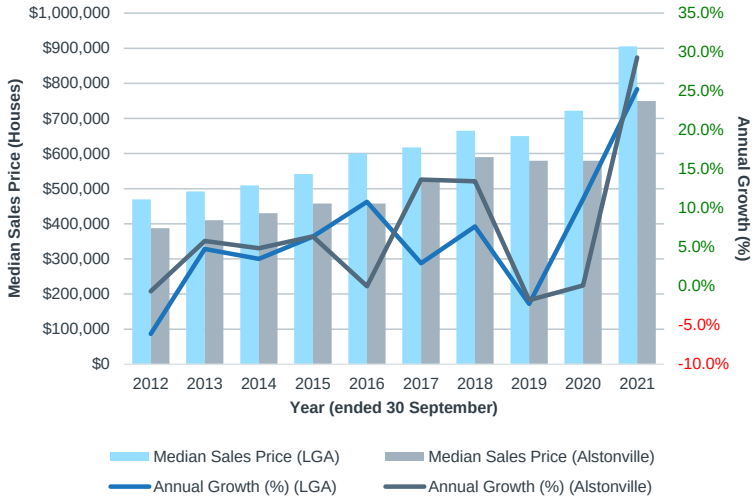
3.1 RESIDENTIAL LAND USES

Housing is a common theme in the strategic documents and policies prepared by the Ballina Shire and regional plans. This option considers residential development in the form of low and low-medium density development i.e. subdivided lots with a mix of single dwellings, and duplex/townhouse/villa housing typologies. This option also assumes the quarry pit will remain as an environmental feature or open space.

3.1.1 Market Analysis

Over the past ten years, sales price for houses in the Ballina Shire LGA have increased from $469,500 in the year ended 30 September 2012 to $905,000 in the year ended 30 September 2021, representative of an average increase of 6.4% per annum. Sales prices in Alstonville experienced a similar trend, increasing at an average of 7.1% per annum, from $387,500 to $750,000 over the same period.

Figure 3.1. Median House Sales Prices and Annual Growth Rates, 2012 – 2021, Year (at September)

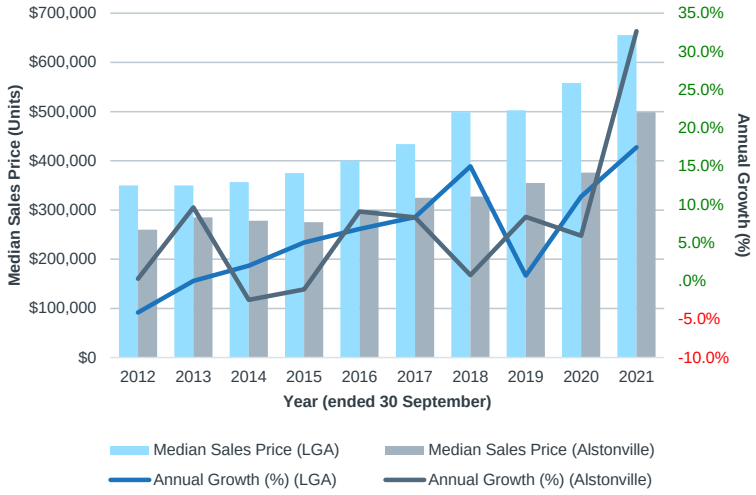


Source: PriceFinder.

In the past 12 months, house prices experienced significant growth, increasing by 25.5% in the LGA and 29.3% in Alstonville, the highest annual growth observed in the past 15 years. Peak selling periods were experienced in the past two years, where a total of 642 sales and 620 sales were recorded in 2020 and 2021 respectively for the LGA. This is aligned with the significant housing growth in Australia, fuelled by record low interest rates and other pandemic driven factors such as working from home and the desire for more private residing space, travel restrictions and government stimulus. Households are also moving to regional cities to seek out cheaper house prices and larger homes, illustrated by ABS internal migration data which show that the capital cities had a total net loss of 11,800 in the three months ended March 2021. Greater Sydney recorded a net loss of approximately 8,200 people in the March quarter.

Sales prices of units have experienced a similar trend as houses. In the Ballina LGA, the median sale price for units increased from $350,000 in 2012 to $655,500 in 2021, an increase of 87% over this period at an average of 6.2% per annum. In Alstonville, the median price for units was $260,000 in 2012, increasing to $498,750 in 2021, at an average annual rate of 7.2%. There are limited volumes of units for sale in Alstonville, with an average of 40 units sold per year over the past ten years. The 10-year average for the LGA is 326 units sold per annum.

Figure 3.2. Median Unit Sales Prices and Annual Growth Rates, 2012 – 2021, Year (at September)



Source: Price Finder.

3.1.2 Case Studies

Lilydale Quarry Redevelopment – Kinley Estate (Lilydale, Victoria)

The Lilydale Quarry, located approximately 42 km from Melbourne CBD, is a former limestone quarry which ceased operations in 2015. The development, known as the Kinley Estate, is led by Intrapac Property and its joint venture partners, Hume Partners and Bayport. The site is approximately 163 hectares in size, and is approved to support new residential development for up to 3,000 dwellings for 8,000 new residents. It will also include a host of retail, community and commercial facilities. Affordable housing will also be considered on the site. A new station will be added by the state government on the existing railway line which runs adjacent to the site.

The plan is for the quarry pit to be filled to enable up to 1,000 homes to be built on top of it. The pit component of the quarry is approximately 25 hectares, and is estimated to plunge 120 metres at the deepest point. According to Intrapac, the process will take five years and estimated to cost close to $100 million.

Development of the site will occur in stages. Stage 1 is almost complete, with civil construction for Stage 2 anticipated to be completed by the first quarter of 2022. All releases of land, as well as home packages have been sold out to date. More land is expected to be released at a later stage.

Figure 3.3. Aerial Photo of Site & Masterplan

Source: Kinley, Yarra Ranges Council.

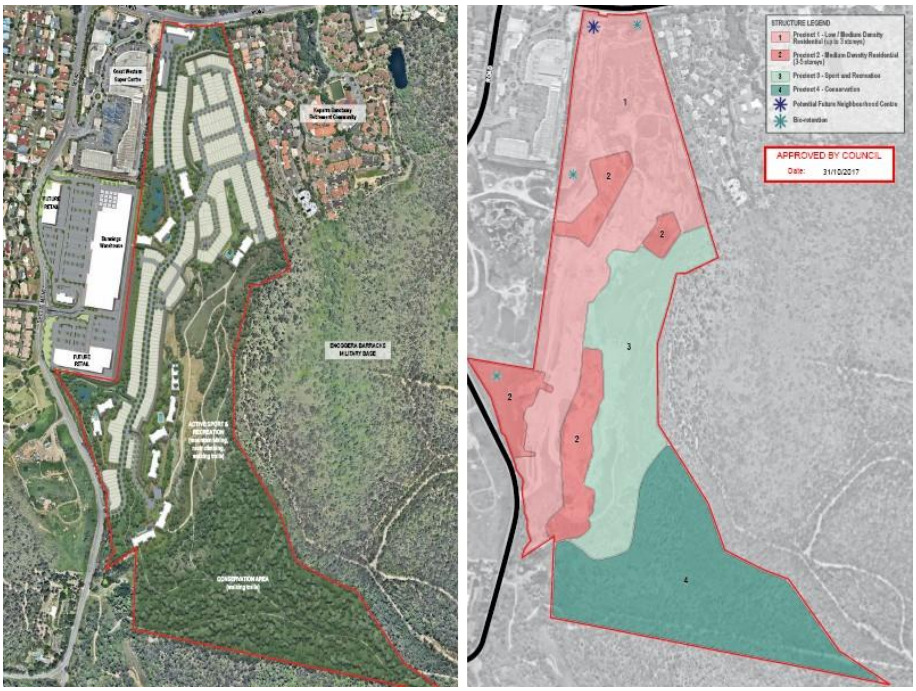
Keperra Quarry Redevelopment (Keperra, Queensland)

The former granite quarry is a 48.7 hectare site located approximately 9 kilometres northwest of the Brisbane CBD, in the established suburb of Keperra. The site adjoins a shopping centre which houses Bunnings, Aldi and Woolworths. A private independent-living retirement village also adjoins the site - the Keperra Sanctuary, which comprises of 254 units and a separately managed aged care facility which provides low level care accommodation for up to 49 residents.

The site was sold in December 2019 from Brookfield Residential Properties to Frasers Property Australia with a preliminary development approval for up to 700 dwellings (of up to five levels in height) across two precincts, around 60% of open space as well as a 7,000 sqm neighbourhood retail and childcare centre. Figure 3.4 shows the approved masterplan for the site.

Frasers is currently in the process of developing a new masterplan, with the intention to reduce development density to up to 550 dwellings with a maximum of three levels in height. Approximately 45% of the site will become dedicated open space, with 14.7 hectares of conservation land to be dedicated to local government, and the remaining 8.7 hectares to be for resident use.

Figure 3.4. Approved Masterplan, Keperra Quarry Development



Source: Google.

3.1.3 Key Considerations for the Site

House prices in Alstonville and the Ballina Shire have increased significantly over the past ten years, with median house prices almost doubling during this period (+93.5% in Alstonville and +92.8% in Ballina Shire). Housing affordability is referred to in the strategic documents as a common issue in the Ballina Shire.

Analysis of the case studies suggests that residential development in former quarries is possible. However, the developments of the Kinley Estate at the former Lilydale Quarry and the proposed development at the Keperra Quarry are much larger in scale than if the Tuckombil Quarry site were to be redeveloped for residential purposes. The Site is approximately 25.5 hectares, which includes the quarry void (approx. 5.8 hectares).

The following factors are important indicators of 'successful' redevelopments for residential uses:

- **Masterplanned communities** – Both developments propose a host of retail, commercial and community facilities. This provides additional amenity for future residents and improves the liveability of the area.
- **Supporting infrastructure** – Both the proposed Keperra Quarry redevelopment and the Kinley Estate are within close proximity to established residential neighbourhoods. The Keperra railway station is approx. 2km from the proposed development, whereas the Kinley Estate is located next to an existing railway line, with a new station to be added by the State government to service its future residents.
- **Significant open space** – Redevelopment of the former quarries include a significant amount of open space for public use, as well as private use for future residents. In the case of the Keperra development, the quarry void was proposed to be open space, which reduces the intensity of rehabilitation works. The quarry void at the Kinley estate will be filled to enable additional residential development in future stages.

- **Government support** – In the case of the Kinley Estate, there is strong support for the redevelopment by the local and State government. A comprehensive development plan was prepared for the site, with the Minister for Planning also announcing his intention to fast track consideration of the Lilydale Quarry Precinct.

The Site is located approximately 2.3km from the Alstonville town centre. Additional retail amenity may need be included on the Site if it is developed for residential purposes to service future residents.

In addition, a recent housing study undertaken by Council has revealed that existing zoned land in the Ballina Shire has the potential to provide lots to satisfy 30 to 40 years of residential land supply. The development of the Site for residential purposes would be a long-term opportunity (beyond 20 years), if pursued.

3.2 TECHNOLOGY AND LIGHT INDUSTRIAL LAND USES

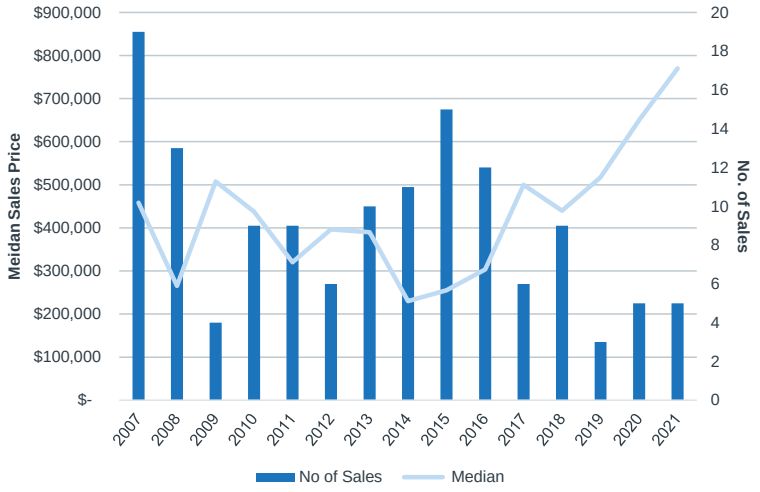
This option explores the potential use of the Site as an industrial precinct, with light industry, low-impact uses such as breweries, light manufacturing, data centre, training centres, self-storage, co-working hub and other similar land uses.

3.2.1 Market Analysis

There is limited industrial land available in the Ballina Shire, with two industrial precincts identified in the LSPS. This includes the Russellton Industrial Estate in Alstonville and the Southern Cross Industrial Estate in Ballina. In total, the Ballina Shire has approximately 146 hectares of 'General Industrial' zoned land in the LGA. Land in the industrial zones appear to be mostly developed, with approximately 41 hectares (28%) appearing to be vacant or underdeveloped (from desktop review).

Data shown within Figure 3.5 reflects the level of industrial property sales activity in the Ballina Shire LGA over the past 15 years. There have been limited industrial sales activity over the past few years within the Ballina Shire.

Figure 3.5. Industrial Sales Activity, Ballina Shire LGA (2007 to 2021 YTD)



Source: PriceFinder (2021).

Russellton Industrial Estate

The Russellton Industrial Estate is located in Alstonville, and is approximately 3.2km west of the Tuckombil Quarry Site. The Russellton Industrial Estate was established in 1987 for the local businesses in the Alstonville and Wollongbar townships to develop and grow. The industrial estate is home to a mix of local businesses, from heavy

machinery style businesses such as steel, farming and agriculture, to manufacturing businesses. An additional growth area within the industrial estate has been the home and building sector.

This industrial estate appears to be near fully developed with industrial buildings with development appearing to have commenced in the 1980's or even earlier. Vacant land is limited in availability. The subdivision appears to provide land lots ranging from about 1,000 sqm up to 2-3 hectares. Development comprises a mix of metal and brick factories with some small strata industrial complexes intermingled.

The most recent industrial land sale within the estate occurred at 17-19 Russellton Drive on 8 June 2021 and sold for $600,000, being a 2,072sqm lot analysing to $290/sqm as an indication of land sales rates for this lot size in the estate. However, as mentioned the availability of vacant land in the estate is limited and implications are that there is limited opportunity for industrial operators to secure vacant land for development.

3.2.2 Case Studies

Prospect Quarry - Quarry, Greystanes Industrial Estate (Greystanes, New South Wales)

The Prospect Quarry first commenced in the early 1820s and supplied crushed rock for road and building construction. The quarry ceased operations in 2007 and was acquired by Dexus Property Group and its fund partners across two tranches in 2007 and 2014. The 70-hectare site is fully developed with construction completing in March 2019, delivering more than 310,000 sqm of premium warehouse space and around 30,000 sqm of high quality office space. The estate is fully leased, with tenants including Beaumont Tiles, Orora, Coco Republic, Bunnings Trade, Toshiba, HelloFresh and Symbion. The total project value is estimated to be $200 million.

Figure 3.6. Aerial Photo of Quarry at Greystanes Industrial Estate

Source: Dexus.

3.2.3 Key Considerations for the Site

Industrial land is scarce in the Ballina Shire, noting the existence of two industrial precincts being the Russellton Estate and Southern Cross Estate. Both precincts are in more accessible locations compared to the Tuckombil Quarry Site.

The Russellton Estate located near Bruxner Highway, which forms part of an east-west link from the Northern Rivers coast, across the Northern Tablelands in northern NSW, is close to the border of Queensland. It provides a key movement corridor between Lismore and Ballina, linking with the Pacific Highway.

The Southern Cross Estate is located in Ballina, adjoining the Ballina Byron Gateway Airport and the Ballina waste management centre. The estate is within close proximity to the Ballina town centre and the Pacific Highway entry and exit points.

The Prospect Quarry redevelopment has been commercially successful primarily due to the accessibility to key arterial roads and their ease of access, which are attractive for logistics tenants. Further, industrial land within western Sydney is gradually being developed with production of new industrial land not able to satisfy demand, thereby pushing up land prices in existing industrial precincts.

The following factors are important indicators of 'successful' redevelopments for industrial uses:

- **Location and Accessibility** – Access to major arterial roads and highways are an important factor for viable industrial operations, particularly for light industries such as warehousing, freight, logistics, construction and building supplies etc. Where there are access issues, industrial lands will struggle to be competitive in the long term.
- **Co-location/Business Clusters –** Business clusters require critical mass to be viable. Major industrial businesses generally benefit from co-location of other industries major industrial parks.
- **Unrestricted hours of operation** – Ability to operate in a conflict-environment (e.g. unrestricted hours of operation). The proximity to residential areas may cause noise complaints (depending on type of industrial use), and other traffic-related issues.

Given the Site does not have direct access to motorways or other major arterial roads, its location may not be as attractive to industries compared to the Russellton Industrial Estate or Southern Cross Estate. Other issues that may arise include noise and traffic-related complaints from residents in neighbouring areas (depending on the scale of future industrial development on Site). Further the road infrastructure surrounding the quarry is of a neighbourhood scale and may not be suitable for heavy/regular large vehicle movements without upgrade to the road infrastructure.

3.3 PUBLIC RECREATION AND COMMUNITY USES

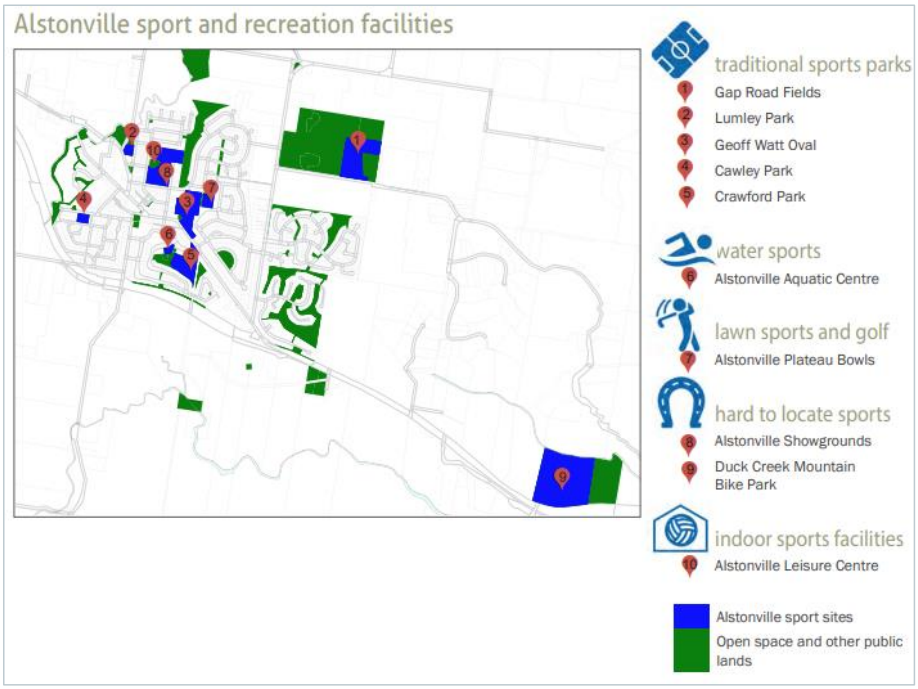
This option will consider community uses such as open space and a public recreational/entertainment space (likely to be Council owned and operated). This could include an outdoor sports facility, or event space. There may also be opportunities for weekend markets and community gardens.

3.3.1 Market Analysis

According to the *Ballina Shire Sport and Recreation Facility Plan 2020*, there were 45 sports facilities (approximately 232 hectares) that provide a variety of traditional and non-traditional sport and active recreation opportunities to the Shire's residents. This provision rate equates to 2.79ha/1,000 people, a surplus of 1.09ha/1,000 people when compared to the benchmark of 1.79ha/1,000 people per the *Ballina Shire Open Space Strategy 2008*. While the Shire has a good supply of open space, the Strategy notes that it has not necessarily been tailored to suit community needs.

Figure 3.7 illustrates the existing sport and active recreation facilities in Alstonville. Within Alstonville, there are five traditional sports parks, an aquatic centre, an indoor sports facility, a lawn bowls club, mountain bike track and a showground. Open space and other public areas are scattered across the locality. The Tuckombil Quarry site is identified in the "open space and other public areas" category, however, is not available for public community access. It adjoins the Gap Road Fields, which is used for community sports, provided on an interim basis pending the future of the quarry.

Figure 3.7. Alstonville Sport and Recreation Facilities



Source: Ross Planning (2020).

In the neighbouring village of Wollongbar, a new Sporting Field complex was opened in 2017 and offers significant recreational space for the Ballina Shire, which includes six tennis courts, four netball courts, two rugby fields, an AFL oval and cricket pitch over 14 hectares of space. The multi-million dollar complex was a collaboration between the three tiers of government, with the majority of funding ($4.5m) provided from the Federal Government towards the development of the Wollongbar Sports Fields.

A number of recent commitments have been also made to upgrade to open space and recreational areas in the Ballina Shire over the past few years. A new district park in Wollongbar received approval in 2020, with the project anticipated to be completed in January 2022. The park is located on the corner of Plateau Drive and Rifle Range Road in Wollongbar, and will include a skate park, half-size basketball court, table tennis, exercise equipment and playground, BBQs and park furniture, public amenities and carparking.

Another significant upgrade to community parklands in the Shire include the Kingsford Smith Reserve Master Plan, which was adopted on 28 October 2021. Council received $3.6 million in funding as part of an election commitment to upgrade some facilities at Kingsford Smith Park to meet the requirements of a regional sporting facility. The first stage of the upgrades, funded by the NSW Office of Sport, will result in improvements and upgrades to sporting facilities, including the netball facility upgrades, surface improvements, change room/amenity improvements etc. All future stages of work in the master plan are currently unfunded. To realise all upgrades per the master plan, Council will need an estimated $25 million of funding.

Figure 3.8. Kingsford Smith Reserve Master Plan

Source: Urbis (2021).

3.3.2 Case Studies

Hornsby Quarry Redevelopment – Hornsby Park (Hornsby, New South Wales)

Hornsby Shire Council are currently in the process to transform the former Hornsby Quarry to a new 59-hectare public park. The masterplan includes multi-use fields, sporting and recreation buildings, a wetlands cascade, informal amphitheatre, and tree-top walkway. Abseiling and climbing on the quarry rockface are listed in the plan as potential activities within the quarry site. The former quarry void will be established as a major parkland.

The quarry void is being partially filled in to make it safe, using excavated material from the NorthConnex tunnel that was built by the NSW Government to link the M1 and M2 motorways. Bulk earthworks commenced on the site in October 2021 to reshape and stabilise the site. This stage of works is expected to be completed in mid-2023.

The project is estimated to cost $130M, funded by Federal, State, Council and private sector investment. NSW Government provided $50M for the creation of the park, and Council has sourced $30M in development contributions to spend on the park. The construction of the NorthConnex was a timely project with the fill resulting from the road tunnelling making the significant filling of the quarry pit possible and located nearby to the quarry pit.

Figure 3.9. Hornsby Park Master Plan

Source: Clouston Associate and Aterta Interactive

Gipps Street Recreation Precinct (Penrith, New South Wales)

The Gipps Street Recreation Precinct project will transform the former waste facility site into a sport and recreation destination. The 32 hectare site will incorporate both active and passive sport and recreational space, including floodlit sports fields, inclusive children's play areas, a youth precinct with skate park, pump track and multi-sport courts, and other public open space areas.

The project is estimated to cost $15 million, funded by Council as part of their $125 million investment over five years into sport and recreation facilities in the Penrith LGA.

The Gipps Street Recreation Precinct is expected to be complete in approximately late 2023.

Figure 3.10. Gipps Street Recreation Precinct Master Plan

Source: Penrith City Council.

Quarry Amphitheatre (Perth, Western Australia)

The Quarry Amphitheatre is an outdoor venue located in City Beach, Western Australia. The amphitheatre is located in a former limestone quarry, first quarried in 1834 and ceased operations in 1906. In 1917 the land was sold to Perth City Council and was converted to the venue in 1986.

The project received funding support from the Commonwealth Government, Lotteries Commission and the former City of Perth. Construction began following receipt of a $468,000 grant from a Commonwealth Employment programme which stipulated the use of unemployed labour.

The site is approximately 2 hectares, and includes an amphitheatre constructed for performing arts in quarry void, a café, a wooden stage and changing facilities. A marquee can be set up on the stage for weddings and corporate events. The amphitheatre has a seating capacity of 557 persons, wheelchair access, car parking for 200 plus vehicles. The venue is a BYO facility and is extensively used between October and May for a range of events from ballets to concerts and large weddings.

The Quarry Amphitheatre was previously managed by the Perth Theatre Trust to 2009 and is now managed by the Town of Cambridge. In 2013, the amphitheatre underwent refurbishment with an allocated budget of $2 million.

Figure 3.11. Quarry Amphitheatre, WA

Source: Quarry Amphitheatre.

Warrnambool Community Garden (Warrnambool, Victoria)

The Warrnambool Community Garden is located on the former Albert Park limestone quarry, which was unused for over 50 years. The land is Crown-owned and managed by the Warrnambool City Council (WCC), which leases it to Warrnambool Community Garden Inc. (WCG). The community garden has been located at the site since 2006 and is a common ground where the community can meet and grow produce, and mid-week markets are held on the site. The market works to improve access to fresh and sustainable produce in the Warrnambool area, reflecting the community garden's commitment to help residents access locally produced, waste-free goods.

The WCG organisation commenced a masterplanning process to transform the former quarry to a multipurpose facility for community events, as well as a native plant creek gully. Earthworks has been undertaken to create an amphitheatre for performances, markets and community events (progress of the amphitheatre in Figure 3.12 as of October 2021).

The quarry rehabilitation project has been in the pipeline for several years and is largely being funded by a $194,000 grant as part of the Victorian Government's *Pick My Project Initiative*. The project also received $10,000 from Federal MP for Wannon Dan Tehan for weed control.

Figure 3.12. Warrnambool Quarry Redevelopment Master Plan & Amphitheatre Progress

Source: Perry Mills, Warrnambool Community Garden.

3.3.3 Key Considerations for the Site

The Ballina Shire has an ample supply of open space (according to the *Open Space Strategy 2008*), although this does not mean it is suited to community needs. Significant public space upgrades are being pursued by Council, which includes playground upgrades at Pop Denison Park, the construction of a new district park in Wollongbar and the master plan of the Kingsford Smith Reserve to elevate the parkland to a regional sporting facility.

The Hornsby Park and Gipps Street Recreation Precinct are regional-level parks (characteristically a large sized park that accommodates substantial sports and recreation areas and significant areas of public open space). The size and scale of these parks will draw residents from across and outside the region to use its facilities. The significant upgrades to Kingsford Smith Reserve is expected to designate it as the regional park for the Ballina Shire. As such, it is unlikely a similar level of investment will be made by Council to redevelop the Tuckombil Quarry site for this purpose in the short-term. The Site could still be redeveloped for public use as a local or district park in the first instance, which requires a lower capital costs and will enable public access and use for recreation purposes.

The quarry footprint forms a natural amphitheatre and sound barrier. Like the Quarry Amphitheatre in WA and the Warrnambool quarry in VIC, the quarry void at the Tuckombil Site could be developed for a flexible outdoor venue that could cater for music festivals, events and wedding celebrations. This venue could be Council owned and operated, in order to generate additional revenue for Council.

Events are identified as a key driver of domestic visitation for the region in the North Coast Destination Management Plan 2018-2021. There are presently no large scale outdoor venues for music or other events in the Ballina Shire, and thus no major events are held in the Shire, unlike the Iron Man in Port Macquarie, Rally Australia in Coffs Harbour, Splendour in the Grass and Blues Fest in the Byron Shires.

Key indicators of 'successful' redevelopments for public recreation and events uses:

- **Open park design and shaded areas** – Open areas encourage active recreational activities for many uses. Shaded areas provide places for relaxation and can stimulate social interactions.
- **Car Parking** – Sufficient car park spaces should be accommodated for recreational and events facilities. If there is insufficient car parking available at parks and event spaces, it may deter people from visiting or holding events at the space.
- **Flexible spaces** – The design of event spaces should be flexible enough to cater to many different types of events. As an example, the Quarry Amphitheatre in WA is an open amphitheatre, however there is the option to set up a marquee for events such as weddings or corporate receptions.
- **Level of Amenities** – Amenities such as change rooms, bathrooms and lighting should be sufficient and appropriate for the capacity of the venue.

3.4 ADVENTURE TOURISM

This option explores the opportunity to establish a regional destination that takes advantage of the unique qualities of the Site. This could create a distinctive attraction for the Ballina Shire as well as a valuable asset with potentially higher financial returns if the right operator can be found to develop the Site for their use.

3.4.1 Market Analysis

The Ballina Shire currently supports a variety of nature-based sporting activities, such as mountain biking and hiking, complemented by coastal nature-based activities such as surfing, diving, parasailing, hang-gliding etc. Adventure-based sports not presently catered for in the Shire include rock climbing and abseiling, zip lining, tree top walks or challenges, indoor trampolining, ninja warrior- style obstacle courses, competition BMX and bike pump tracks.

There is a Treetops Adventure located at Coffs Harbour, which has 8 tree ropes courses, each filled with a mix of ziplines and aerial activities and is established in Orara East State Forest, within close proximity to the Sealy Lookout.

3.4.2 Case Studies

'Zip World' Penrhyn Quarry, North Wales

The Penrhyn quarry is a slate quarry located near Bethesda, North Wales. The site is approximately 162 hectares in size, and the main pit is nearly 1.6km long and 370 metres deep. The quarry is owned by Welsh Slate Ltd and is still in operation.

A portion of the site is no longer used for slate extraction and is the home of a new adventure tourism facility operated by Zipworld, which first opened in 2013. The facility has the fastest zip line in the world, the Velocity 2, a 1.5 kilometre zip line which flies over an abandoned and partially flooded part of the quarry pit. Other activities on the site include mountain cart experience, tours of the quarry and a shorter zip line of 200 metres for younger children. The facility has attracted over a million visitors since inception.

Figure 3.13. Zip World at Penrhyn Quarry

Source: Zip World UK.

Quarry Park Adventures, Rocklin, California, USA

The Big Gun Quarry was one of the largest working granite quarries in California, located in the Quarry District of Rocklin. The Quarry District is experiencing a transformation through private and public development that supports vibrant entertainment, commercial activity and residential options.

At the centre of the revitalisation is the Quarry Park, a 5.5 acre (2.2 hectares) park with an outdoor amphitheatre and Quarry Park Adventures, an adventure park built within and atop the former rock quarry. The attraction offers a combination of activities, including rock climbing, aerial obstacle course, paddle boats, rappelling and zip lining.

The site is owned by the City of Rocklin. The City had entered into a contract with an operator to construct and operator the adventure park. The total cost of project construction was estimated to be at $3.25 million USD (approx. $4.5 million AUD). The investment in the park was funded by the City, and will be paid back through park revenues. Revenues are split 50-50 between the City and the park operator.

Figure 3.14. Quarry Park Adventure Site Map

Source: Quarry Park.

3.4.3 Key Considerations for the Site

The majority of adventure-tourism sports present in the Ballina Shire are nature-based, such as hikes, mountain biking and other coastal activities such as diving, surfing and parasailing. These operations require very little capital expenditure or infrastructure as it relies on the environmental features of the region.

The Site can accommodate recreational activities that are not currently in the region, such as rock climbing, zip lining and/or obstacle course track. The walls of the quarry void can be used for rock climbing or abseiling, similar to the Quarry Park Adventures in California (subject to a stability assessment), which can be constructed and operated by a commercial operator.

In general, the activities of adventure parks tend to attract families and children. Ballina Shire has a higher proportion of older persons, with the average age in the Shire estimated to be 44.6 years old, compared to the NSW average of 38.7 years. In addition, approximately a third of Ballina's population is over 60 years old. This relatively older demographic of Ballina Shire may reduce the demand of such a facility in the region, from the local population base at least. However, a new adventure park might be able to attract domestic travellers visiting the region.

Factors contributing to the success of adventure parks include:

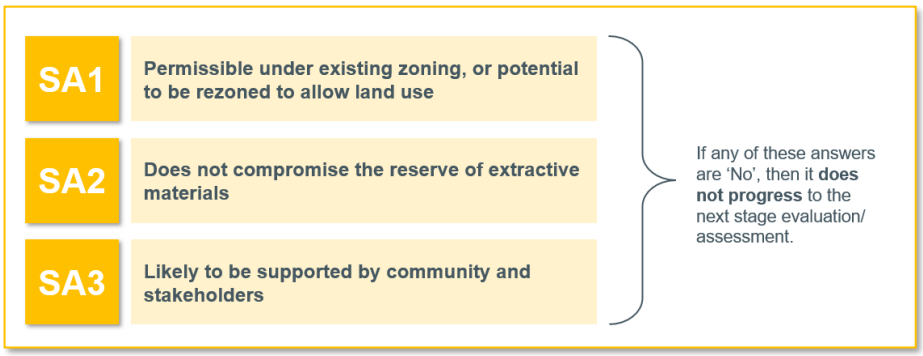
- **Unique and innovative attraction elements** – attractions that are inclusive, engaging and memorable will encourage repeat visitation and attract more people from outside the region.
- **Operate during holidays and peak seasons** – this includes peak periods such as school holidays, weekends and the Christmas period, when families travel for a holiday.
- **Complementary facilities** – such as restaurants, cafes, gift shops etc., will encourage additional spend by visitors and may increase visitation time at the parks.

3.5 PRELIMINARY ASSESSMENT TO SHORTLIST OPTIONS

3.5.1 Strategic Alignment Evaluation Criteria

To shortlist the options discussed in this Section, the potential land uses will be assessed against the following criteria illustrated in Figure 3.15. This criteria was developed in collaboration with Council to identify any planning or strategic considerations that would allow or prohibit development of the potential land use the Site.

Figure 3.15. Strategic Alignment Evaluation Criteria



Source: AEC.

Strategic Alignment Criteria 1: Permissible under existing zoning, or potential to be rezoned to allow land use

The Site, including the quarry pit and leased areas, is currently identified as 1(e) Rural (Extractive and Mineral Resources) zoning under the Ballina Shire Local Environmental Plan (BLEP) 1987. The primary objectives of the 1(e) zoning under the BLEP 1987 are:

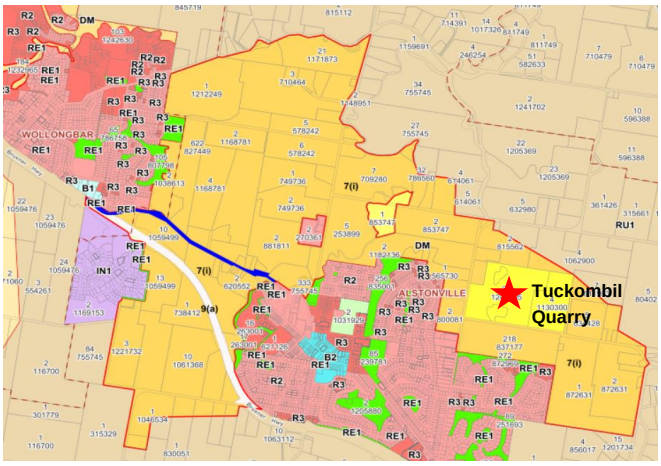
(a) *to identify land which are extractive or mining industry potential,*
(b) *to prohibit development which would result in the withdrawal of actual or potentially productive mineral resources land, and*
(c) *to prohibit development which would be adversely affected by the operations of extractive or mineral resources development, particularly adverse effects from noise, vibration or dust.*

Permissible uses include agriculture and forestry (without consent), and bush fire hazard reduction, dwelling houses, extractive industries, home industries, industries (other than offensive or hazardous industries), mines, open space, roads, telecommunication facilities, and utility installations (with development consent). Dwellings are only permissible on vacant land if the area is not less than 40 hectares.

The area surrounding the quarry site is zoned 7(i) Environmental Protection (Urban Buffer) under the provisions of Ballina LEP 1987 (illustrated by the mustard colour in Figure 3.16). The primary objective of the zone is to "create a rural buffer in the locality of Alstonville and Wollongbar and to prevent development of an urban character within any part of the zone which is likely to be seen by existing or likely future residents of the villages of Alstonville and Wollongbar or from a major road in the locality."

Permissible uses include agriculture (not including the erection of buildings – permissible without consent), and agriculture (including erection of buildings), bed and breakfast establishments, bush fire hazard reduction, dwelling houses, home industries, open space, roads, roadside stalls, rural industries. telecommunication facilities, and utility installations (with development consent). Dwellings are only permissible on vacant land if the area is not less than 20 hectares.

Figure 3.16. Extract from Ballina LEP 2012 Land Zoning Map



Source: BLEP (2012).

The urban buffer zone between Wollongbar and Alstonville was introduced to maintain the individuality and integrity of each village. During the community engagement process for the Alstonville Planning and Environmental Study, it was noted that the community valued the inter-urban break that provides a visual separation between villages and creates a defined urban edge.

It is the current policy position of Council to retain the 7(i) zoning and by extension recognise the inter-urban break between Alstonville and Wollongbar through a land use zone. This is mirrored in a number of Council strategies:

- **Ballina Shire Growth Management Strategy 2012** - "Maintain the urban buffer/inter-urban break between Wollongbar and Alstonville".
- **Alstonville Strategic Plan 2017** – "Advocate a policy position which discourages proposals which seek to introduce urban style development within the rural area which separates Alstonville from Wollongbar and from farmland designated as being of State and Regional significance. Retain the inter-urban break between Alstonville and Wollongbar".
- **Wollongbar Strategic Plan 2019-2039** – "Retain the rural separation between Wollongbar and Alstonville (north of the Bruxner Highway). Advocate a policy position which generally discourages proposals which seek to introduce urban style development within the rural area which separates Wollongbar from Alstonville with particular reference to properties fronting Lismore Road."

Given these considerations, this evaluation criteria aims to shortlist those options which do not impede on the inter-urban break/buffer between Wollongbar and Alstonville, and are, or likely to be permissible.

Strategic Alignment Criteria 2: Does not compromise the reserve of extractive materials

A key planning consideration for the Site relates to local planning Directions issued by the Minister for Planning to relevant planning authorities under section 9.1(2) of the *Environmental Planning and Assessment Act 1979*. These directions apply to planning proposals lodged with DPIE for new Local Environment Plans (LEPs).

The Site is identified in the Ballina Growth Management Strategy as an 'Identified Resource Area' with the adjacent areas named 'Transition Areas'. Land that falls into these categories are affected by Ministerial Direction.1.3 – Mining, Petroleum Production and Extractive Industries.

The objective of this direction is to *"ensure that the future extraction of State or regionally significant reserves of coal, other minerals, petroleum and extractive materials are not compromised by inappropriate development*". The Direction requires that Council consult with the Department of Primary Industries, who manage the state's extractive

resources prior to any LEP amendments. Any objections from that Department would likely prevent progress of the LEP Amendment.

Previous studies undertaken of the Tuckombil Quarry indicate there are significant quantities of good quality basalt material, and that continued extraction, while not straightforward, is likely to be physically and economically viable. As such, this is a significant constraint in terms of Ministerial Direction 1.3 as an LEP amendment will need to demonstrate that the reserve of extractive materials is not compromised.

The studies note that significant extractive reserves are located in the north-eastern part of the Site, extending past the eastern boundary of the lot and partially to the existing hockey fields adjoining the Site. The constraints resulting from the Ministerial Direction will potentially impact the scale of development, where development is located on the Site and the nature of future development, i.e. whether it can be easily removed in the future in order to access the remaining extractive resources.

Strategic Alignment Criteria 3: Likely to be supported by community and stakeholders

The use of the Site for quarry operations has raised many concerns and complaints in the past from residents adjoining the Site. It is unlikely that the continued use of the Site as a quarry will be viewed favourably by the community. As such, alternate land use options which may be more acceptable to the community are being considered by Council. The future use on the Site will be likely subject to public opinion and consultation. It is important that the proposed land use be supported to ensure a good outcome is delivered for the community.

3.5.2 Preliminary Evaluation – Strategic Alignment Assessment

Table 3.1 outlines the assessment of the four options against the strategic alignment criteria.

Strategic Alignment Assessment Criteria:

- **SA1** - Permissible under existing zoning, or potential to be rezoned to allow land use.
- **SA2** – Does not compromise the reserve of extractive materials
- **SA3** - Likely to be supported by community and stakeholders

Table 3.1. Preliminary Evaluation, Strategic Alignment Assessment

Option	Criteria	Assessment	Meets Criteria?	Proceed with Evaluation?
Residential	SA1	A rezoning will be required to allow residential development on the Site, however residential uses will conflict with the objectives of the buffer between Wollongbar and Alstonville, which surrounds the Site. Dwelling houses are only permissible in the current zoning if the land is more than 20 hectares. As such, residential development is not likely to be allowed as a future use on the Site.	No	No
	SA2	Residential development is permanent in nature, and will compromise the future extraction of the remaining resources.	No	
	SA3	Residential development is consistent with the development to the west of the Site. It is likely that this use will be supported by the community (assuming the scale of development is consistent with the existing supply in the area).	Yes	
Technology and Light Industrial	SA1	Industrial and commercial development will require the rezoning of the Site to a IN1 zone, which will require a LEP amendment. This is an issue due to the Ministerial Direction 1.3 (discussed in SA2 criteria below). A major technology and light industrial precinct is also unlikely to be permissible on the Site due to the urban buffer zone between Alstonville and Wollongbar.	No	No
	SA2	Industrial development generally has high capital costs to build the necessary infrastructure, and thus will require a long-term lease in order for development to be feasible. This long-term/permanent nature may impact future extraction of resources at the Site unless improvements are easily removed in the future.	No	
	SA3	Depending on the future uses on the Site, it is possible that the Site be used for technology and light industrial uses. It is within close proximity to residential neighbourhoods, and thus industrial uses that do not create noise, pollution or too much traffic could be acceptable by the community.	Possible	
Public Recreation and Community	SA1	Open space is currently permissible (with development consent) under the current zoning of 1(e) Rural (Extractive and Mineral Resources) per the BLEP 1987.	Yes	Yes
	SA2	Public recreation and community use will require rehabilitation of the Site, and potentially a Council-owned venue/facility that is available for hire. As the Site would remain in Council ownership, future extraction of the remaining resources could still be possible.	Yes	

Option	Criteria	Assessment	Meets Criteria?	Proceed with Evaluation?
	SA3	Community and stakeholders will likely be supportive of the Site if used for public recreation and community uses as it provides more open space and adds amenity to the area.	Yes	
Adventure Tourism	SA1	Adventure tourism is a recreation use which is currently not permissible under the existing zoning. However, an equivalent zone under the BLEP 2012 could be applied for the Site. Deferred matters recommendation is an RU2 – Rural Landscape zone, which permits major and outdoor recreation facilities with consent. This pathway is plausible if adventure tourism is decided as the most appropriate future use of the Site.	Yes	Yes
	SA2	Depending on the scale, design and activity, adventure tourism uses may be easily removed from the Site to allow for future extraction of resources (if required). Uses such as rock climbing, zip lining, obstacle courses are relatively low-scale development compared to more intensive uses such as residential and industrial.	Yes	
	SA3	It is likely that adventure tourism uses on the Site will be viewed more favourably than current quarrying operations. It provides additional recreational facilities in the region.	Yes	

Source: AEC.

3.5.3 Shortlisted Options

This chapter has highlighted the two shortlisted potential options for further consideration and evaluation:

4 **Public Recreation and Community Use** – publicly accessible open space that provide a variety of passive and active activities, such as sporting fields, indoor and outdoor sport courts, picnic areas, as well as potentially including an outdoor venue which is owned and operated by Council and available for hire.

5 **Adventure Tourism** – this could include zip-lining, rock climbing (subject to rock stability assessment), outdoor obstacle courses (such as treetop adventures), archery, kayaking etc.

As well as the two shortlisted options outlined above, we will also evaluate the following Phase 1 Option:

6 **Byron Studios Option** – headquarters for Byron Studios to establish film and production studios, and use of the quarry pit for filming.

4. EVALUATION OF SHORTLISTED OPTIONS

4.1 EVALUATION CRITERIA

Decisions about future use of government land should focus on achieving positive social, environmental and economic benefits and outcomes for their community, while offering money for value to government and ensuring land use is in line with government strategic policies.

AEC has reviewed the relevant local and state strategic policies, and held a workshop with Council staff to develop the assessment indicators under each criteria in order to evaluate the potential land use options for the Site. This is detailed in Table 4.1.

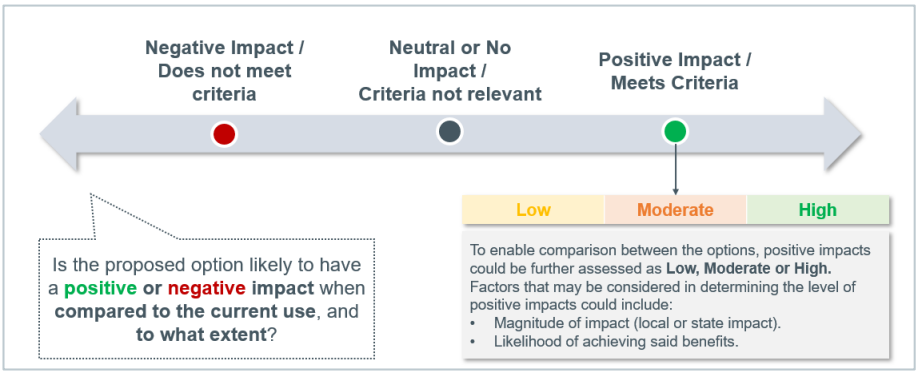
Table 4.1. Evaluation Criteria, Tuckombil Quarry Site

Preliminary Evaluation	Full Evaluation Assessment			
Strategic Alignment	**Social**	**Economic**	**Environmental**	**Financial**
• Permissible under existing zoning, or potential to be rezoned to allow land use • Likely to be supported by community and stakeholders • Does not compromise the reserve of extractive materials	• Improved access to local services and recreation. • Maintain village's character and lifestyle. • Encourages sense of community and social interaction.	• Creation of new jobs and employment opportunities. • Supports and attracts local businesses. • Enables tourism growth.	• Avoids land use conflicts and minimises impacts to the environment and community. • Enhances Ballina's environmental qualities and features.	• Minimal upfront costs to Council. • Financially sustainable business model. • Potential for government funding for redevelopment. • Ability to attract private investment. • Low risks associated with delivery.

Source: AEC

Under each criteria, an assessment to determine whether the potential land use being evaluated meets the criteria. The applicable levels of assessment are illustrated in Figure 4.1.

Figure 4.1. Level of Assessment



Source: AEC.

Note: For the purposes of this assessment, the evaluation assessment assumes all criteria are of equal importance as Council is required to make decisions which balance financial returns and community benefit. No scores or weightings have been applied to the criteria as they can be highly subjective. Instead, the evaluation assessment takes an 'impact rating' approach to determine the **level of impact** of a certain land use to the community.

4.2 ASSESSMENT OF POTENTIAL OPPORTUNITIES

4.2.1 Public Recreation and Community Use

This option assumes the Site will be used for public recreation purposes, which may include multi-use sports fields, picnic benches, BBQ areas, playgrounds, public open space areas etc. An amphitheatre could be built in the quarry void, and used as a flexible events space for festivals, music concerts, wedding, and corporate functions.

Social Benefits

Access to open space is an important aspect of amenity and liveability. The provision of this amenity is linked to recreation enjoyment, health benefits, and other social and community benefits.

The provision of high-quality and well-designed open space encourages people to be physically active and also supports good mental and physical health. A range of activities can be accommodated on public open spaces, such as sports and other games, and passive recreation which includes sightseeing, walking, and relaxation.

The use of the Site for public recreation can encourage positive social interactions that cultivate social cohesion and sense of community, as well as enhance the health and wellbeing of the community. It provides an ideal space of people to meet and socialise, and spend time outdoors, which is important for mental health and wellbeing.

The provision of an informal amphitheatre in the quarry void will meet a gap in the Shire as there is currently no large scale outdoor venues for music or other events. As the quarry footprint forms a natural sound barrier, it is unlikely this will disturb surrounding residents. Restrictions can also be placed on when certain events can occur to limit noise after hours.

Social Benefits Assessment – Level of Impact

S1	Improved access to local services and recreation.	**Positive – High**
S2	Maintain village's character and lifestyle.	**Positive – High**
S3	Encourages sense of community and social interaction.	**Positive - High**

Economic Benefits

The Ballina Shire LSPS notes the following planning priority under the 'Prosperous Economy' theme:

- Stimulate economic activity and provide improved access to local services and facilities.

Jobs are likely to be created during the construction and rehabilitation phase, in industries including construction, design and landscaping. Ongoing maintenance of the public space, and oversight of the venue operations would also create additional jobs in the area. Overall, the impact of this option on new jobs and employment opportunities is expected to be minimal (compared to other options assessed in this report).

The provision of open space could potentially attract more residents in the area, which may indirectly benefit the local businesses that serve the Alstonville population. These benefits could include increased spending at retail shops and cafes and bring new skills and expertise. This impact is expected to be low, unless a significant number of new residents move to the area as a result of the new public space at the Site.

It is unlikely that the use of the Site for public recreation will enable any tourism growth in the area. Depending on the type of events held at the amphitheatre on the Site, it could potentially lead to overnight stays in the motels around Alstonville, however events are more likely to be local and not draw visitors from intrastate or interstate.

Another economic benefit is the impact to homeowners and local government. There is evidence that open spaces such as parks and recreation areas can have a positive effect on nearby residential property values, resulting in increased taxes and revenues to local government.

Economic Benefits Assessment – Level of Impact

EC1	Creation of new jobs and employment opportunities.	**Positive – Low**
EC2	Supports and attracts local businesses.	**Positive – Low**
EC3	Enables tourism growth.	**Neutral**

Environmental Benefits

Green and open spaces provide environmental benefits through their effects on negating urban heat, offsetting greenhouse gas emissions and improving air quality. Compared to the existing use as an asphalt plant, this option will result in high positive impacts to the environment and the community.

The use of the Site for public recreation will enhance Ballina's environmental qualities through the provision of high-quality public open space. It also builds on the existing environmental features on the Site, and creates a unique proposition in the Shire if the quarry void was developed as an amphitheatre.

Economic Benefits Assessment – Level of Impact

EV1	Avoids land use conflicts and minimises impact to the environment and community.	**Positive – High**
EV2	Enhances Ballina's environmental qualities and features.	**Positive - High**

Financial Assessment

The provision of public open spaces is the responsibility of local and state governments. It is generally Council funded, with grants available from State Government. Costs can be quite high, depending on the level of rehabilitation and landscaping required, as well as the level of amenity to be provided on the Site.

The construction of the amphitheatre will also need to be funded upfront by Council; however these capital costs can be recouped through the venue hire fees that could be earned during the operational phase. The operations of the venue have the potential to generate ongoing revenue for Council.

There will also be ongoing costs associated with maintaining the open space and recreational areas to a suitable standard for public use. This can potentially be offset by the revenues generated through the venue, however if there are any shortfalls the costs these will be the responsibility of Council.

Funding is most likely the biggest risk for this option. Development could be undertaken in stages to minimise the risk of delivery.

Financial Assessment – Level of Impact

F1	Minimal upfront costs to Council.	**Negative**
F2	Financially sustainable business model.	**Positive – Low**
F3	Potential for government funding for redevelopment.	**Positive – Moderate**
F4	Ability to attract private investment.	**Negative**
F5	Low risks associated with delivery.	**Positive - Low**

4.2.2 Adventure Tourism Use

This option examines the benefits if the future use of the Site for an adventure tourism use. It assumes the Site will be leased to a single or multiple tourism operator. Further exploration will need to be completed to determine what the most viable opportunities for this operator would be. Activities could include zip lining, rock climbing, obstacle course etc. A portion of the Site could be retained for community use/open space.

Social Benefits

Adventure sports such as rock climbing, zip lining, outdoor obstacle course etc. are not available in the Ballina Shire. The provision of this use on the Site will cater to this gap in the market. Such uses will also improve the livelihood of the neighbourhood at certain periods of the year, such as school and public holidays and weekends. These uses typically only operate during the day; thus no noise will be generated during the evenings which may disturb surrounding residences.

If a portion of the Site was retained for public open space, the social benefits are similar to those of Option 1 (depending on what facilities are included in the design). Direct benefits include improved amenity and access to services/recreation, and encouragement of social interaction. Indirect benefits include improved physical health and wellbeing, and sense of community.

Social Benefits Assessment – Level of Impact

S1	Improved access to local services and recreation.	**Positive – Moderate**
S2	Maintain village's character and lifestyle.	**Positive – Moderate**
S3	Encourages sense of community and social interaction.	**Positive – Moderate**

Economic Benefits

The economic benefits that could result from this option aligns to the vision for the Ballina Shire, as set out in the Ballina Shire Economic Development Strategy (EDS) and Ballina Coast and Hinterland Destination Management Plan (DMP), noting that following key objectives:

- **EDS:** Leverage environmental qualities with respect to tourism**.**
- **DMP:** Encourage investment into recreational assets, product development and access improvements

Ballina is a popular tourism destination, particularly for family households. The provision of adventure sports on the Site may encourage additional visitation to the town centre, and result in tourist and consumer spending outside of the Site which will benefit the local businesses located in the centre (such as cafes, restaurants, shops etc).

This option will create additional temporary and permanent jobs during the construction and operational phases, and has the most potential to enable tourism growth at a regional level (compared to the other options). If the attractions on the Site are unique and distinct, it has the opportunity to draw visitors from outside the Shire, creating a regional level destination for the North Coast region.

Economic Benefits Assessment – Level of Impact

EC1	Creation of new jobs and employment opportunities.	**Positive – Moderate**
EC2	Supports and attracts local businesses.	**Positive – Low**
EC3	Enables tourism growth.	**Positive - Moderate**

Environmental Benefits

The development of adventure sports on the Site is unlikely to result in any land use conflicts or detriments to the environment and community, if designed around sensitive features on the Site. As with Option 1, this option will

result in high positive impacts to the environment and the community when compared to its existing use as an asphalt plant.

If the walls of the quarry void are to be used for activities such as rock climbing, additional investigation and remedial works will need to be undertaken to ensure such activities do not compromise the integrity of the walls, resulting in harm and accidents.

Alternatively, water-based activities could also be undertaken in the void, which will create a water feature, which will enhance the natural amenity on the Site.

Economic Benefits Assessment – Level of Impact

EV1	Avoids land use conflicts and minimises impact to the environment and community.	**Positive – High**
EV2	Enhances Ballina's environmental qualities and features.	**Positive - Moderate**

Financial Assessment

The commercial element of this option could result in a financially sustainable business model for Council if a private operator is found for the Site. Upfront costs to Council are expected to be lower than Option 1, which is expected to include rehabilitation of the Site. The development of the infrastructure required for adventure sport activities will be funded by the private operator. There is opportunity for ongoing revenues for Council through lease of the Site.

Conversely, Council could take more involvement in the redevelopment of the Site and enter into a financial arrangement to share profits with the private operator (similar to the Quarry Park Adventures arrangement in California).

The biggest risk for this option is the ability to find a reliable and productive operator willing to develop and establish operations on the Site.

Financial Assessment – Level of Impact

F1	Minimal upfront costs to Council.	**Positive – Low**
F2	Financially sustainable business model.	**Positive – Moderate**
F3	Potential for government funding for redevelopment.	**Positive – Low**
F4	Ability to attract private investment.	**Positive – Moderate**
F5	Low risks associated with delivery.	**Positive - Low**

4.2.3 Byron Studios Option

Byron Studios has expressed strong interest in the potential for studios to be constructed at the Tuckombil Quarry Site. There are five stages proposed as part of this option:

- Stage 1 – Construction of buildings, shed and carpark area
- Stage 1A – Use of quarry pit for filming.
- Stage 2 – Construction of offices and temporary accommodation for workers.
- Stage 3 – Construction of one larger size studio (to support expansion requirements).
- Stage 4 – Construction of a creative precinct/education art space.
- Stage 4A: Establishment of a theatre.
- Stage 5 – Future planning expansion.

Figure 4.2. Tuckombil Quarry Site – Byron Studios Option, Proposed Stages

Source: Ballina Shire Council.

Social Benefits

The use of the Site as a filming studio will be viewed positively by local residents. Council has indicated that there has been increasing complaints from community within the neighbouring residential areas, who have voiced their concerns about the operations of the quarry and the asphalt processing plant, including noise, pollution and traffic congestion.

The proposed creative precinct / education art space may also potentially provide the community with a new facility for services and recreation, if made available to the public. This yields positive social outcomes as it promotes community engagement and social interaction.

Social Benefits Assessment – Level of Impact

S1	Improved access to local services and recreation.	**Positive – Low**
S2	Maintain village's character and lifestyle.	**Positive - Low**
S3	Encourages sense of community and social interaction.	**Positive - Low**

Economic Benefits

The retail, hospitality and entertainment sector (including media) is identified in the Economic Development Strategy (EDS) as the largest industry of employment in the Ballina Shire, with a greater prevalence of creative occupations compared to other regional areas.

The operations of Byron Studios in the Ballina Shire contributes significantly to the film and production industry within the region. It is Byron Bay's first and only film studio, and employs workers who are local to the area. It's plans for expansion include creating a future destination and media precinct, which could assist in establishing the Ballina Shire as a regional hub for national and international film industry.

The economic benefits that could result from the establishment of the Byron Studios film and media precinct aligns to the vision for the Ballina Shire, as set out in the EDS, noting that relevant key objectives include:

- Support the development of a strong entrepreneurial culture, and
- Attract key anchor industries and talent to help anchor innovation and support local jobs growth.

The establishment of the Byron Studios headquarters at the quarry site presents a unique and innovative opportunity, which will contribute to the largest employment industry in the Shire and further improve the Shire's ability to attract new businesses and additional investment into the Shire. This opportunity may also benefit other ancillary industries such as food catering, local contractors for set constructions, equipment hire etc. The proposed creative precinct / education art space in Stage 4 may create more jobs for local employment.

The Alstonville town centre, which is located 2.3 km from the Site, may also experience an increase in activity once Byron Studios is in full operation. This option could also deliver economic benefits to the retail and hospitality businesses located in the town centre.

Economic Benefits Assessment – Level of Impact

EC1	Creation of new jobs and employment opportunities.	**Positive – High**
EC2	Supports and attracts local businesses.	**Positive - Moderate**
EC3	Enables tourism growth.	**Neutral**

Environmental Benefits

In the past, there have been concerns raised about the potential health effects on local residents as a result of the pollution and noise from the bitumen plant operations (although these concerns have not been scientifically proven). The Byron Studios option is likely to have fewer negative impacts on the environment, when compared to the existing use as an asphalt processing plant. The environmental benefits will also extend to the adjoining farmlands with the replacement of the asphalt plant with the studio use.

The uses proposed by Byron Studios are also designed around the current environmental features of the Site, i.e. Byron Studios proposes to keep the quarry pit as is to be used as a filming location.

Economic Benefits Assessment – Level of Impact

EV1	Avoids land use conflicts and minimises impact to the environment and community.	**Neutral**
EV2	Enhances Ballina's environmental qualities and features.	**Neutral**

Financial Assessment

Stage 1A of the Byron Studios' option proposes the use of the quarry pit for filming purposes. It is estimated that approximately **$441,600** would be required as a minimum to carry out rehabilitation of the quarry faces to reduce to an acceptable grade, including project management fees and project contingency of 30%. Council has indicated that the allocation of quarry rehabilitation costs is approximately $700,000, which is sufficient to cover the estimated costs.

Other significant costs include rezoning costs of $150,000 and the construction of a new access road for Ron Southon $250,000. Factoring all these costs, it is estimated that the discounted payback period will be 5.03 years, assuming all stages proposed by Byron Studios progresses.

Overall, the Byron Studios options presents a net benefit of $6.2m over a 50-year period, which is $4.65m of financial benefit in excess of the base case scenario. This assumes all stages proposed by Byron Studios proceeds.

Government grants may be available to Byron Studios; however this is unlikely to be available to Council for rehabilitation of the Site.

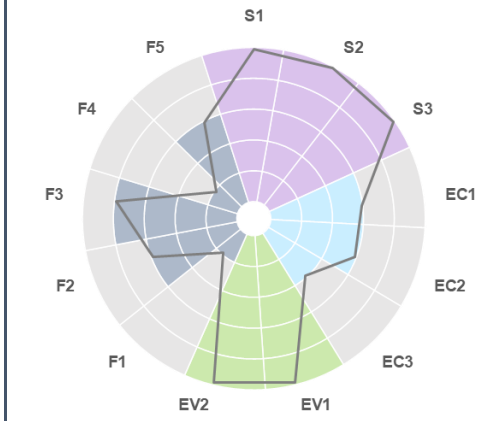
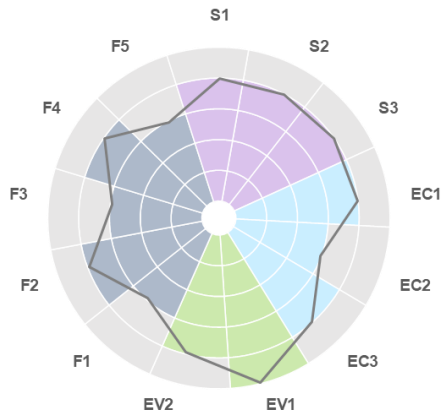
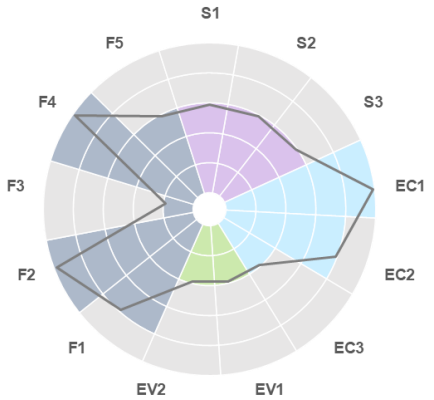
Financial Assessment – Level of Impact

F1	Minimal upfront costs to Council.	**Positive – Moderate**
F2	Financially sustainable business model.	**Positive – High**
F3	Potential for government funding for redevelopment.	**Negative**
F4	Ability to attract private investment.	**Positive – High**
F5	Low risks associated with delivery.	**Positive - Moderate**

4.3 RESULTS OF THE EVALUATION ASSESSMENT

The evaluation outcomes are presented in Figure 4.3 to enable visual comparison between the options.

Figure 4.3. Evaluation Assessment Results

	Option 1: Public Recreation and Community	Option 2: Adventure Tourism	Option 3: Byron Studios
Evaluation Assessment			
Benefits	• **Most 'community and environmentally focused'** option, with the highest social and environmental outcomes. • Unique outdoor venue proposition that is currently not provided in the Shire.	• **Most 'balanced' option** – with moderately high social, economic, and environmental benefits. • Development will be partially funded by private operator.	• **Most 'commercially-focused' option**, with private investor already identified and willing to negotiate. • Highest economic benefits, with a new industry operating in the area.
Challenges	• **Funding risk** – project will have to be funded by Council, with no ability to attract private investment. • **Long-term realisation** – funding constraints may result in the development to be progressed in stages.	• **Private Operator** - May be difficulties with finding a private operator to develop the Site. • **Funding risk** – for the open space portion of the Site which is available for public use.	• **Scale of development** – The proposed option includes five stages, including north of the Site. This may compromise the future extraction of materials on the Site if permanent buildings are developed on this portion.

Social			Economic			Environment		Financial				
Improved access to local services and recreation.	Maintain village's character and lifestyle.	Encourages sense of community and social interaction.	Creation of new jobs and employment opportunities.	Supports and attracts local businesses.	Enables tourism growth.	Avoids land use conflicts & minimises environment/ community impact.	Enhances Ballina's environmental qualities and features.	Minimal upfront costs to Council.	Financially sustainable business model.	Potential for government funding for re-development.	Ability to attract private investment.	Low risks associated with delivery.
S1	S2	S3	EC1	EC2	EC3	EV1	EV2	F1	F2	F3	F4	F5

4.4 RISK ASSESSMENT

The below table outlines the delivery and operational risks of the three options, and suggested mitigation measures.

Table 4.2. Risk Register - Options Assessment

Risk	Risk Detail	Risk Rating			Mitigations
		Option 1 Public Recreation / Community	Option 2 Adventure Tourism	Option 3 Byron Studios	
Funding	• Lack of available public funding from State or Federal Government. • No private investor interest.	**High**	**Medium**	**Low**	• Development to be undertaken in stages. • Business case prepared and ready for application of grants as they are released.
Rezoning issues	• Unable to be rezoned in a timely manner to allow land use.	**Low**	**Low**	**Medium**	• Engage with DPIE to understand complications and likelihood of rezoning potential prior to progressing negotiations on the scale of development.
Community / user participation	• Resistance from community to the proposed use.	**Low**	**Medium**	**Medium**	• Community engagement to be undertaken in early planning phases and throughout development phases.
Unable to find private operator	• No private operator interest for desired adventure sport activities.	**N/A**	**High**	**N/A**	• Expression of Interest and flexible criteria to encourage private investment.
Life cycle costs and ongoing repairs and maintenance	• Costs are higher than anticipated.	**Low**	**Low**	**Low**	• Establishment of an independent management organisation to look after ongoing costs and needs. • Cost recovery model through tenants on the Site.

Source: AEC

5. RECOMMENDATION

The evaluation assessment outlined the following with regards to each option:

- **Option 1 – Public Recreation and Community -** Most 'community and environmentally focussed' option.
- **Option 2 – Adventure Tourism** – Most 'balanced' option.
- **Option 3 – Byron Studios Option –** Most 'commercially focussed' option.

There is merit in exploring each option further, given each option has different benefits, risks and considerations. Council will need to assess their priorities for the Site and understand their risk tolerance level to undertake development on the Site.

Additional investigations are recommended to be undertaken for Council to make an informed decision on the future use of the Site. It is recommended that Council allocate further resources to explore these options in more detail. The evaluation assessment provides a mechanism for comparing the benefits and risks associated with each option, however further investigations will explore the practical feasibility of the options by revealing the barriers or points in which an option is considered unviable.

To assist Council, we have ranked the three options based on the social, economic and financial benefits and considerations and identified the potential next steps if the option was to be explored:

Ranking of Options

7 Option 3 – Byron Studios Option.

8 Option 2 – Adventure Tourism.

9 Option 1 – Public Recreation and Community.

Highest Ranking Option – Byron Studios Option

The Byron Studios option is ranked the highest as there is, to an extent, **a higher degree of certainty** in this option as a private investor has already been identified. Council was approached by Byron Studios, who expressed their interest in leasing and developing the Site as their new headquarters following the intention of Council not to renew the Byron Studios licence for occupation at the Alstonville Cultural Centre at license expiry in December 2022.

The following issues are relevant when considering the progression of Option 3 on the Site:

- Rezoning of the Site will be required for the proposed uses of Byron Studios to be legally permissible. Byron Studio's proposal in its current form may not be acceptable under Ministerial Direction 1.3 regarding the future extraction of resources. Negotiations will need to commence with Byron Studios to consider a different configuration, or development of a smaller scale in order for the use to be allowed.
- This Option will require an upfront capital cost and an ongoing commitment expenditure (in the form of site rental) from Byron Studios. If Byron Studios are considering securing financial assistance in the form of government grant funding (for the arts) there is likely to be pre-funding conditions to be met such as securing the lease over the Site from Council. Given the commercial terms of the lease agreement with Council over the Site have not been finalised (based on our understanding) there may be terms which contribute to higher risk exposure to Council.
- Additional concerns relate to Stage 2A and Stage 4A developments, which are positioned in 'high risk' zones and are recommended to be relocated elsewhere on the Site. Any proposed development close to the edges of the highwall will require detailed geotechnical investigation and analysis to provide information for design of remedial works and development infrastructure. However, it is anticipated that the costs associated with such work would be very high, compared to simply relocating the proposed development. It should also be noted that additional hazards may be encountered upon completion of geotechnical investigation works. The development may also require additional fencing and barriers to separate the Site users from fall risks.

- Timing is a key risk. Byron Studio's license agreement at the Alstonville Cultural Centre ends in December 2022. Planning approvals will need to be obtained to enable Byron Studios to move onto the Site (area marked as Stage 1). Construction of a new studio space and access road will also be required prior to the cessation of Byron Studios license agreement to minimise disruption of Byron Studio's operations.
- Option 3 assumes Ron Southon will remain on the Site. The area leased to Ron Southon is used for storage of hazardous materials, and a buffer zone of 240 metres is required to store the current quantity of licenced explosives. This may potentially impact the leasable area for Byron Studios use. Council staff have liaised with Ron Southon and note that he has advised that he is capable and willing to reduce the quantities of explosives stored on site in order to achieve the reduced buffer zone of 68 metres.

For Council to progress with investigations with this Option, the potential next steps may include:

1 Enter into negotiations with Byron Studios to discuss matters such as the scale of development and suitable locations for development on the Site which will not compromise the future extraction of resources or the integrity of the quarry pit. Other matters such as practical timing of tenancy, commercial lease terms (rent and lease period) and required infrastructure works will also need to be clarified.

2 Concurrently, Council should investigate the likelihood of obtaining planning approvals for the potential use through early engagement with DPIE.

3 Undertake stakeholder engagement to ensure the community is informed and there will be no backlash with regards to the proposed development.

4 Progress with the development as per Council processes (i.e. planning approvals, development applications, development contributions etc).

Second Ranking Option – Adventure Tourism

Option 2 – **Adventure Tourism** is the "most balanced" option of the three options which were evaluated (refer to Figure 4.3). It provides social and economic benefits in the form of public and recreational space, tourism and jobs, as well as generating a revenue for Council. The biggest risk for this option is the ability to find a private operator to fund and operate the development.

Potential next steps to progress this option could include:

1 Undertake detailed investigations on the stability of the quarry void to determine whether active recreational activities can be accommodated in the pit (e.g. rock climbing, abseiling etc).

2 Investigate the likelihood of obtaining planning approvals for the potential use through early engagement with DPIE.

3 Commence an expression of interest (EOI) process to gauge interest from private operators.

4 Enter into negotiations with the private operator on matters such as proposed activities, scale of development, funding, commercial arrangements etc.

5 Commence a masterplanning process for the Site with the identified operator.

6 Undertake stakeholder engagement to ensure the community is informed and there will be no backlash with regards to the proposed development.

7 Progress with the development as per Council processes (i.e. planning approvals, development applications, etc).

Third Ranking Option – Public Recreation and Community Use

The Public Recreation and Community Use option has been ranked third among the evaluated options as there is already a good supply of open space in the Shire (as indicated in the Sports and Recreation Strategy) and there have been recent commitments to upgrade other public spaces including the new Wollongbar district park and Kingsford Smith Reserve. However the inclusion of an event space (such as an amphitheatre) in the quarry pit

would provide for a unique destination and cater for the gap currently in the Shire for an outdoor entertainment venue.

Potential next steps to progress this option could include:

1 Undertake detailed investigations on the stability of the quarry void to determine whether an entertainment venue can be accommodated in the pit.

2 Early engagement with DPIE to ensure there are no barriers with progressing this option.

3 Commence a masterplanning process for the Site as a public area.

4 Undertake stakeholder engagement to ensure the community is informed and there will be no backlash with regards to the proposed development.

5 Advocate for government grants and funding for development.

6 Progress with the development as per Council processes (i.e. planning approvals, development applications, etc).

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APPENDIX A: SITE ANALYSIS (PHASE 1 REPORT)

Site Location

The Tuckombil Quarry ("the Site") is located at 540 Gap Road, Alstonville within Ballina Shire Council (Council) Area. The Site is positioned north-east of existing residential development and surrounded predominately by non-urban, primary production land. The nearest residential areas to the Site are located approximately 200 metres to the west and 300 metres to the south.

Property Details

The Site is primarily contained within Lot 22 DP1243105, which extends to approximately 23 hectares with quarry production and ancillary uses also on-site occupying additional land. The Site also includes Lot 21 DP 1243105 and Lot 3 DP1130300, which are leased to Boral Asphalt and Ron Southon, respectively. The total land area of the Site is approximately 25.5 hectares. Vehicular access to the Site is via a driveway entrance on the northern side of Gap Road, about 250 metres east from the Teven and Gap Roads intersection. The land leased to Ron Southon (Lot 3 in DP 1130300) benefits from a right of carriageway 8 metres wide which travels through the Bitupave tenancy area and shares the same driveway entrance from Gap Road.

The quarry has been in existence since 1908 and operated by Lismore City Council under lease from Ballina Shire Council until August 2016. All quarrying activities ceased on the site with the termination of the lease.

The operation of the quarry is governed by development consent DA1995/276. The development consent does not specify a maximum time period for the quarries continued operation. Condition 9 of the consent enables the extraction of a maximum of 450,000m^3 (1.3 million tonnes).

Planning Considerations

The Site, including the quarry pit and leased areas, is currently identified as a 'Deferred Matter' zoning under the Ballina Shire Local Environmental Plan (BLEP) 2012. The preceding BLEP 1987 continues to apply to 'Deferred Matter' land, which identifies the Site's zoning as **1(e) Rural (Extractive and Mineral Resources)**.

The primary objectives of the 1(e) zoning under the BLEP 1987 are:

(a) to identify land which are extractive or mining industry potential,
(b) to prohibit development which would result in the withdrawal of actual or potentially productive mineral resources land, and
(c) to prohibit development which would be adversely affected by the operations of extractive or mineral resources development, particularly adverse effects from noise, vibration or dust.

The area surrounding the quarry site is zoned 7(i) Environmental Protection (Urban Buffer) under the provisions of Ballina LEP 1987 and remains in place today as the area is deferred from the Ballina LEP 2012. The primary objective of the zone is to "*create a rural buffer in the locality of Alstonville and Wollongbar and to prevent development of an urban character within any part of the zone which is likely to be seen by existing or likely future residents of the villages of Alstonville and Wollongbar or from a major road in the locality.*"

The Ballina Development Control Plan (DCP) 2012 – Chapter 2 General and Environmental Constraints, Part 3, contains guidance regarding minimum required buffer distances for extractive industries and mining. A buffer of 500 metres is nominated between residential uses, or 1,000 metres if blasting occurs.

Existing Leases

The Site is currently subject to two leases, comprising:

- Bitupave Ltd (Boral Asphalt or 'Boral'), and
- Ron Southon Pty Ltd.

Boral Asphalt leases a portion of the Site at the front of the quarry for the purposes of operating an asphalt batching plant. The plant has been in operations since 1978, contributing to major highway and local road projects. Boral

announced that regular operations ceased at the end of July 2020 and is no longer open for sales. The plant currently operates on an infrequent basis to support any major customer projects until the expiry of the lease with Council.

The second area is leased to Ron Southern for the purpose of storage and maintenance of drilling plant and equipment and the storage of hazardous materials. This use was approved in 1998 pursuant to the conditions contained within development consent DA1998/252.

Both leases are due to expire on 31 December 2024. Council has resolved to not renew Boral's lease on the Site upon expiry. Council has indicated that Boral intend to continue operating the plant and remaining in their tenancy arrangement until the end of the lease term.

Ron Southon has expressed a strong preference to remain on the Site due to significant investment (both infrastructure and employment) made since commencing on the Site in 1999. This business was relocated to this site by Council in 1998, to support the business to be able to operate. The requirement to relocate this operation again will likely result in the cessation of their business.

Hazard and Risk Assessment

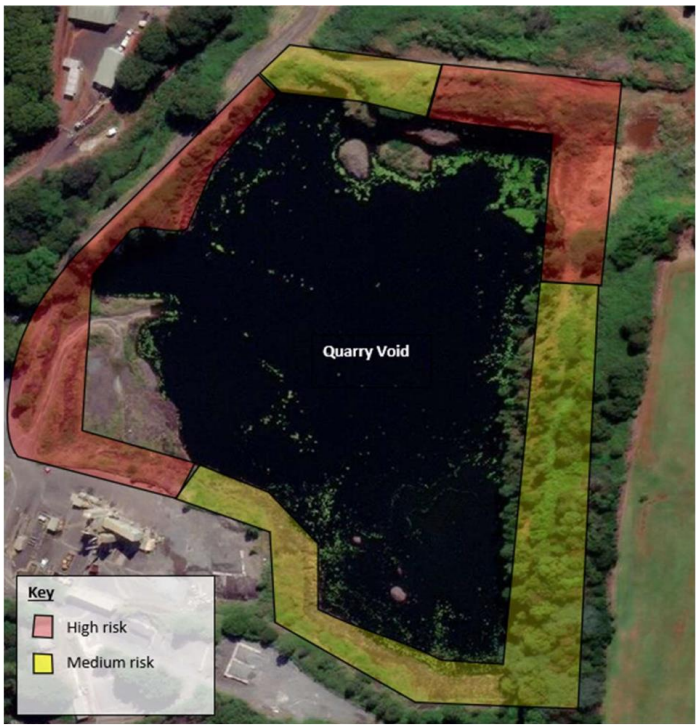
It is noted that rockfall instability has occurred from the quarry void sidewalls in the past and will occur again in the future, particularly given the columnar nature and fracture sets of the basalt rock encountered.

However, with reference to observations made during the site inspection, it is considered that the quarry void in its current condition is generally stable, and although no ongoing failures were observed, there are some 'high risk' zones of relatively minor instability which will need to be addressed in the short term. This geohazard includes the potential for rockfalls at areas where blocky and/or loose, fractured rock exists (particularly at the northeast and southwest corners of the void).

From the site inspection, zones of detached fractured rock are generally present on the lower benches of the void (and these are likely to be more accessible by people working nearby) based on the current water level. Therefore, it is recommended that scaling is carried out to remove loose rocks in areas where personnel are likely to be. In particular, the rockface above the access ramp in the southwest corner of the void will require remedial treatment to ensure people entering and exiting the void from this location are not at risk of injury from falling rocks.

Outside of the 'high risk' areas, the rest of the sidewalls are classed as a 'medium risk' (refer to Figure A. 1. Risk Assessment Plan**Error! Reference source not found.**) until a more detailed assessment can be undertaken. Although there is a risk of rockfall in the 'medium risk' areas, these are considered to be from relatively discrete zones and the entire quarry sidewalls are not considered to be susceptible to this geohazard. In addition, dense and mature vegetation is growing and established at the crest of, and on the faces of, many of the void sidewalls. This vegetation is considered to be beneficial to the ongoing stability of the sidewalls.

Figure A. 1. Risk Assessment Plan



Source: ATCW (2021).

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AFFILIATED OFFICES:

BRISBANE
Level 5, 131 Leichhardt Street
Spring Hill QLD 4000
Australia
T: +61 (0)7 3831 0577

TOWNSVILLE
233 Flinders Street East
Townsville QLD 4810
Australia
T: +61 (0)7 4771 5550

SYDNEY
Level 14, 25 Bligh Street,
Sydney NSW 2000
Australia
T: +61 (0) 2 9283 8400

BANGKOK
2024/129-130 Sukhumvit 50
Prakanong Klongtoey,
Bangkok, Thailand 10260
T: +66 2 107 0189

DARWIN
Level 1, 48-50 Smith Street
Darwin NT 0800
Australia
T: 1300 799 343

MELBOURNE
Level 13, 200 Queen Street
Melbourne VIC 3000
Australia
T: +61 (0)3 8648 6586

PERTH
Level 2, 580 Hay Street
Perth WA 6000
Australia
T: +61 (0) 8 6555 4940

SHANGHAI
Level 35, 1st Building,
700 Liquan Road, Putuo District,
Shanghai, China 200333
T: +8618 516293312

aecgroupltd.com

OUTCOME DRIVEN

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OUTCOME DRIVEN

Ballina Shire Council
40 Cherry Street
BALLINA NSW 2478

PO Box 450
BALLINA NSW 2478

1300 864 444
council@ballina.nsw.gov.au
www.ballina.nsw.gov.au

N

Bitupave (Boral) Lease Area Site Plan

ballina shire council
geographical information system

Projection: # GDA94 / MGA zone 56
Date: 20/11/2024

Ballina Shire Council
40 Cherry Street
BALLINA NSW 2478

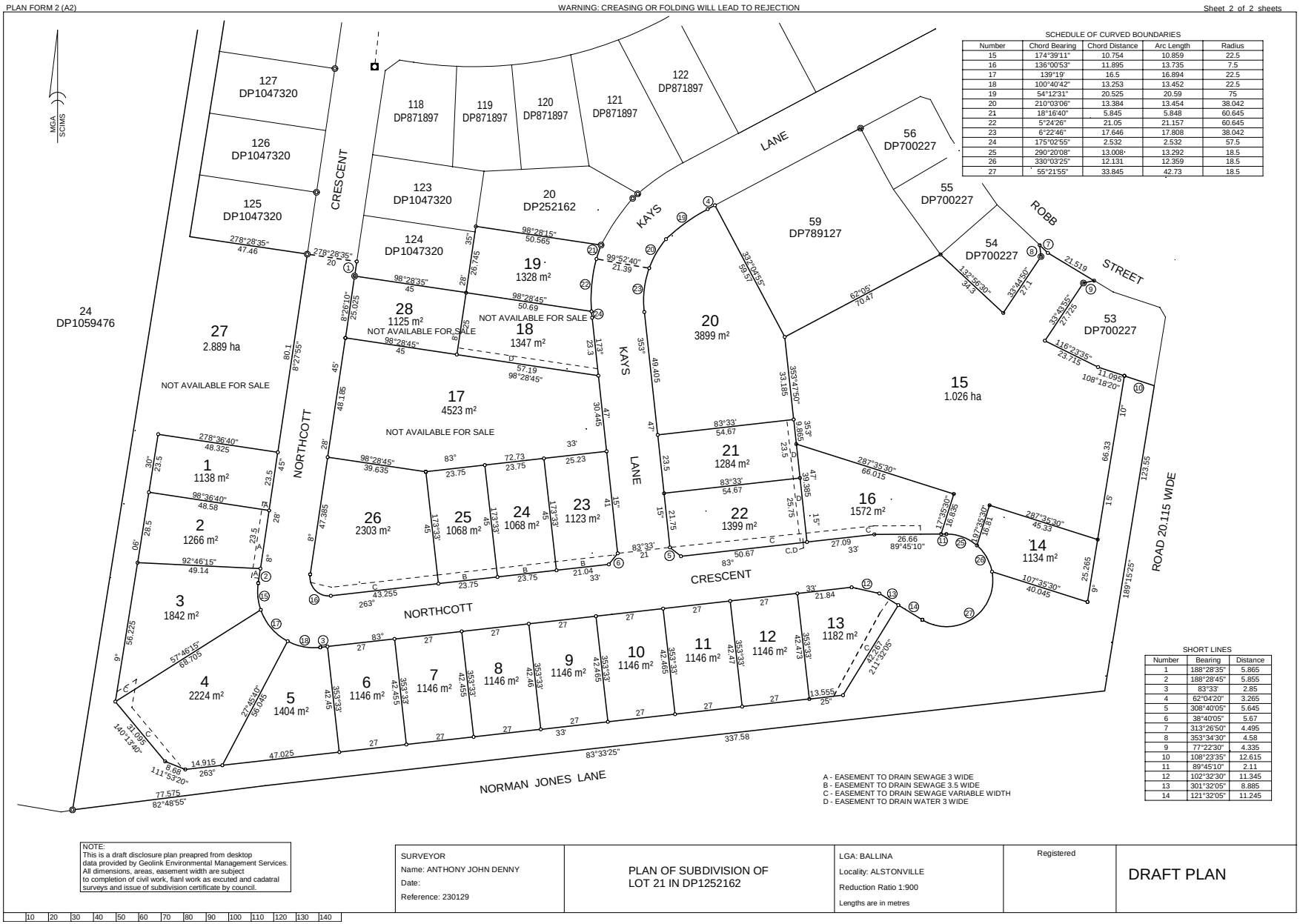
PO Box 450
BALLINA NSW 2478

1300 864 444
council@ballina.nsw.gov.au
www.ballina.nsw.gov.au

Russellton Industrial Estate, Wollongbar

ballina shire council
geographical information system

Projection: GDA94 / MGA zone 56
Date: 17/10/2024


PLAN FORM 2 (A2)
WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION
Sheet 2 of 2 sheets
MGA
SCIMS
SCHEDULE OF CURVED BOUNDARIES
Number | Chord Bearing | Chord Distance | Arc Length | Radius
15 | 174°39'11" | 10.754 | 10.859 | 22.5
16 | 136°00'53" | 11.895 | 13.735 | 7.5
17 | 139°19' | 16.5 | 16.894 | 22.5
18 | 100°40'42" | 13.253 | 13.452 | 22.5
19 | 54°12'31" | 20.525 | 20.59 | 75
20 | 210°03'06" | 13.384 | 13.454 | 38.042
21 | 18°16'40" | 5.845 | 5.848 | 60.645
22 | 5°24'26" | 21.05 | 21.157 | 60.645
23 | 6°22'46" | 17.646 | 17.808 | 38.042
24 | 175°02'55" | 2.532 | 2.532 | 57.5
25 | 290°20'08" | 13.008 | 13.292 | 18.5
26 | 330°03'25" | 12.131 | 12.359 | 18.5
27 | 55°21'55" | 33.845 | 42.73 | 18.5
SHORT LINES
Number | Bearing | Distance
1 | 188°28'35" | 5.865
2 | 188°28'45" | 5.855
3 | 83°33' | 2.85
4 | 62°04'20" | 3.265
5 | 308°40'05" | 5.645
6 | 38°40'05" | 5.67
7 | 313°26'50" | 4.495
8 | 353°34'30" | 4.58
9 | 77°22'30" | 4.335
10 | 108°23'35" | 12.615
11 | 89°45'10" | 2.11
12 | 102°32'30" | 11.345
13 | 301°32'05" | 8.885
14 | 121°32'05" | 11.245
A - EASEMENT TO DRAIN SEWAGE 3 WIDE
B - EASEMENT TO DRAIN SEWAGE 3.5 WIDE
C - EASEMENT TO DRAIN SEWAGE VARIABLE WIDTH
D - EASEMENT TO DRAIN WATER 3 WIDE
NOTE:
This is a draft disclosure plan preapred from desktop data provided by Geolink Environmental Management Services. All dimensions, areas, easement width are subject to completion of civil work, fianl work as excuted and cadatral surveys and issue of subdivision certificate by council.
SURVEYOR
Name: ANTHONY JOHN DENNY
Date:
Reference: 230129
PLAN OF SUBDIVISION OF LOT 21 IN DP1252162
LGA: BALLINA
Locality: ALSTONVILLE
Reduction Ratio 1:900
Lengths are in metres
Registered
DRAFT PLAN
10 20 30 40 50 60 70 80 90 100 110 120 130 140
CRESCENT
LANE
KAYS
ROBB
STREET
NORTHCOTT
NORMAN JONES LANE
ROAD 20.115 WIDE
NOT AVAILABLE FOR SALE
24 DP1059476
27 2.889 ha
28 1125 m²
18 1347 m²
17 4523 m²
19 1328 m²
20 3899 m²
15 1.026 ha
21 1284 m²
22 1399 m²
16 1572 m²
14 1134 m²
53 DP700227
54 DP700227
55 DP700227
56 DP700227
59 DP789127
20 DP252162
123 DP1047320
124 DP1047320
125 DP1047320
126 DP1047320
127 DP1047320
118 DP871897
119 DP871897
120 DP871897
121 DP871897
122 DP871897
1 1138 m²
2 1266 m²
3 1842 m²
4 2224 m²
5 1404 m²
6 1146 m²
7 1146 m²
8 1146 m²
9 1146 m²
10 1146 m²
11 1146 m²
12 1146 m²
13 1182 m²
23 1123 m²
24 1068 m²
25 1068 m²
26 2303 m²

DESIGN DEVELOPMENT

ALSTONVILLE CULTURAL CENTRE 42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

ARCHITECTURAL DRAWINGS

000	COVER SHEET	
100	SITE PLAN	
180	DEMOLITION PLAN	LEVEL 0
181	DEMOLITION PLAN	LEVEL 1
200	GENERAL ARRANGEMENT PLAN	LEVEL 0 - PART A
201	GENERAL ARRANGEMENT PLAN	LEVEL 0 - PART B
202	GENERAL ARRANGEMENT PLAN	LEVEL 1
210	ROOF PLAN	PART A
211	ROOF PLAN	PART B
250	FIRE DIAGRAMS	
251	ACOUSTIC DIAGRAMS	
252	AREA DIAGRAMS	
260	REFLECTED CEILING PLAN	LEVEL 0 - PART A
261	REFLECTED CEILING PLAN	LEVEL 0 - PART B
262	REFLECTED CEILING PLAN	LEVEL 1
300	ELEVATIONS	SHEET 1
301	ELEVATIONS	SHEET 2
400	SECTIONS	SHEET 1
401	SECTIONS	SHEET 2
510	STAIR DETAILS	SHEET 1
511	STAIR DETAILS	SHEET 2
512	STAIR & RAMP DETAILS	
710	GLAZING ELEVATIONS	SHEET 1
711	GLAZING ELEVATIONS	SHEET 2
712	GLAZING ELEVATIONS	SHEET 3
720	WINDOW SCHEDULE	SHEET 1
730	DOOR SCHEDULE	SHEET 1
809	INTERIOR DETAILS	SERVERY
900	PERSPECTIVES	
SK027	EXTERNAL WAYFINDING SIGNAGE	SIGN LOCATION PLAN
SK028	EXTERNAL WAYFINDING SIGNAGE	KEY SIGNAGE CONCEPTS

Grand total: 31

CONSTRUCTION NOTES:

- Copyright held by Ballina Shire council
- Verify all dimensions on site before commencing work or shop drawings.
- Do not scale from drawings. Confirm all dimensions on site prior to commencement of relevant works and report any discrepancies to architect.
- Any discrepancies in levels on site shall be reported to the architect
- Drawings shall be read in conjunction with structural engineer's drawings, computations and all structure specified by the structural engineer.
- Drawings shall be read in conjunction with all architectural materials, finishes, fixtures and fittings schedules.
- All work must comply with SEPP legislation, National Construction Code, Australian Standards, and all other relevant by laws and authority requirements. No work shall be undertaken prior to approval by a registered Certifier.
- All work practices must be safe for workers and visitors on the site and the general public.
- During construction, any existing structures should be maintained in a stable condition and any adjacent structures should not be damaged or compromised.
- No footing, or wall to encroach the title boundary.
- Contractor to arrange all inspections by structural engineer or certifier as required. Inspection certificates or notices to be sent to the superintendent upon completion.
- All services shall be concealed in walls or ducts unless noted otherwise and must be confirmed with architect if not on drawings.
- Provide articulation joints to comply with structural engineer's requirements
- Steps to be provided where fall from building exceeds 190mm.
- The contractor shall carry out works in accordance with the signed drawings and schedules and anything reasonably inferred, and with the Conditions of Contract, and in accordance with the directions and to the satisfaction of the Superintendent, whose interpretation of the contract documents shall be final.
- Plumbing to be carried by a licensed plumber and in accordance with the requirement of local authorities.
- The contractor shall be responsible for all permits and approvals.
- Any new or amended driveway and crossover must be approved by Council. The contractor shall be responsible for obtaining all permits and approvals.
- All products to be installed to manufacturers' requirements for suitable exposure levels
- Termite treatment to be carried out in accordance with AS 3660.1-2014 Builder to provide certificates of installation in accordance with NCC BCA-NSW 3.1.4.2 and must confirm preferred system with architect prior to selection or installation.
- Toilets and bathrooms to be provided with lift off hinges where the distance between the leading edge of the door when fully open and the W.C. pan is less than 1.2m
- Stair construction and balustrades in accordance with part 3.9.1 of the NCC BCA
- Contractor to provide all certificates as requested by Certifier at completion of construction
- All rubbish, excess building materials and debris to be removed from site prior to handover to owner
- If in doubt, ask!

GENERAL NOTES:

- Certification of this building has been undertaken using NCC BCA 2019
- All drawings must be printed in colour for clarity

PART J:

- Combined roof and ceiling construction must equal or exceed total R value of **R3.7** in accordance with NCC BCA 2019
- Minimum total R value for walls is **R1.4**
- Drawings to be read in conjunction with Part J report prepared by Built Environment Collective Pty Ltd

SOUND INSULATION:

- Best practice insulation has been provided to all new partitions. No specific requirements exist under BCA 2019.

ACCESSIBILITY:

- Drawings to be read in conjunction with NCC report prepared by Mackie Construction Consultants

FIRE ENGINEERING:

- Building will be subject to a fire engineered solution, currently in progress

KO AND CO ARCHITECTURE

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E: mail@koandcompany.com.au | W: koandcompany.com.au

Do not scale from drawings. Dimensions are to be checked on site prior to commencement of work. Discrepancies to be brought to the attention of the author.

REV	DATE	ISSUE	DRAWN	CHECK
A	20.08.2020	Concept Design Issue	KF	KO
B	03.12.2021	Issued for client review	SR	CM
C	21.01.2022	Issue for cost estimate	SR	CM
D	04.02.2022	Issue for client review	SR	CM
E	08.04.2022	Development Application	SR	CM
F	27.03.2023	drawings for DA RFI response	CM	KO

100mm LINE @ A1 10mm scale : NTS

PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

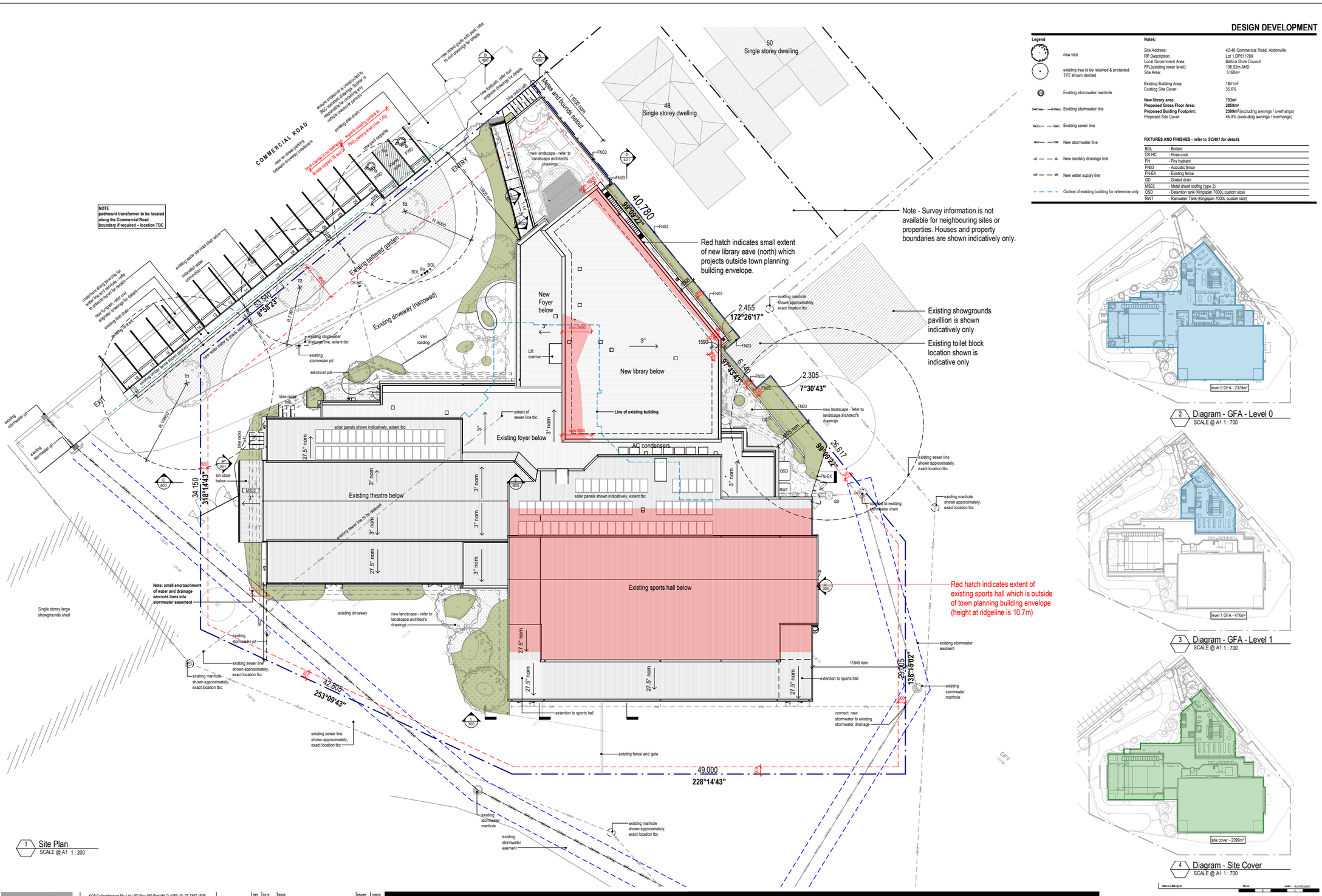
CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

DRAWING NAME
COVER SHEET

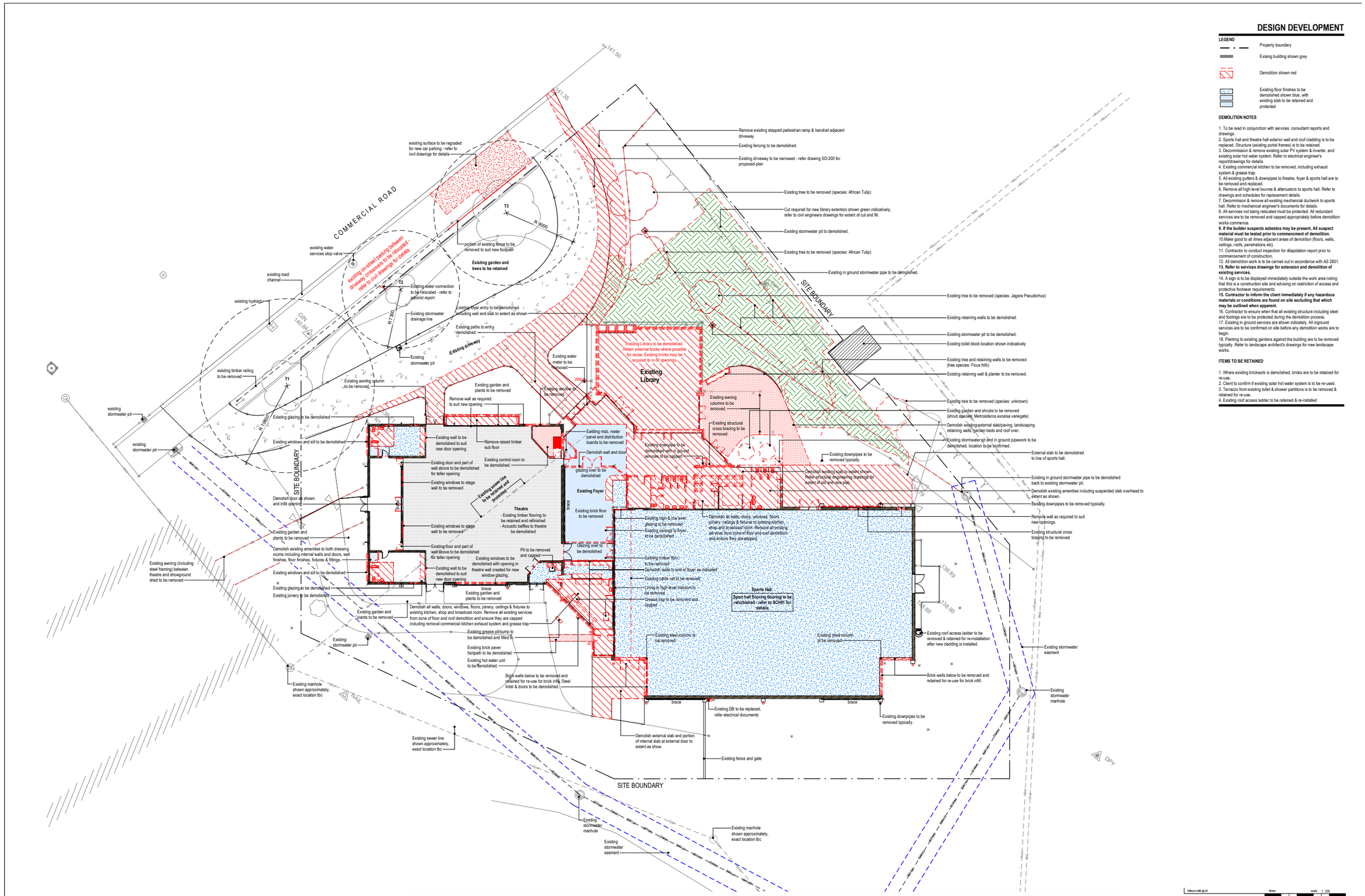
PROJECT NO: 2010 at plot 1:1 A1

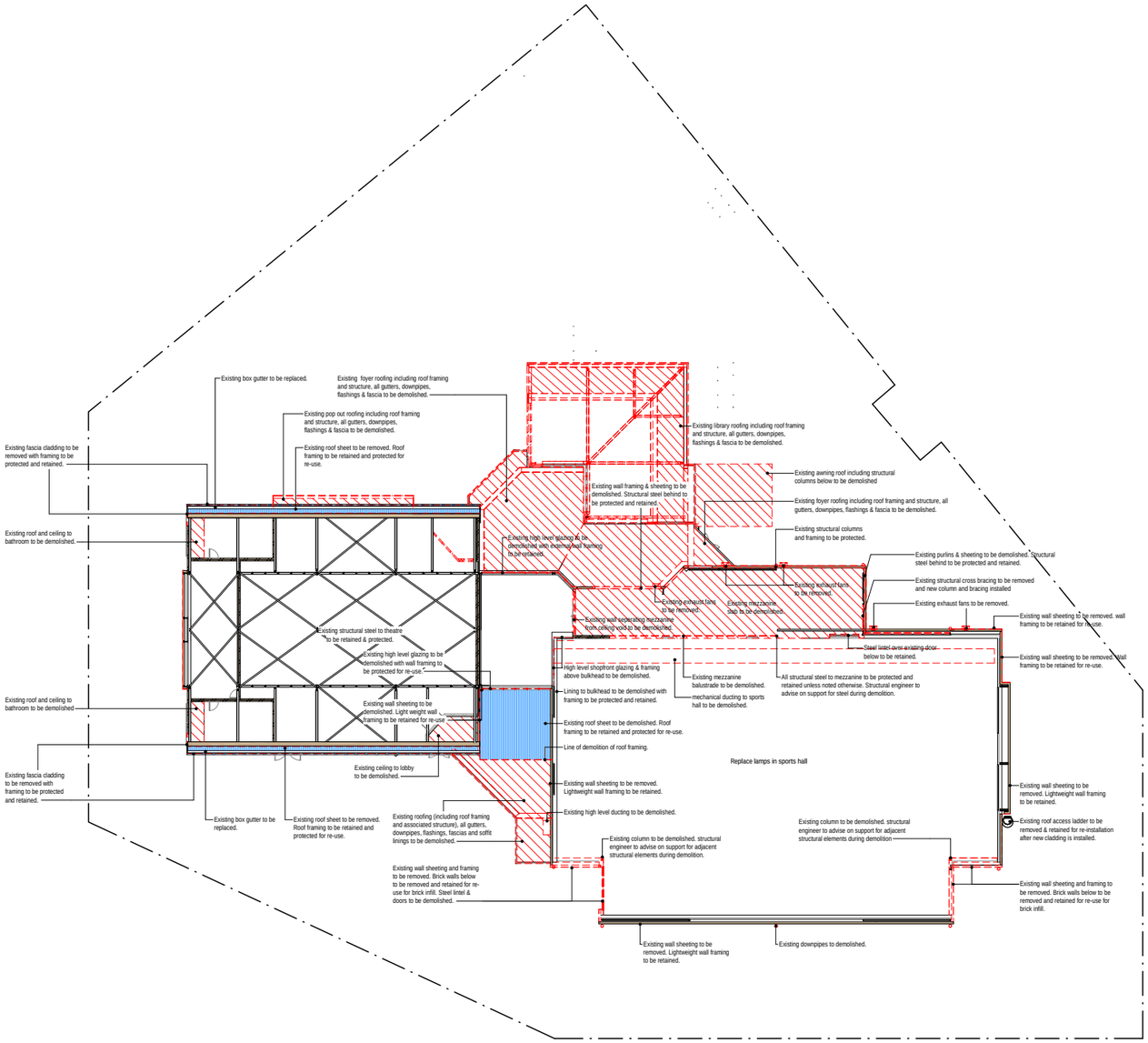
PHASE	DWG No.	REV.
DD	000	F

5.7 Alstonville Cultural Centre - Update



5.7 Alstonville Cultural Centre - Update





DESIGN DEVELOPMENT

LEGEND

- Property boundary
- Exising building shown grey
- Demolition shown red
- Existing floor finishes to be demolished shown blue, with existing slab to be retained and protected

DEMOLITION NOTES

1. To be read in conjunction with services consultant reports and drawings.
2. Sports hall and theatre hall exterior wall and roof cladding is to be replaced. Structure (existing portal frames) is to be retained.
3. Decommission & remove existing solar PV system & inverter, and existing solar hot water system. Refer to electrical engineer's report/drawings for details.
4. Existing commercial kitchen to be removed, including exhaust system & grease trap.
5. All existing gutters & downpipes to theatre, foyer & sports hall are to be removed and replaced.
6. Remove all high level louvres & attenuators to sports hall. Refer to drawings and schedules for replacement details.
7. Decommision & remove all existing mechancial ductwork to sports hall. Refer to mechanical engineer's documents for details.
8. All services not being relocated must be protected. All redundant services are to be removed and capped appropriately before demolition works commence.
9. If the builder suspects asbestos may be present, All suspect material must be tested prior to commencment of demolition.
10. Make good to all itmes adjacent areas of demolition (floors, walls, ceilings, roofs, penetrations etc).
11. Contractor to conduct inspection for dilapidation report prior to commencement of construction.
12. All demolition work is to be carried out in accordance with AS 2601.
13. Refer to services drawings for extension and demolition of existing services.
14. A sign is to be displayed immediately outside the work area noting that this is a construction site and advising on restriction of access and protective footwear requirements.
15. Contractor to inform the client immediately if any hazardous materials or conditions are found on site excluding that which may be outlined when apparent.
16. Contractor to ensure when that all existing structure including steel and footings are to be protected during the demolition process.
17. Existing in ground services are shown indicately. All inground services are to be confirmed on site before any demolition works are to begin.
18. Planting to existing gardens against the building are to be removed typically. Refer to landscape architect's drawings for new landscape works.

ITEMS TO BE RETAINED

1. Where existing brickwork is demolished, bricks are to be retained for re-use.
2. Client to confirm if existing solar hot water system is to be re-used.
3. Terrazzo from existing toilet & shower partitions is to be removed & retained for re-use.
4. Existing roof access ladder to be retained & re-installed

KO AND CO ARCHITECTURE

KO&CoArchitecture Pty Ltd | PO Box 490 Red Hill Q 4059 | P: 07 3367 1878
E: mail@koandcompany.com.au | W: koandcompany.com.au

REV	DATE	ISSUE	DRAWN	CHECK
A	01.12.2021	Issued for client review	SR	CW
B	21.01.2022	Issue for cost estimate	SR	CW
C	04.02.2022	Issue for client review	SR	CW
D	08.04.2022	Development Application	SR	CW

PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

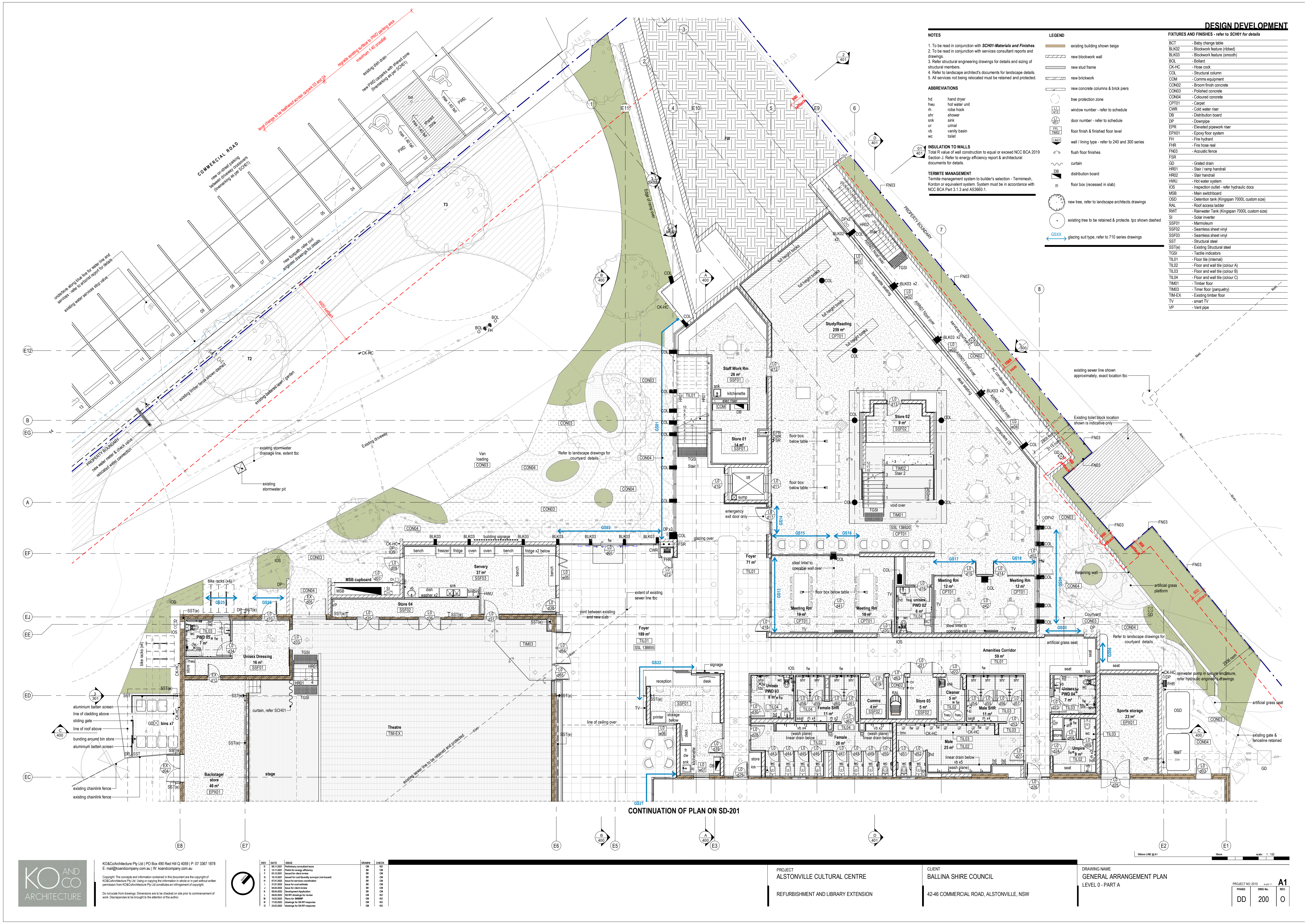
CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

DRAWING NAME
DEMOLITION PLAN
LEVEL 1

100mm LINE @ A1 — 10mm — SCALE: 1 : 200

PROJECT NO. 2010 — A1

PHASE	DWG No.	REV.
DD	181	D


DESIGN DEVELOPMENT
CONTINUATION OF PLAN ON SD-201
COMMERCIAL ROAD
PROPERTY BOUNDARY
Study/Reading 259 m²
Staff Work Rm 26 m²
Foyer 71 m²
Foyer 189 m²
Servery 37 m²
Theatre
Backstage/ store 46 m²
Unisex Dressing 16 m²
Meeting Rm 19 m²
Meeting Rm 18 m²
Meeting Rm 12 m²
Amenities Corridor 59 m²
Female 28 m²
Male 25 m²
Sports storage 23 m²
KO AND CO ARCHITECTURE
PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION
CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW
DRAWING NAME
GENERAL ARRANGEMENT PLAN
LEVEL 0 - PART A
PROJECT NO: 2010
A1
PHASE DD
DWG No. 200
REV. O
scale : 1 : 100

DESIGN DEVELOPMENT

NOTES

1. To be read in conjunction with ***SCH01-Materials and Finishes***.
2. To be read in conjunction with services consultant reports and drawings.
3. Refer structural engineering drawings for details and sizing of structural members.
4. Refer to landscape architect's documents for landscape details.
5. All services not being relocated must be retained and protected.

ABBREVIATIONS

hd	hand dryer
hwu	hot water unit
rh	robe hook
shr	shower
snk	sink
ur	urinal
vb	vanity basin
wc	toilet

INSULATION TO WALLS
Total R value of wall construction to equal or exceed NCC BCA 2019 Section J. Refer to energy efficiency report & architectural documents for details.

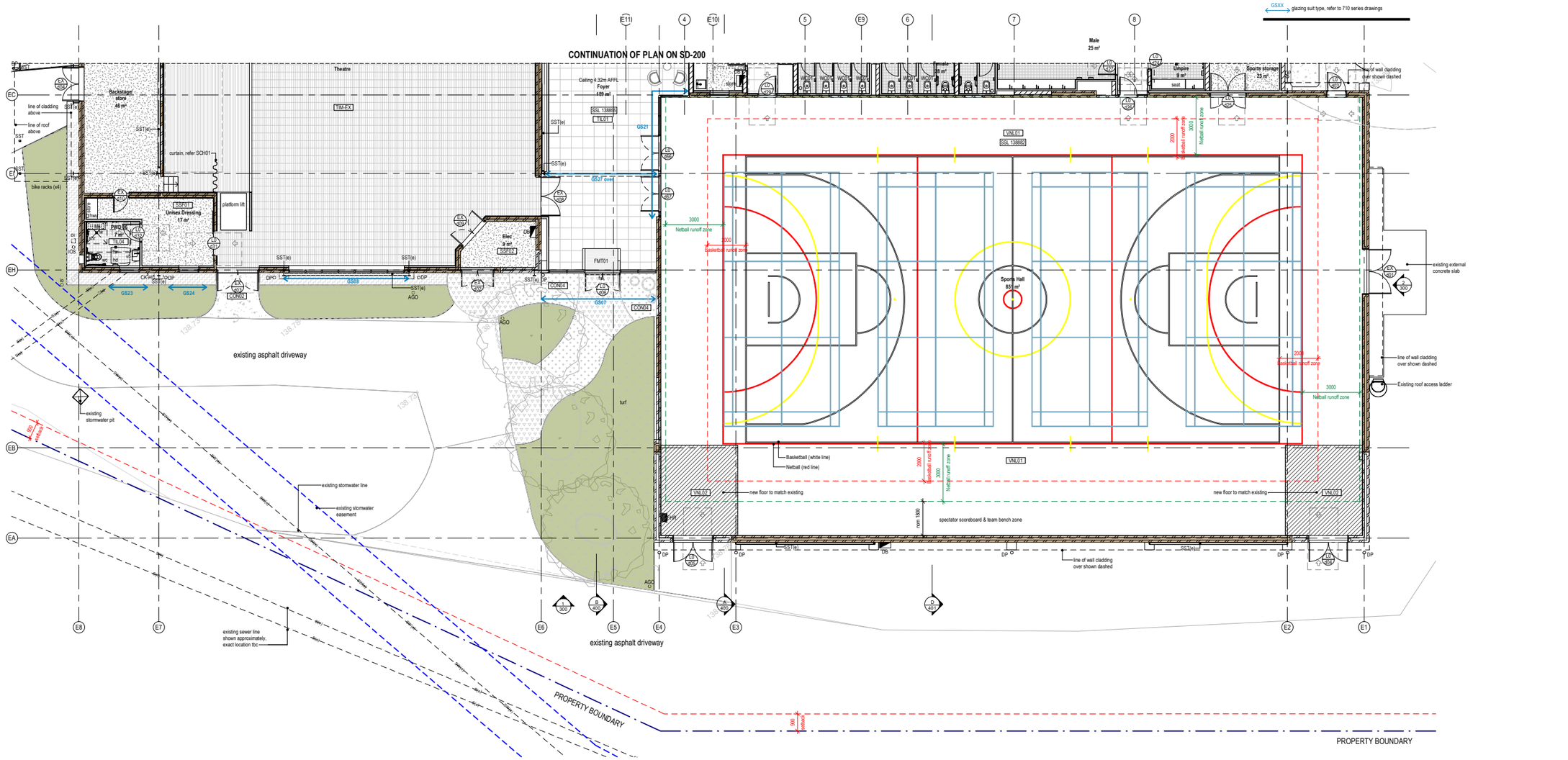
TERMITE MANAGEMENT
Termite management system to builder's selection - Termimesh, Kordon or equivalent system. System must be in accordance with NCC BCA Part 3.1.3 and AS3660.1.

LEGEND

- existing building shown beige
- new blockwork wall
- new stud frame
- new brickwork
- new concrete columns & brick piers
- tree protection zone
- window number - refer to schedule
- door number - refer to schedule
- floor finish & finished floor level
- wall / lining type - refer to 240 and 300 series
- flush floor finishes
- curtain
- distribution board
- floor box (recessed in slab)
- new tree, refer to landscape architects drawings
- existing tree to be retained & protecte. tpz shown dashed
- glazing suit type, refer to 710 series drawings

FIXTURES AND FINISHES - refer to *SCH01 for details*

AGO	
CK-HC	- Hose cock
CONC2	- Broom finish concrete
CON04	- Coloured concrete
DB	- Distribution board
DP	- Downpipe
FHR	- Fire hose reel
FMT01	- Recessed floor mat
io	- Inspection outlet - refer hydraulic docs
IOS	- Inspection outlet - refer hydraulic docs
SSF01	- Marmoleum
SSF02	- Seamless sheet vinyl
SST	- Structural steel
SST(e)	- Existing Structural steel
TIL01	- Floor tile (internal)
TIL04	- Floor and wall tile (colour C)
TIM-EX	- Existing timber floor
VNL01	- Vinyl / rubber sports floor
VNL02	- Vinyl / rubber sports floor
WC01	- Toilet (standard)



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E: mail@koandcompany.com.au | W: koandcompany.com.au

REV	DATE	ISSUE	DRAWN	CHECK
D	06.11.2021	Preliminary consultant issue	CM	KO
E	13.11.2021	Prelim for energy efficiency	SR	CM
F	03.12.2021	Issued for client review	SR	CM
G	16.12.2021	Issued for cost Quantity surveyor (not issued)	BR	CM
H	21.01.2022	Issue for services coordination	SR	CM
I	31.01.2022	Issue for client review	SR	CM
J	04.02.2022	Issue for client review	SR	CM
K	08.04.2022	Development Application	SR	CM
L	28.02.2023	DA RFI drawings for review	CM	KO
M	15.03.2023	Plans for SWMMP	CM	KO
N	17.03.2023	drawings for DA RFI response	CM	KO
O	31.03.2023	drawings for DA RFI response	CM	KO

PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

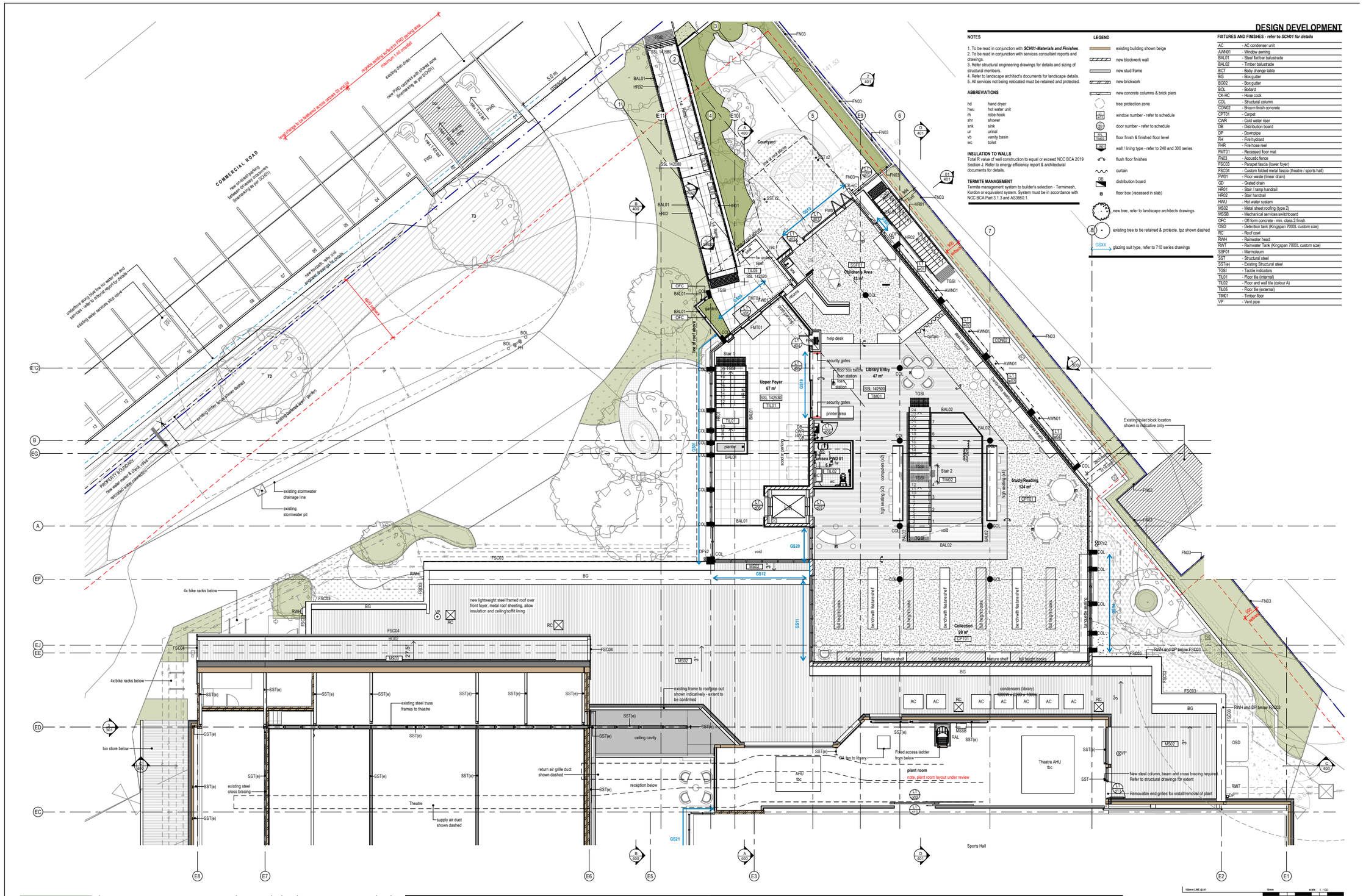
CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

DRAWING NAME
GENERAL ARRANGEMENT PLAN
LEVEL 0 - PART B

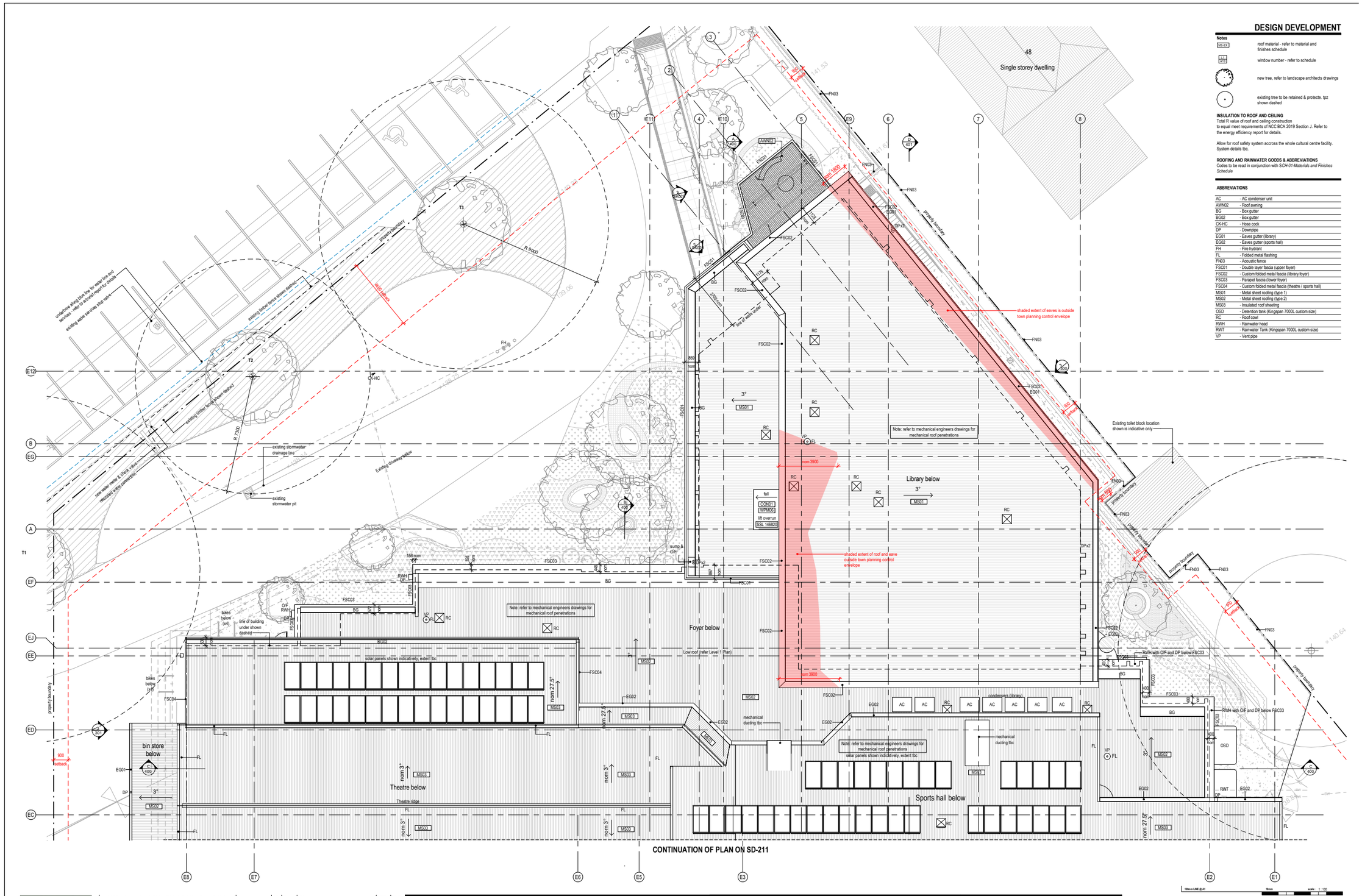
100mm LINE @ A1 — 10mm — scale 1 : 100

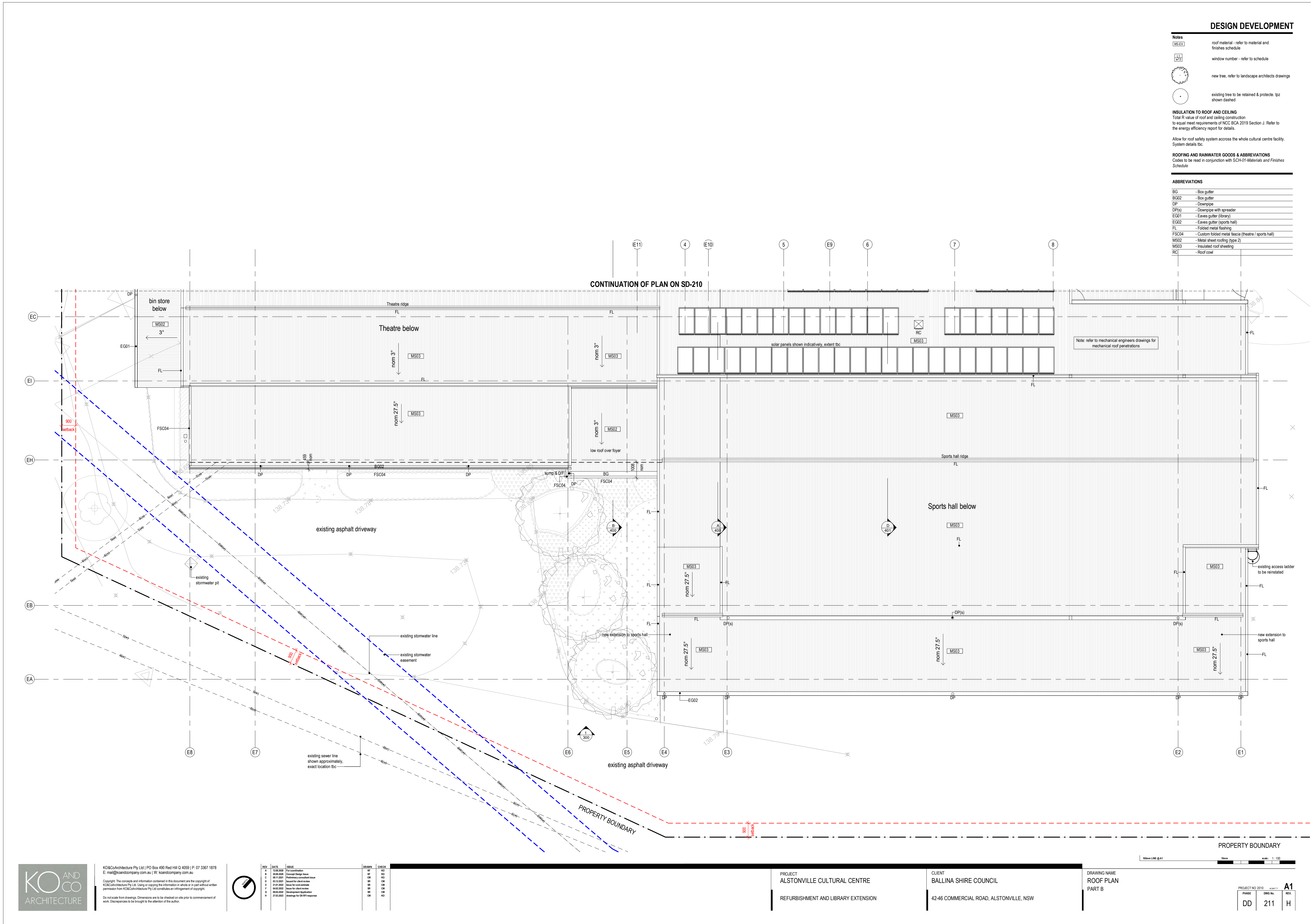
PROJECT NO 2010 — drgNo — REV.
A1
PHASE: DD | DWG No.: 201 | REV.: O

5.7 Alstonville Cultural Centre - Update



5.7 Alstonville Cultural Centre - Update





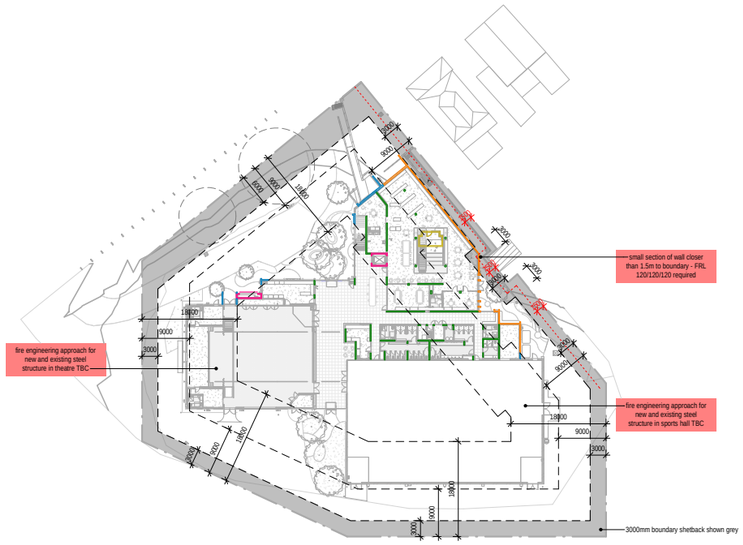
DESIGN DEVELOPMENT
Notes
MS-EX roof material - refer to material and finishes schedule
L1 w13 window number - refer to schedule
new tree, refer to landscape architects drawings
existing tree to be retained & protecte. tpz shown dashed
INSULATION TO ROOF AND CEILING
Total R value of roof and ceiling construction to equal meet requirements of NCC BCA 2019 Section J. Refer to the energy efficiency report for details.
Allow for roof safety system accross the whole cultural centre facility. System details tbc.
ROOFING AND RAINWATER GOODS & ABBREVIATIONS
Codes to be read in conjunction with SCH-01-Materials and Finishes Schedule
ABBREVIATIONS
BG - Box gutter
BG02 - Box gutter
DP - Downpipe
DP(s) - Downpipe with spreader
EG01 - Eaves gutter (library)
EG02 - Eaves gutter (sports hall)
FL - Folded metal flashing
FSC04 - Custom folded metal fascia (theatre / sports hall)
MS02 - Metal sheet roofing (type 2)
MS03 - Insulated roof sheeting
RC - Roof cowl
CONTINUATION OF PLAN ON SD-210
bin store below
Theatre ridge
Theatre below
low roof over foyer
solar panels shown indicatively, extent tbc
Note: refer to mechanical engineers drawings for mechanical roof penetrations
Sports hall ridge
Sports hall below
existing access ladder to be reinstated
new extension to sports hall
existing asphalt driveway
existing stormwater pit
existing stormwater line
existing stormwater easement
existing sewer line shown approximately, exact location tbc
PROPERTY BOUNDARY
PROPERTY BOUNDARY
900 setback
scale : 1 : 100
PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION
CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW
DRAWING NAME
ROOF PLAN
PART B
PROJECT NO: 2010
A1
PHASE DD
DWG No. 211
REV. H

DESIGN DEVELOPMENT

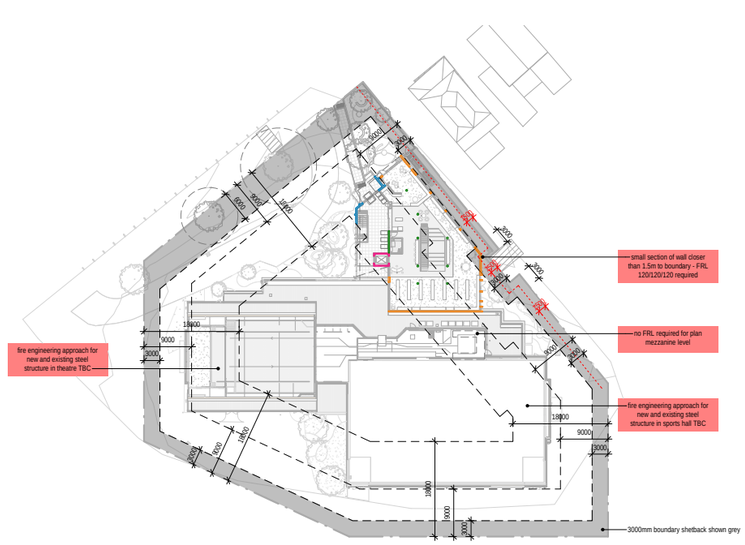
diagram legend | FIRE

120/30/30	Type B Construction (external loadbearing wall or column, 3-9m from site boundary)
120 / 30 / -	Type B Construction (external loadbearing wall or column, 9-18m from site boundary)
120/120/120	internal loadbearing lift shafts switchboard sustaining emergency equipment
- / 120 / 30	self-closing fire rated roller shutter
120 / - / -	Type B Construction (internal loadbearing walls bounding public corridors / lobbies)
60 / 60 / 60	enclosure of space under stairs
- / 60 / 30	self-closing fire doors

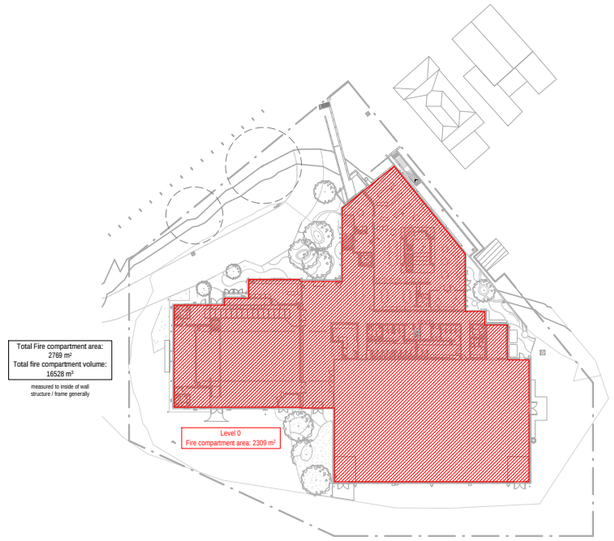
NOTES
- building classification: 9b
- construction type: Type B
- refer to NCC report prepared by Mackie Construction Consultants and Fire Engineering Brief prepared by Walkerbai Fire Engineers for further details



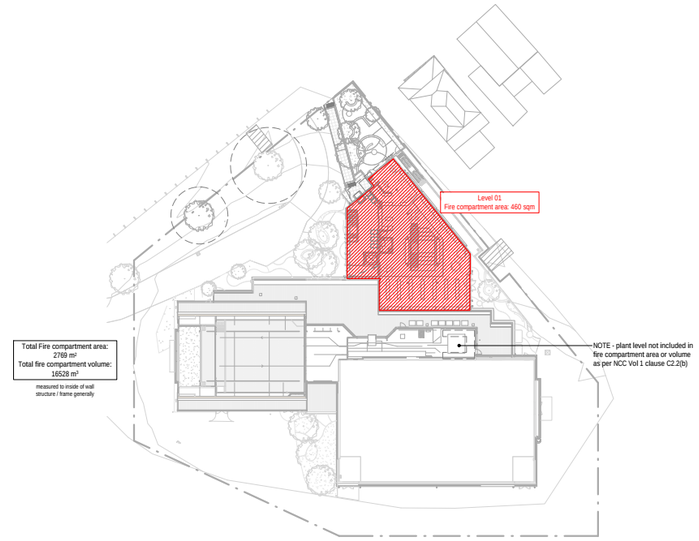
2 Diagram - Fire - Level 0 - FRL requirements
SCALE @ A1 1 : 500



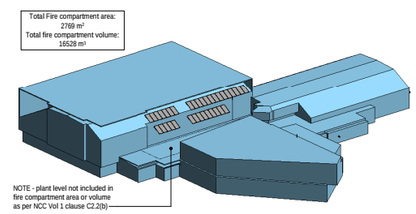
3 Diagram - Fire - Level 1 - FRL requirements
SCALE @ A1 1 : 500



5 Diagram - Fire - Level 0 - Compartments
SCALE @ A1 1 : 500



6 Diagram - Fire - Level 1 - Compartments
SCALE @ A1 1 : 500



4 Fire compartment volume
SCALE @ A1

NTS

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REV	DATE	ISSUE	DRAWN	CHECK
A	09.11.2021	Diagrams for review	CW	RD
B	21.01.2022	Issue for review	CW	CW
C	01.02.2022	Issue for cost estimate	SR	CW
D	04.02.2022	Issue for client review	SR	CW
E	08.04.2022	Development Application	SR	CW

100mm LINE @ A1 — 10mm — scale 1 : 500

PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

DRAWING NAME
FIRE DIAGRAMS

PROJECT NO: 2010 — at size A1

PHASE	DWG No.	REV.
DD	250	E

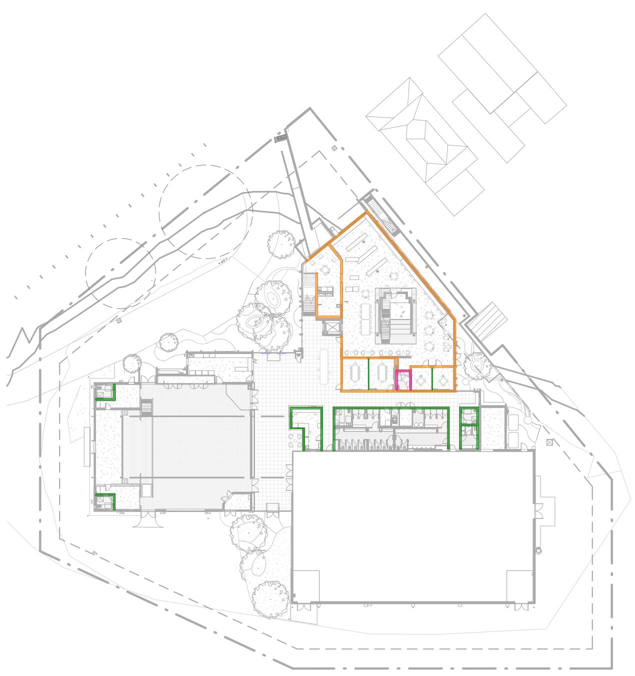
DESIGN DEVELOPMENT

diagram legend | ACOUSTIC

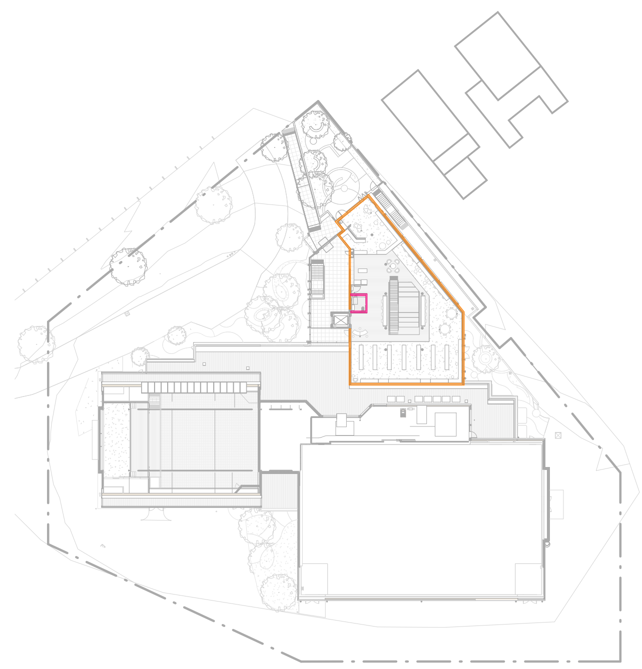
the following Rw ratings are proposed for the new facilities:

- min Rw 50 targeted
- min Rw+Ctr 50 targeted
- min Rw 45 targeted

note, any glazed openings will achieve lower Rw ratings than those noted above, refer to 700 series glazing schedules for glazing details.



1 Diagram - Acoustic - Level 0
SCALE @ A1 1 : 500



2 Diagram - Acoustic - Level 1
SCALE @ A1 1 : 500

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Do not scale from drawings. Dimensions are to be checked on site prior to commencement of work. Discrepancies to be brought to the attention of the author.

NORTH

REV	DATE	ISSUE	DRAWN	CHECK
A	09.11.2021	Diagrams for review	CM	KO
B	03.12.2021	Issued for client review	SR	CM
C	21.01.2022	Issue for cost estimate	SR	CM
D	04.02.2022	Issue for client review	SR	CM
E	08.04.2022	Development Application	SR	CM

100mm LINE @ A1 10mm scale : 1 : 500

PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

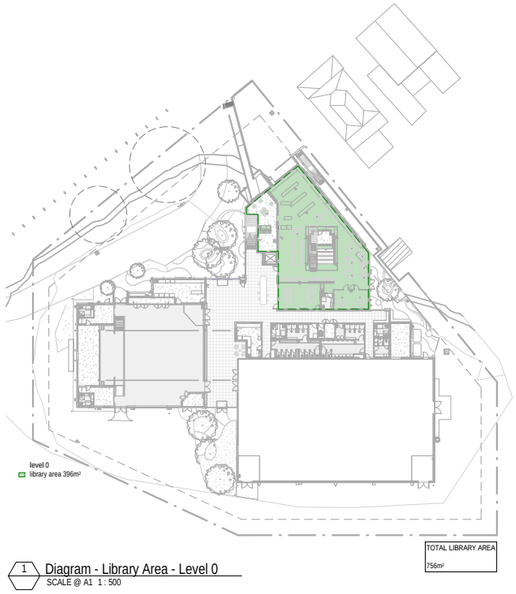
CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

DRAWING NAME
ACOUSTIC DIAGRAMS

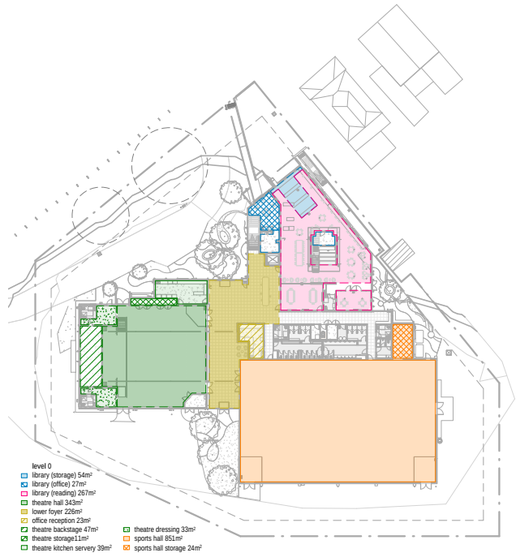
PROJECT NO: 2010 at plot 1:1 A1

PHASE	DWG No.	REV.
DD	251	E

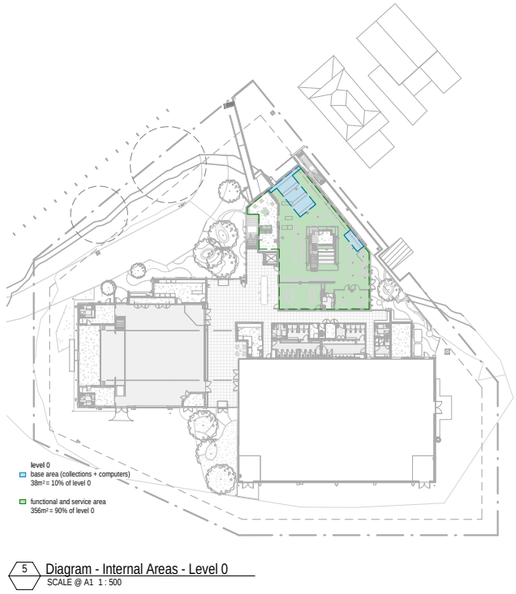
DESIGN DEVELOPMENT



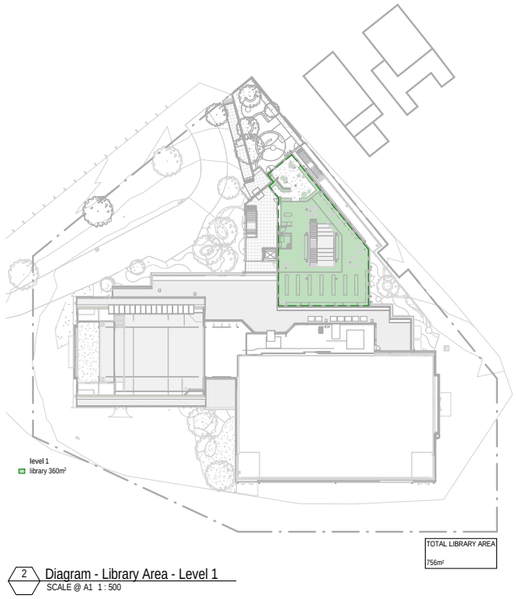
1 Diagram - Library Area - Level 0
SCALE @ A1 1 : 500



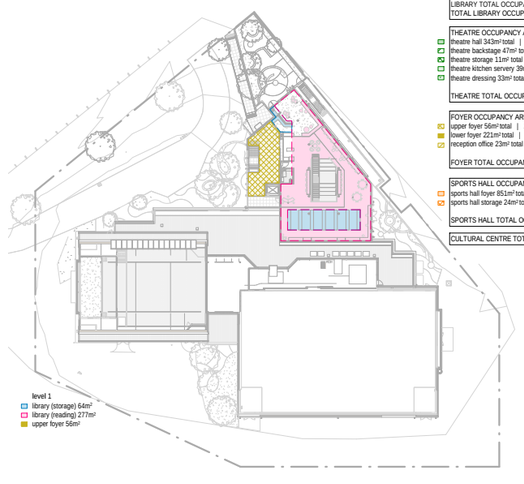
3 Diagram - Library Area & Occupancy - Level 0
SCALE @ A1 1 : 500



5 Diagram - Internal Areas - Level 0
SCALE @ A1 1 : 500



2 Diagram - Library Area - Level 1
SCALE @ A1 1 : 500



LIBRARY OCCUPANCY AREAS
library (storage) 118m² total | 30m² per person = 4 people
library (office) 27m² total | 10m² per person = 3 people
library (reading) 544m² total | 2m² per person = 272 people

LIBRARY TOTAL OCCUPANCY (based on NCC area calculations) | 279
TOTAL LIBRARY OCCUPANCY (client estimations) | 100 (initially) - 200 (with future growth)

THEATRE OCCUPANCY AREAS
theatre hall 343m² total | 1m² per person = 343 people
theatre backstage 47m² total | 4m² per person = 12 people
theatre storage 11m² total | 30m² per person = 1 person
theatre kitchen servery 39m² total | 10m² per person = 4 people
theatre dressing 33m² total | 4m² per person = 9 people

THEATRE TOTAL OCCUPANCY (based on NCC area calculations) | 369

FOYER OCCUPANCY AREAS
upper foyer 56m² total | 1m² per person = 56 people
lower foyer 221m² total | 1m² per person = 226 people
reception office 23m² total | 10m² per person = 3 people

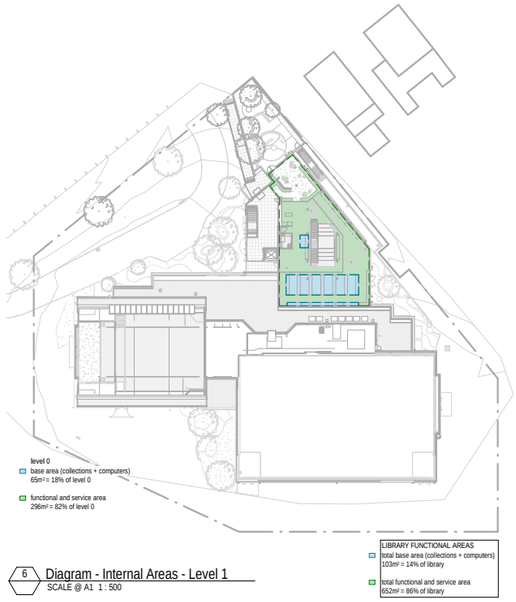
FOYER TOTAL OCCUPANCY (based on NCC area calculations) | 285

SPORTS HALL OCCUPANCY AREAS
sports hall foyer 851m² total | 3m² per person = 284 people
sports hall storage 24m² total | 30m² per person = 1 people

SPORTS HALL TOTAL OCCUPANCY (based on NCC area calculations) | 285

CULTURAL CENTRE TOTAL OCCUPANCY (based on NCC area calculations) | 1218

4 Diagram - Library Area & Occupancy - Level 1
SCALE @ A1 1 : 500



LIBRARY FUNCTIONAL AREAS
total base area (collections + computers)
103m² = 14% of library
total functional and service area
652m² = 86% of library

6 Diagram - Internal Areas - Level 1
SCALE @ A1 1 : 500

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REV	DATE	ISSUE	DRAWN	CHECK
A	25.11.2021	Library Area Diagrams	CW	KO
B	01.12.2021	Issued for client review	SR	CW
C	17.01.2022	Issue for review	SR	CW
D	21.01.2022	Issue for cost estimate	SR	CW
E	04.02.2022	Issue for client review	SR	CW
F	09.04.2022	Development Application	SR	CW

100mm LINE @ A1 — 10mm — scale : 1 : 500

PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

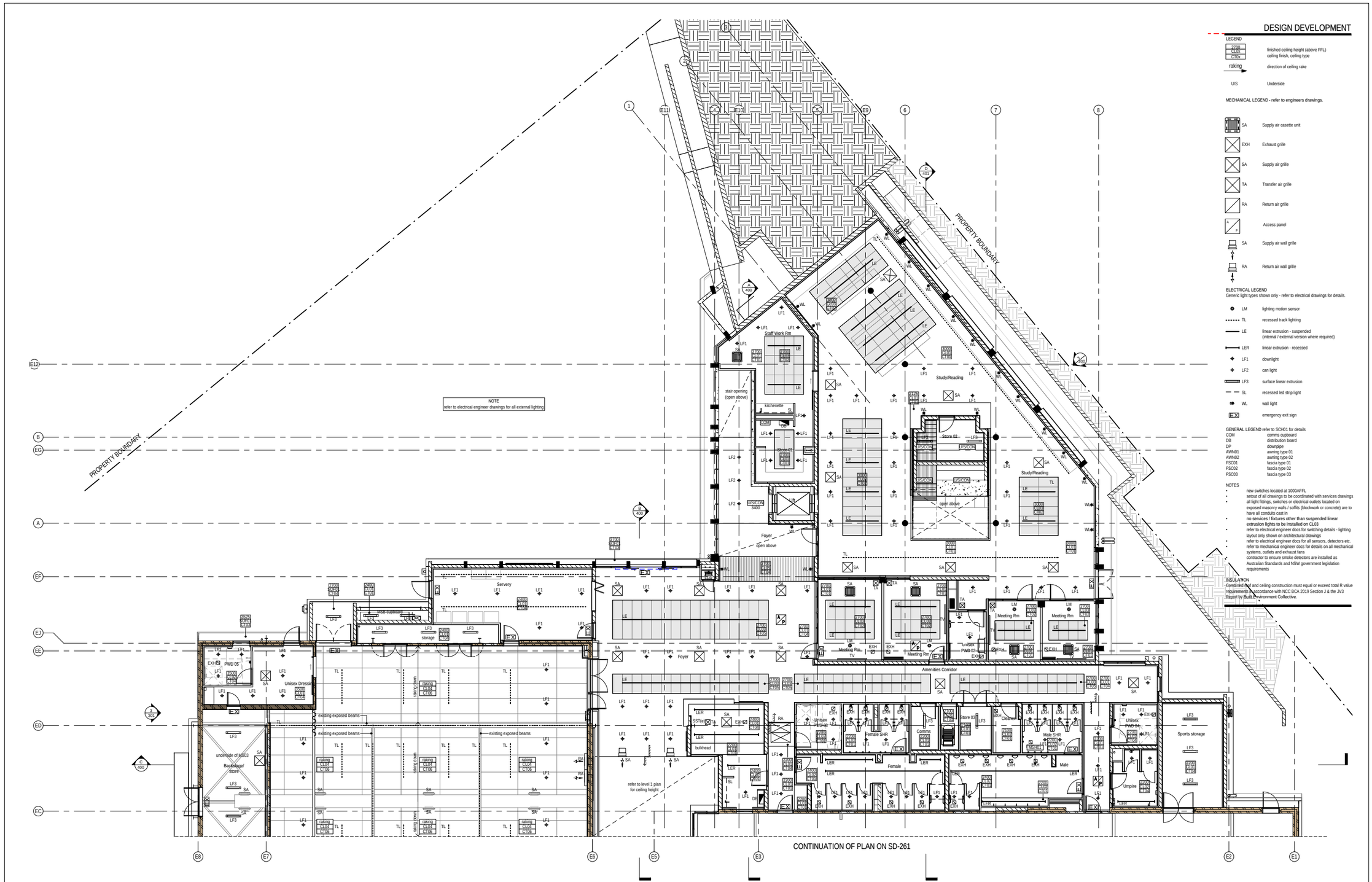
CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

DRAWING NAME
AREA DIAGRAMS

PROJECT NO: 2010 — at size in A1 — A1

PHASE	DWG No.	REV.
DD	252	F

5.7 Alstonville Cultural Centre - Update



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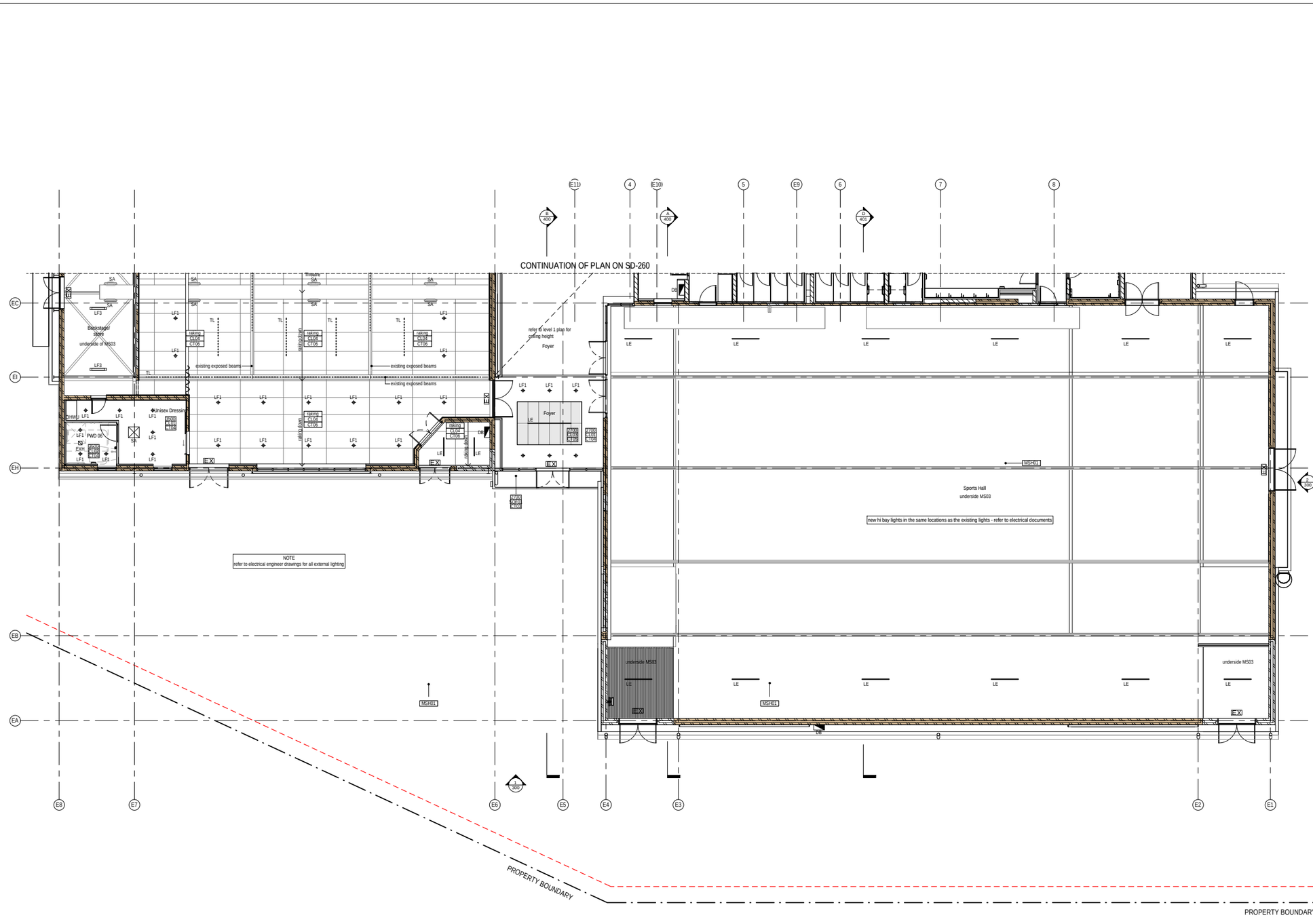
REV	DATE	ISSUE	DRAWN	CHECK
A	08.11.2021	Preliminary consultant issue	CM	KO
B	18.11.2021	Issued for client review	SR	CM
C	30.11.2021	Issued for cost (Quantity surveyor (not issued)	SR	CM
D	13.12.2021	Reflected ceiling plans for coordination	SR	CM
E	07.01.2022	Issue for services coordination	SR	CM
F	25.01.2022	Issue for cost estimate	SR	CM
G	04.02.2022	Issue for client review	SR	CM
H	08.04.2022	Development Application	SR	CM

PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

DRAWING NAME
REFLECTED CEILING PLAN
LEVEL 0 - PART A

PROJECT NO. 2010 | A1
PHASE: DD | DWG No.: 260 | REV.: H



DESIGN DEVELOPMENT

LEGEND

2700 CL0x CT0x	finished ceiling height (above FFL) ceiling finish, ceiling type
raking	direction of ceiling rake
U/S	Underside

MECHANICAL LEGEND - refer to engineers drawings.

SA	Supply air casette unit
EXH	Exhaust grille
SA	Supply air grille
TA	Transfer air grille
RA	Return air grille
	Access panel
SA	Supply air wall grille
RA	Return air wall grille

ELECTRICAL LEGEND
Generic light types shown only - refer to electrical drawings for details.

LM	lighting motion sensor
TL	recessed track lighting
LE	linear extrusion - suspended (internal / external version where required)
LER	linear extrusion - recessed
LF1	downlight
LF2	can light
LF3	surface linear extrusion
SL	recessed led strip light
WL	wall light
EX	emergency exit sign

GENERAL LEGEND refer to SCH01 for details

COM	comms cupboard
DB	distribution board
DP	downpipe
AWN01	awning type 01
AWN02	awning type 02
FSC01	fascia type 01
FSC02	fascia type 02
FSC03	fascia type 03

NOTES

- new switches located at 1000AFFL
- setout of all drawings to be coordinated with services drawings
- all light fittings, switches or electrical outlets located on exposed masonry walls / soffits (blockwork or concrete) are to have all conduits cast in
- no services / fixtures other than suspended linear extrusion lights to be installed on CL03
- refer to electrical engineer docs for switching details - lighting layout only shown on architectural drawings
- refer to electrical engineer docs for all sensors, detectors etc.
- refer to mechanical engineer docs for details on all mechanical systems, outlets and exhaust fans
- contractor to ensure smoke detectors are installed as Australian Standards and NSW government legislation requirements

INSULATION
Combined roof and ceiling construction must equal or exceed total R value requirements in accordance with NCC BCA 2019 Section J & the JV3 Report by Built Environment Collective.

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REV	DATE	ISSUE	DRAWN	CHECK
A	06.11.2021	Preliminary consultant issue	CW	KO
B	03.12.2021	Issued for client review	SR	CW
C	20.12.2021	Issued for cost Quantity surveyor (not issued)	SR	CW
D	24.12.2021	Issued for client review for coordination	SR	CW
E	07.01.2022	Issue for services coordination	SR	CW
F	21.01.2022	Issue for cost estimate	SR	CW
G	04.02.2022	Issue for client review	SR	CW
H	08.04.2022	Development Application	SR	CW

100mm LINE @ A1 — 10mm — scale: 1 : 100

PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

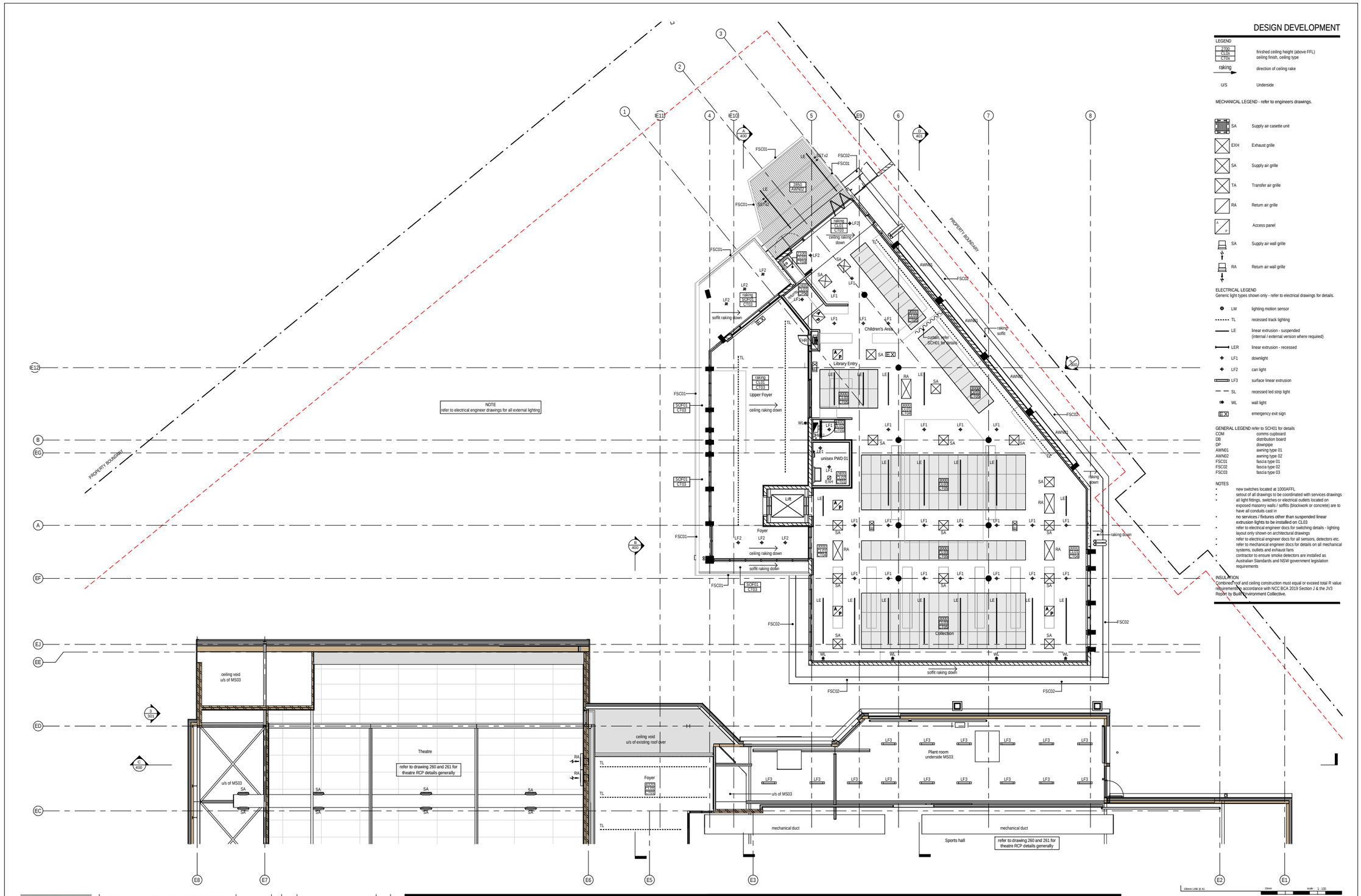
CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

DRAWING NAME
REFLECTED CEILING PLAN
LEVEL 0 - PART B

PROJECT NO 2010 — at size A1

PHASE	DWG No.	REV.
DD	261	H

5.7 Alstonville Cultural Centre - Update



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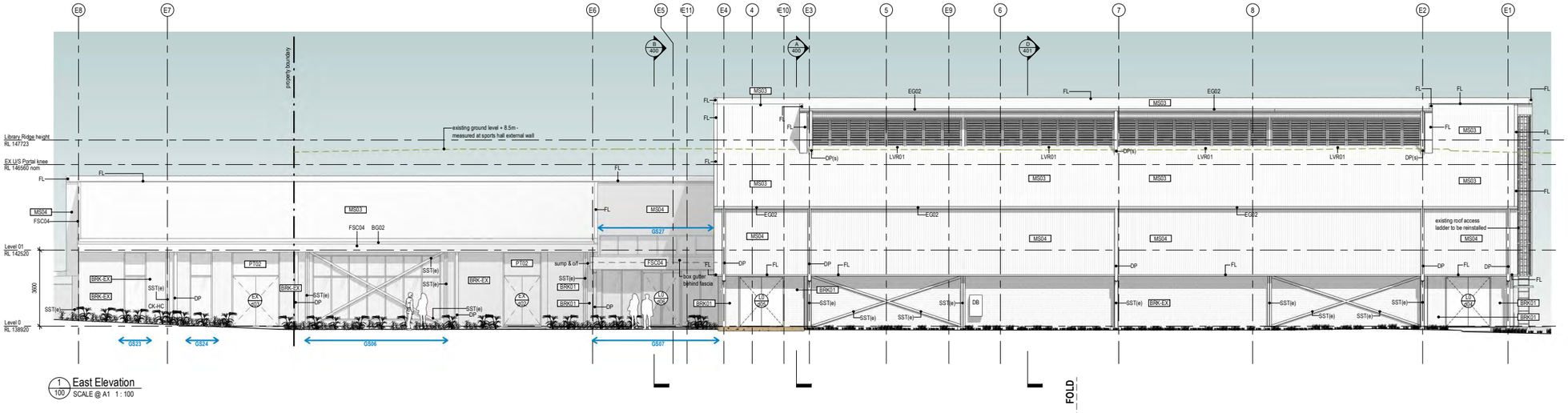
REV	DATE	ISSUE	DRAWN	CHECK
A	06.11.2021	Preliminary consultant issue	CW	KO
B	03.12.2021	Issued for client review	SR	CW
C	20.12.2021	Issued for cost Quantity surveyor (not issued)	SR	CW
D	21.01.2022	Issued for client review for coordination	SR	CW
E	07.01.2022	Issue for services coordination	SR	CW
F	21.01.2022	Issue for cost estimate	SR	CW
G	04.02.2022	Issue for client review	SR	CW
H	08.04.2022	Development Application	SR	CW

PROJECT: ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

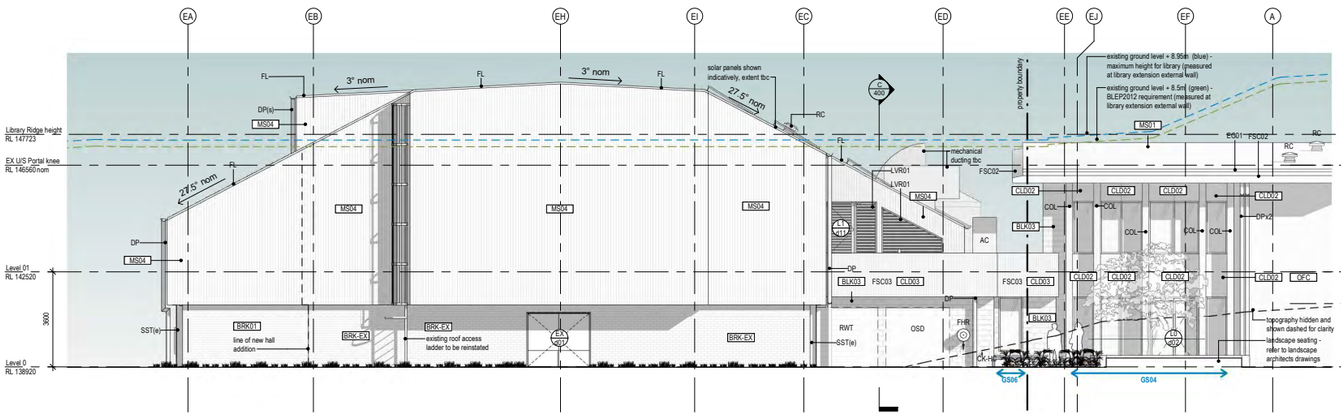
CLIENT: BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

DRAWING NAME: REFLECTED CEILING PLAN
LEVEL 1

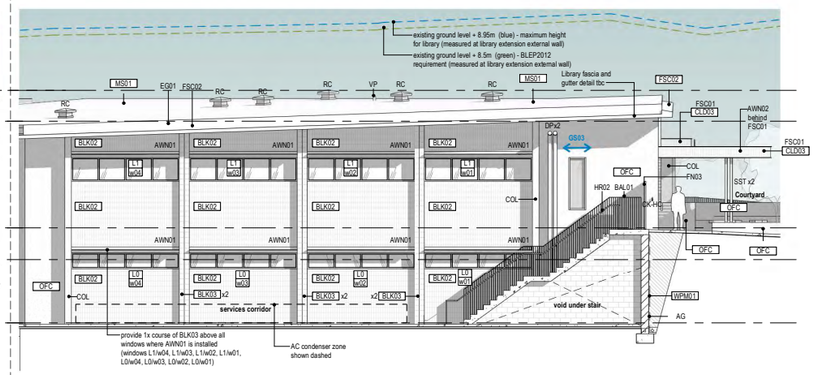
PROJECT NO 2010 — A1
PHASE: DD | DWG No.: 262 | REV.: H



1 East Elevation
100 SCALE @ A1 1 : 100



2 North Elevation
SCALE @ A1 1 : 100



FOLD

DESIGN DEVELOPMENT

LEGEND

- window number - refer to window schedule
- door number - refer to door schedule
- GSXX — glazing suit type, refer to 710 series drawings
- ag — Agricultural drain, refer to hydraulic engineer's drawings

Notes

1. To be read in conjunction with ***SCH01-Materials and Finishes***.
2. To be read in conjunction with services consultant reports and drawings.
3. Refer structural engineering drawings for details and sizing of structural members.
4. Refer to landscape architect's documents for landscape details.
5. All services not being relocated must be retained and protected.

ABBREVIATIONS & EXTERNAL MATERIALS LEGEND
Codes to be read in conjunction with
SCH01-Materials and finishes schedule

AC	- AC condenser unit
AG	- Ag line drainage
AWN01	- Window awning
AWN02	- Roof awning
BAL01	- Steel flat bar balustrade
BG02	- Box gutter
BLK02	- Blockwork feature (ribbed)
BLK03	- Blockwork feature (smooth)
BRK01	- Brick type 01
BRK-EX	- Existing brick
CK-HC	- Hose cock
CLD02	- Prefinished CFC cladding (dark)
CLD03	- Prefinished CFC cladding (white)
COL	- Structural column
DB	- Distribution board
DP	- Downpipe
DP(s)	- Downpipe with spreader
EG01	- Eaves gutter (library)
EG02	- Eaves gutter (sports hall)
FHR	- Fire hose reel
FL	- Folded metal flashing
FN03	- Acoustic fence
FSC01	- Double layer fascia (upper foyer)
FSC02	- Custom folded metal fascia (library foyer)
FSC03	- Parapet fascia (lower foyer)
FSC04	- Custom folded metal fascia (theatre / sports hall)
HR02	- Stair handrail
LVR01	- Louvres - fixed 2 stage aluminium, vermin proofed
MS01	- Metal sheet roofing (type 1)
MS03	- Insulated roof sheeting
MS04	- Insulated wall sheeting
OFC	- Off-form concrete - min. class 2 finish
OSD	- Detention tank (Kingspan 7000L custom size)
PT02	- Paint colour
RC	- Roof cowl
RWT	- Rainwater Tank (Kingspan 7000L custom size)
SST	- Structural steel
SST(e)	- Existing Structural steel
VP	- Vent pipe
WPM01	- Waterproof membrane, refer SCH01

REV	DATE	ISSUE	DRAWN	CHECK
A	10.08.2020	Pre-Consultation	KF	KO
B	15.10.2020	Concept Design Issue	KF	KO
C	30.11.2021	Preliminary consultant issue	CM	KO
D	12.11.2021	Prelim for energy efficiency	SR	CM
E	03.12.2021	Issued for client review	SR	CM
F	21.01.2022	Issue for cost estimate	SR	CM
G	04.02.2022	Issue for client review	SR	CM
H	08.04.2022	Development Application	SR	CM
I	26.02.2023	DA RFI drawings for review	CM	KO
J	17.03.2023	drawings for DA RFI response	CM	KO

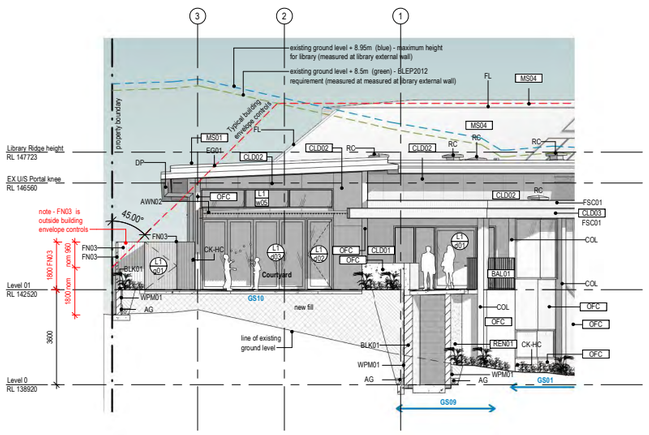
PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

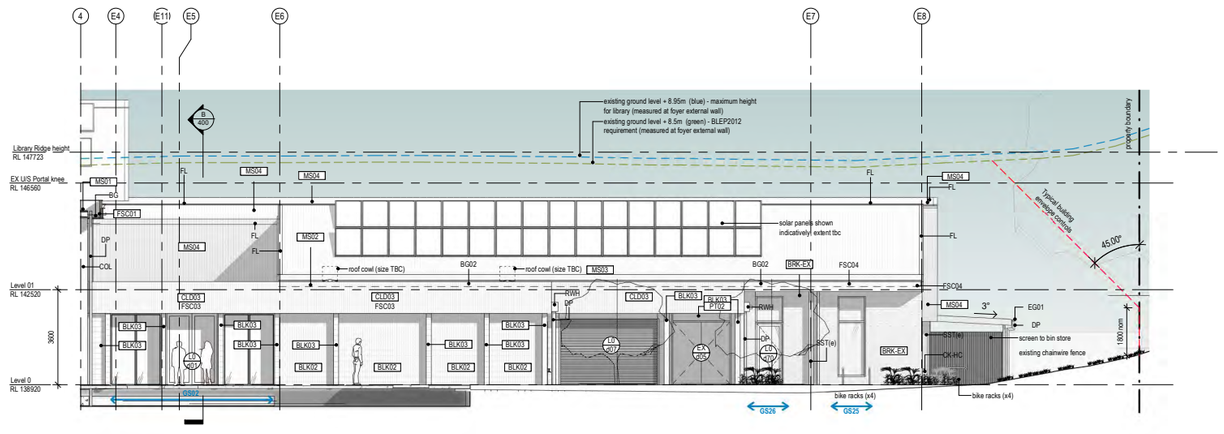
DRAWING NAME
ELEVATIONS
SHEET 1

100mm LINE @ A1 — 50mm — scale: 1 : 100

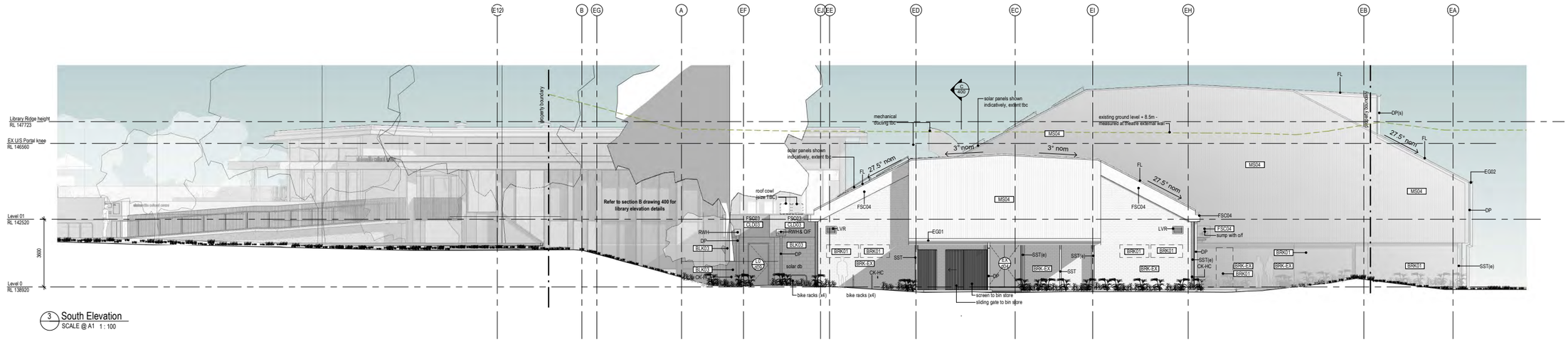
PROJECT NO. 2010 | PHASE: DD | DWG No.: 300 | REV: J | A1



1 West Elevation - part 01
SCALE @ A1 1 : 100



2 West Elevation - part 2
SCALE @ A3 1 : 100



3 South Elevation
SCALE @ A1 1 : 100

DESIGN DEVELOPMENT

LEGEND

- window number - refer to window schedule
- door number - refer to door schedule
- GSXX — glazing suit type, refer to 710 series drawings
- ag — Agricultural drain, refer to hydraulic engineer's drawings

Notes

1. To be read in conjunction with ***SCH01-Materials and Finishes***.
2. To be read in conjunction with services consultant reports and drawings.
3. Refer structural engineering drawings for details and sizing of structural members.
4. Refer to landscape architect's documents for landscape details.
5. All services not being relocated must be retained and protected.

ABBREVIATIONS & EXTERNAL MATERIALS LEGEND
Codes to be read in conjunction with
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BAL01	- Steel flat bar balustrade
BG	- Box gutter
BG02	- Box gutter
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BLK02	- Blockwork feature (ribbed)
BLK03	- Blockwork feature (smooth)
BRK01	- Brick type 01
BRK-EX	- Existing brick
CK-HC	- Hose cock
CLD01	- Prefinished CFC cladding (green)
CLD02	- Prefinished CFC cladding (dark)
CLD03	- Prefinished CFC cladding (white)
COL	- Structural column
DP	- Downpipe
DP(s)	- Downpipe with spreader
EG01	- Eaves gutter (library)
EG02	- Eaves gutter (sports hall)
FL	- Folded metal flashing
FN03	- Acoustic fence
FSC01	- Double layer fascia (upper foyer)
FSC03	- Parapet fascia (lower foyer)
FSC04	- Custom folded metal fascia (theatre / sports hall)
LVR	- Mechanical Louvre
MS01	- Metal sheet roofing (type 1)
MS02	- Metal sheet roofing (type 2)
MS03	- Insulated roof sheeting
MS04	- Insulated wall sheeting
OFC	- Off-form concrete - min. class 2 finish
PT02	- Paint colour
RC	- Roof cowl
REN01	- Textured paint finish
RWH	- Rainwater head
SST	- Structural steel
SST(e)	- Existing Structural steel
WPM01	- Waterproof membrane, refer SCH01

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REV	DATE	ISSUE	DRAWN	CHECK
A	12.06.2020	For coordination	KF	KO
B	26.08.2020	Concept Design issue	KF	KO
C	27.08.2020	Concept Design issue	KF	KO
D	06.11.2021	Preliminary consultant issue	DM	KO
E	12.11.2021	Prelim for energy efficiency	SB	DM
F	03.12.2021	Issue D for client review	SB	DM
G	17.12.2021	Issue for client review	SB	DM
H	04.02.2022	Issue for client review	SB	DM
I	08.04.2022	Development Application	SB	DM
J	28.02.2023	DA RFI drawings for review	DM	KO
K	17.03.2023	drawings for DA RFI responses	DM	KO

PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

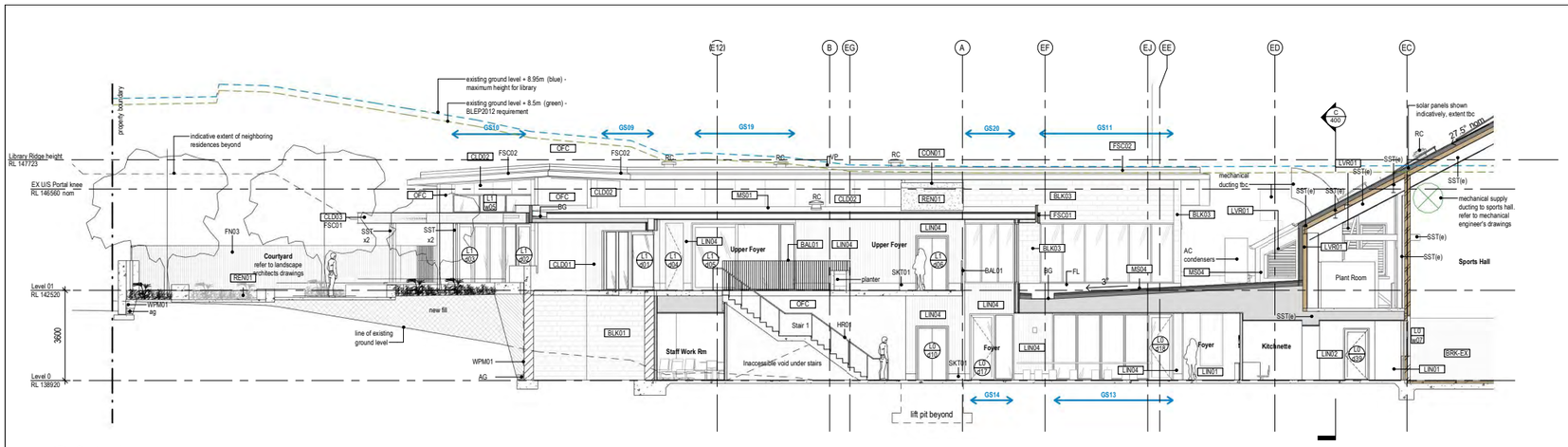
CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

DRAWING NAME
ELEVATIONS
SHEET 2

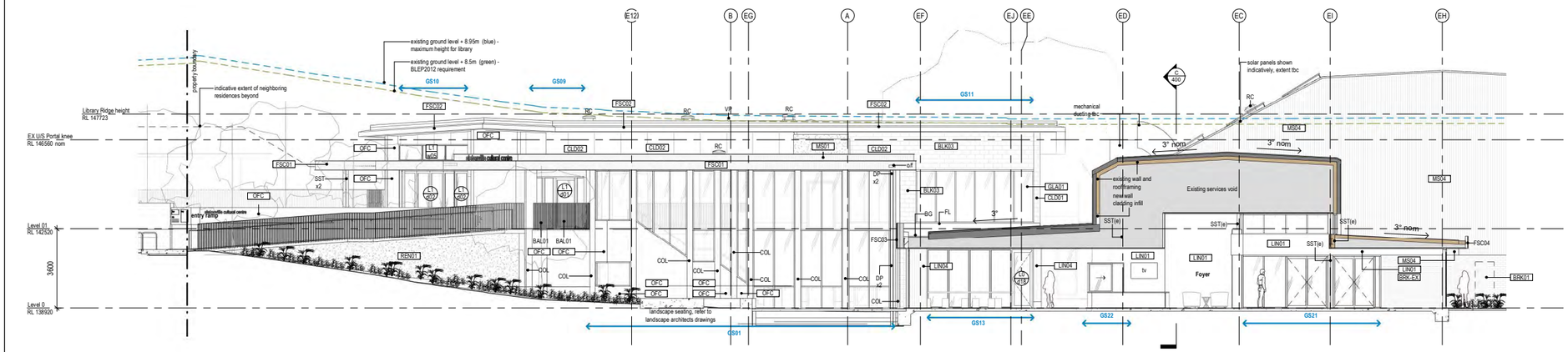
100mm LINE @ A1 — 10mm — scale : 1 : 100

PROJECT NO 2010 — A1

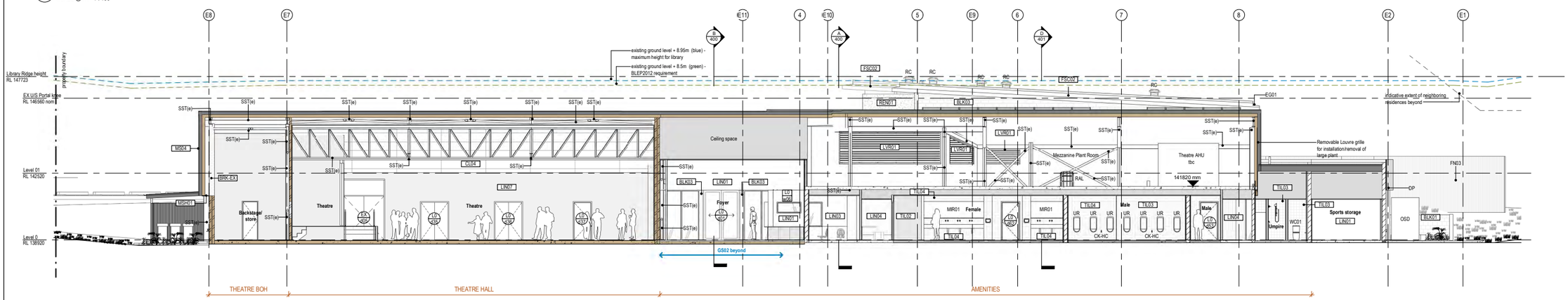
PHASE	DWG No.	REV.
DD	301	K



A Section A
SCALE @ A1 1 : 100



B Section B
SCALE @ A1 1 : 100



C Section C
SCALE @ A1 1 : 100

DESIGN DEVELOPMENT

LEGEND

- L1 / L10 — window number - refer to window schedule
- D1 / D10 — door number - refer to door schedule
- GS/XX — glazing suit type, refer to 710 series drawings
- ag — Agricultural drain, refer to hydraulic engineer's drawings

Notes

1. To be read in conjunction with ***SCH01-Materials and Finishes***.
2. To be read in conjunction with services consultant reports and drawings.
3. Refer structural engineering drawings for details and sizing of structural members.
4. Refer to landscape architect's documents for landscape details.
5. All services not being relocated must be retained and protected.

ABBREVIATIONS & INTERNAL MATERIALS LEGEND
Codes to be read in conjunction with ***SCH01-Materials and finishes schedule***

AG	- Ag line drainage
BAL01	- Steel flat bar balustrade
BG	- Box gutter
BLK01	- Blockwork standard
BLK03	- Blockwork feature (smooth)
BRK01	- Brick type 01
BRK-EX	- Existing brick
CK-HC	- Hose cock
CL04	- Ceiling linings - timber
CLD01	- Prefinished CFC cladding (green)
CLD02	- Prefinished CFC cladding (dark)
CLD03	- Prefinished CFC cladding (white)
COL	- Structural column
CON01	- Hand or machine trowelled concrete
DP	- Downpipe
EG01	- Eaves gutter (library)
FN03	- Acoustic fence
FSC01	- Double layer fascia (upper foyer)
FSC02	- Custom folded metal fascia (library foyer)
FSC03	- Parapet fascia (lower foyer)
FSC04	- Custom folded metal fascia (theatre / sports hall)
GLA01	- Glazing (type 1)
HRD1	- Stair / ramp handrail
LIN01	- Wall linings (Gyprock Impact PB)
LIN02	- Wall linings (Gyprock Standard PB)
LIN03	- Wall linings (Gyprock Aquachek PB)
LIN04	- Wall linings (Supawood Veneer)
LIN07	- Wall linings (Supawood acoustic lining)
LVR01	- Louvres - fixed 2 stage aluminium, vermin proofed
MIR01	- Mirror
MS01	- Metal sheet roofing (type 1)
MS04	- Insulated wall sheeting
MSH01	- Expanded mesh soffit
OFC	- Off-form concrete - min. class 2 finish
OSD	- Detention tank (Kingspan 7000L custom size)
RAL	- Roof access ladder
RC	- Roof cowl
REN01	- Textured paint finish
SKT01	- Skirting
SST	- Structural steel
SST(e)	- Existing Structural steel
TIL02	- Floor and wall tile (colour A)
TIL03	- Floor and wall tile (colour B)
TIL04	- Floor and wall tile (colour C)
UR	- Urinal
VP	- Vent pipe
WC01	- Toilet (standard)
WPM01	- Waterproof membrane, refer SCH01

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REV	DATE	ISSUE	DRAWN	CHECK
A	13.08.2020	For coordination	KF	KO
B	20.08.2020	Concept Design Issue	KF	KO
C	09.11.2021	Preliminary consultant issue	DB	KO
D	10.11.2021	Refer for energy efficiency	SR	DB
E	17.12.2021	Issue for consultants	SR	DB
F	31.01.2022	Issue for cost estimate	SR	DB
G	04.02.2022	Issue for client review	SR	DB
H	09.04.2022	Development Application	SR	DB
I	17.03.2023	drawings for DA RFI response	DB	KO

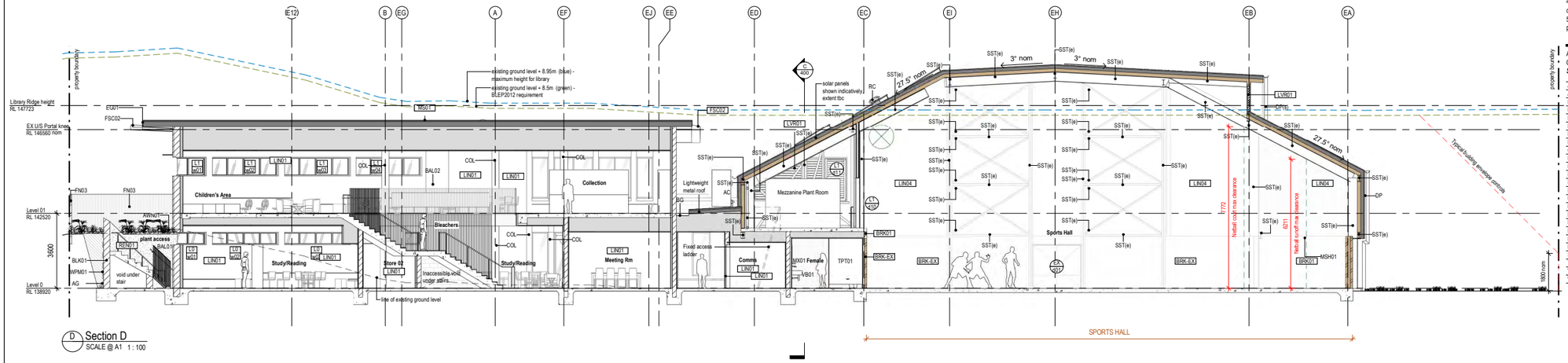
PROJECT: ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

CLIENT: BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

DRAWING NAME: SECTIONS
SHEET 1

PROJECT NO 2010 — A1

PHASE	DWG No.	REV.
DD	400	I



D Section D
SCALE @ A1 1 : 100

DESIGN DEVELOPMENT

LEGEND

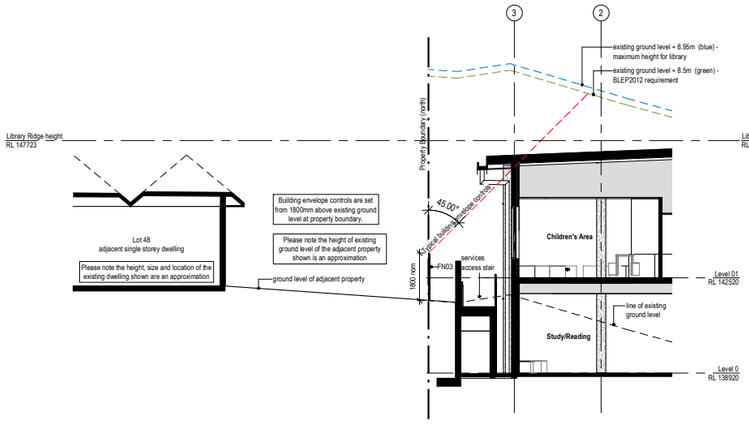
- LW — window number - refer to window schedule
- DR — door number - refer to door schedule
- GSXX — glazing suit type, refer to 710 series drawings
- ag — Agricultural drain, refer to hydraulic engineer's drawings

Notes

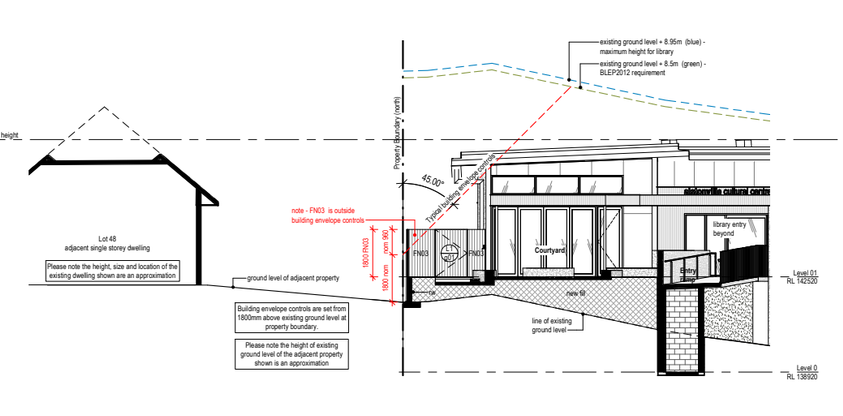
1. To be read in conjunction with ***SCH01-Materials and Finishes***.
2. To be read in conjunction with services consultant reports and drawings.
3. Refer structural engineering drawings for details and sizing of structural members.
4. Refer to landscape architect's documents for landscape details.
5. All services not being relocated must be retained and protected.

ABBREVIATIONS & INTERNAL MATERIALS LEGEND
Codes to be read in conjunction with
SCH01-Materials and finishes schedule

AG	- Ag line drainage
AWN01	- Window awning
BAL01	- Steel flat bar balustrade
BAL02	- Timber balustrade
BG	- Box gutter
BLK01	- Blockwork standard
BRK01	- Brick type 01
BRK-EX	- Existing brick
COL	- Structural column
DP	- Downpipe
DP(s)	- Downpipe with spreader
EG01	- Eaves gutter (library)
FN03	- Acoustic fence
FSC02	- Custom folded metal fascia (library foyer)
LIN01	- Wall linings (Gyprock Impact PB)
LVR01	- Louvres - fixed 2 stage aluminium, vermin proofed
MS01	- Metal sheet roofing (type 1)
MSH01	- Expanded mesh soffit
MX01	- Basin mixer (sensor)
RC	- Roof cowl
REN01	- Textured paint finish
SST(e)	- Existing Structural steel
TPT01	- Toilet partition system
VB01	- Vanity basin (custom moulded acrylic wash plane)
WPM01	- Waterproof membrane, refer SCH01



01 Northern adjacent property - Detail section 01
SCALE @ A1 1 : 100



02 Northern adjacent property - Detail section 02
SCALE @ A1 1 : 100

KO AND CO ARCHITECTURE

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REV	DATE	ISSUE	DRAWN	CHECK
A	12.09.2020	For coordination	KF	KO
B	29.09.2020	Concept Design Issue	KF	KO
C	09.11.2021	Preliminary consultant issue	DB	KO
D	12.11.2021	Prelim for energy efficiency	SR	CM
E	03.12.2021	Issued for client review	SR	CM
F	17.12.2021	Issued for client review	SR	CM
G	04.02.2022	Issue for client review	SR	CM
H	08.04.2022	Development Application	SR	CM
I	17.05.2022	Drawings for DA RFI response	DB	KO

PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

DRAWING NAME
SECTIONS
SHEET 2

100mm LINE @ A1 — 10mm — scale: 1 : 100

PROJECT NO 2010 — at print 11 — A1

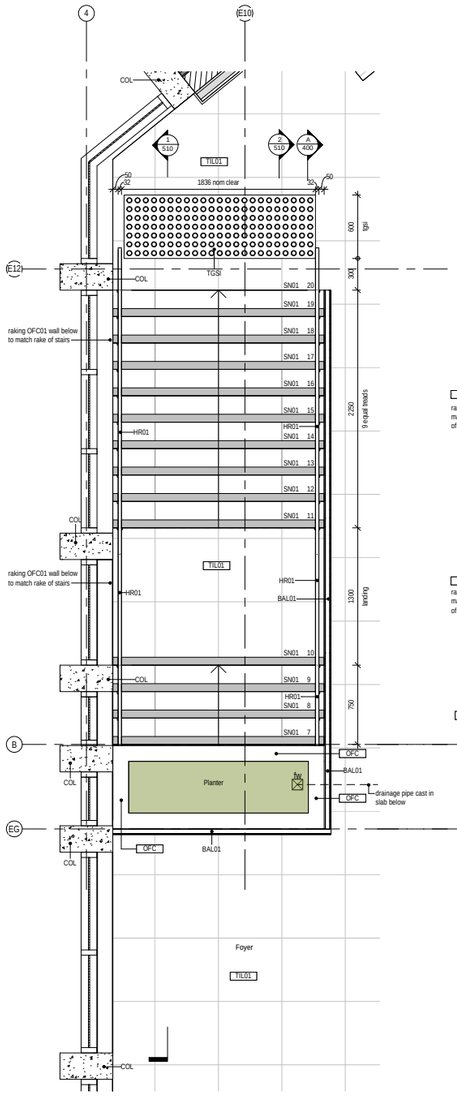
PHASE	DWG No.	REV.
DD	401	I

DESIGN DEVELOPMENT

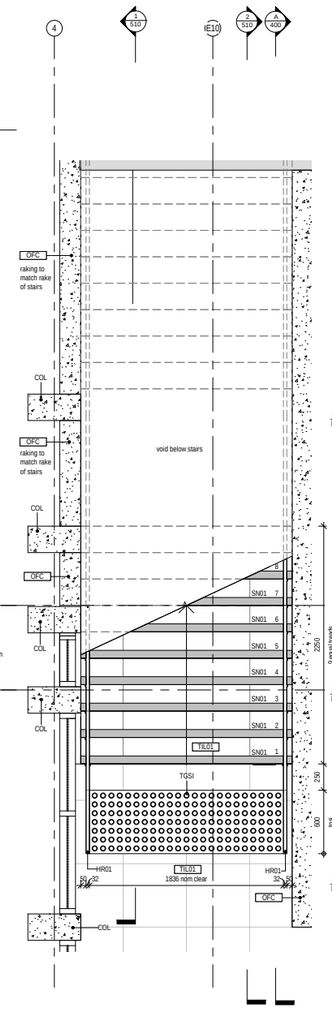
LEGEND
1. To be read in conjunction with SCH01 Materials Schedule.
2. To be read in conjunction with services consultant reports and drawings.
3. Refer structural engineering drawings for details and sizing of structural members.

FIXTURES AND FINISHES

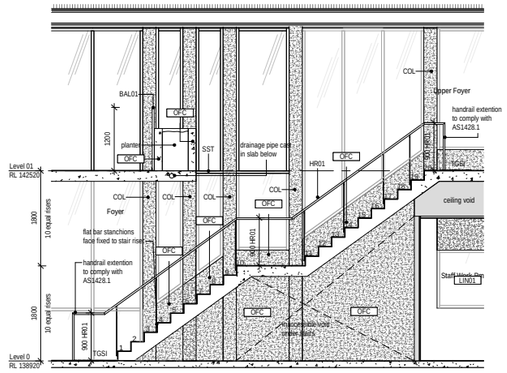
AG	- Ag line drainage
BAL01	- Steel flat bar balustrade
BG	- Box gutter
BLK01	- Blockwork standard
BLK03	- Blockwork feature (smooth)
CLD02	- Prefinished CFC cladding (dark)
COL	- Structural column
CON01	- Hand or machine trowelled concrete
FSC01	- Double layer fascia (upper foyer)
FSC02	- Custom folded metal fascia (library foyer)
HR01	- Stair / ramp handrail
LIN01	- Wall linings (Gyprock Impact PB)
LIN04	- Wall linings (Supawood Veneer)
OFC	- Off-form concrete - min. class 2 finish
RC	- Roof cowl
SKT01	- Skirting
SN01	- Stair nosing
SOF01	- Soffit lining
SST	- Structural steel
TGSI	- Tactile indicators
TIL01	- Floor tile (internal)
WL	- Wall light
WPM05	- Waterproof membrane, refer SCH01



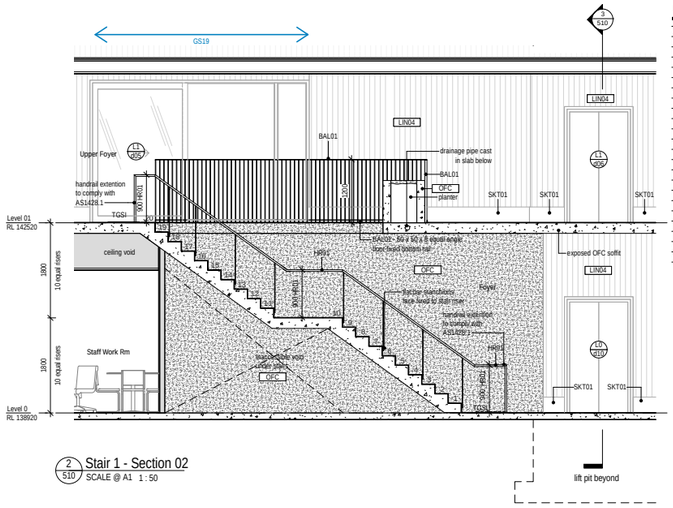
A Stair 1 - Level 01 - Floor Plan
SCALE @ A1 1 : 25



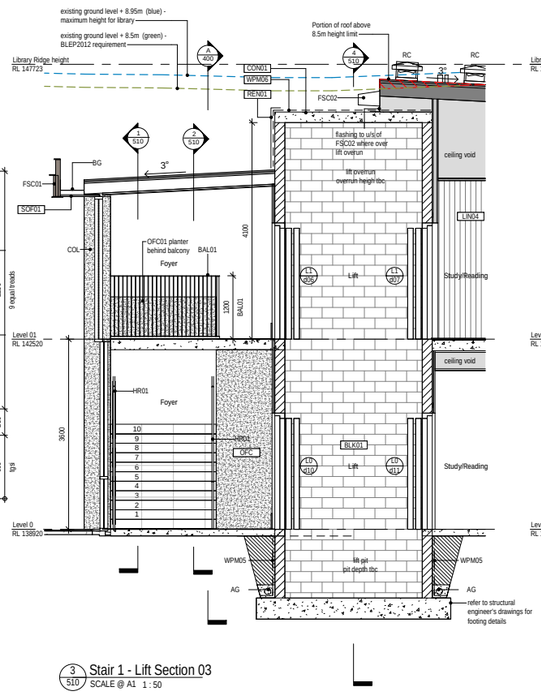
B Stair 1 - Level 0 - Floor Plan
SCALE @ A1 1 : 25



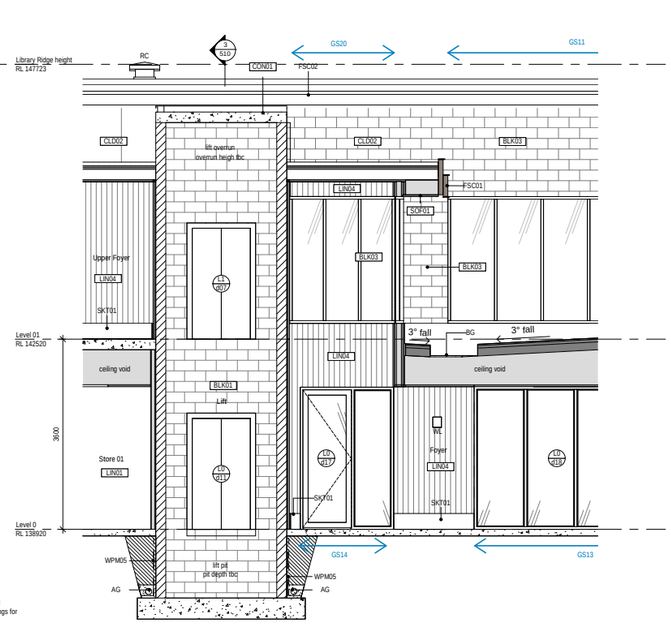
1 Stair 1 - Section 01
SCALE @ A1 1 : 50



2 Stair 1 - Section 02
SCALE @ A1 1 : 50



3 Stair 1 - Lift Section 03
SCALE @ A1 1 : 50



4 Lift - Section 04
SCALE @ A1 1 : 50

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REV	DATE	ISSUE	DRAWN	CHECK
A	31.01.2022	Issue for cost estimate	GR	CW
B	04.02.2022	Issue for client review	SR	CW
C	08.04.2022	Development Application	GR	CW

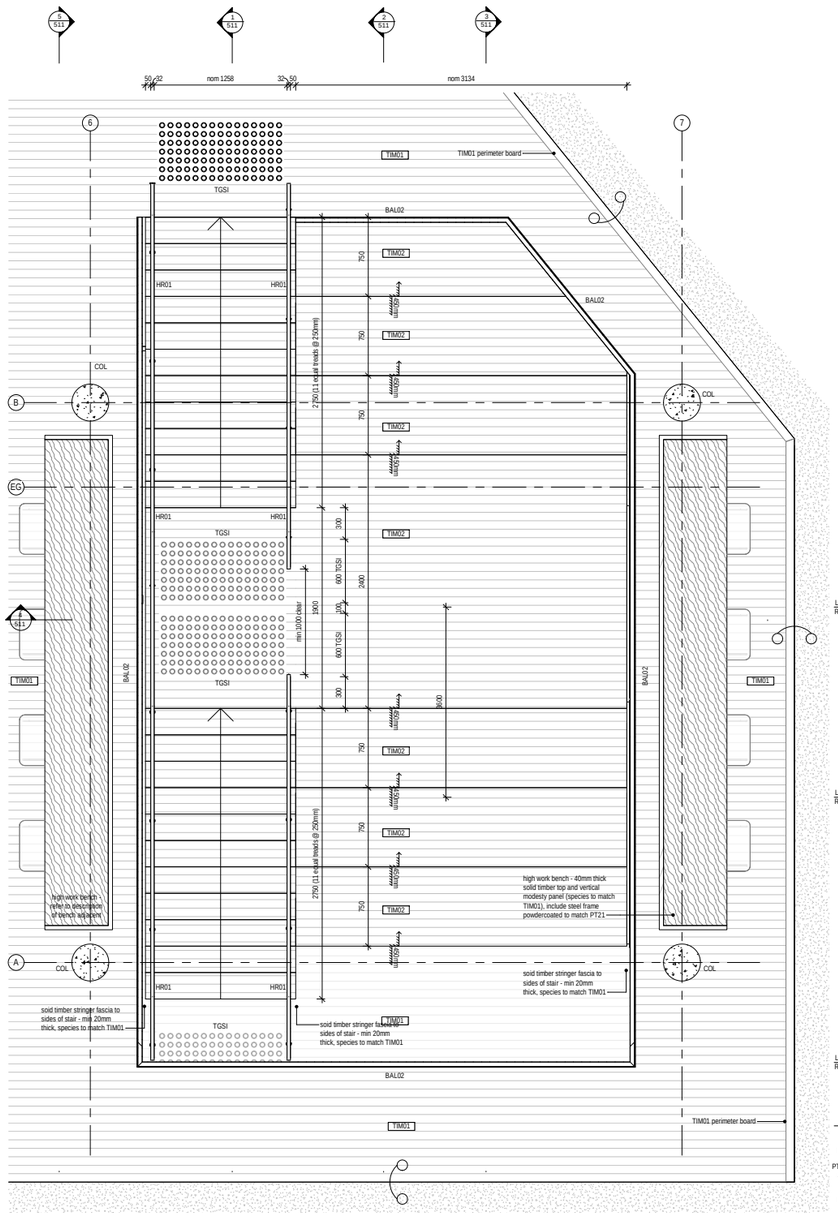
PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

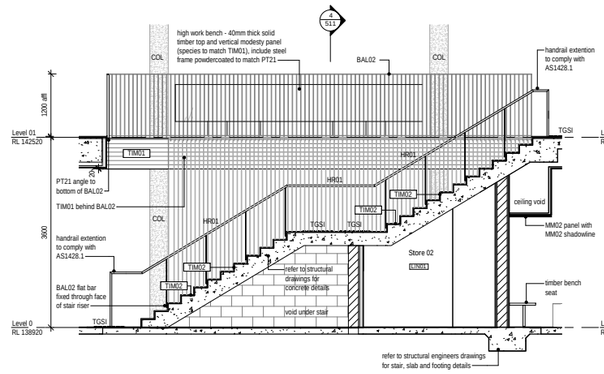
DRAWING NAME
STAIR DETAILS
SHEET 1

PROJECT NO: 2010 — A1

PHASE	DWG No.	REV.
DD	510	C



A Stair 2 - Floor Plan
SCALE @ A1 1 : 25



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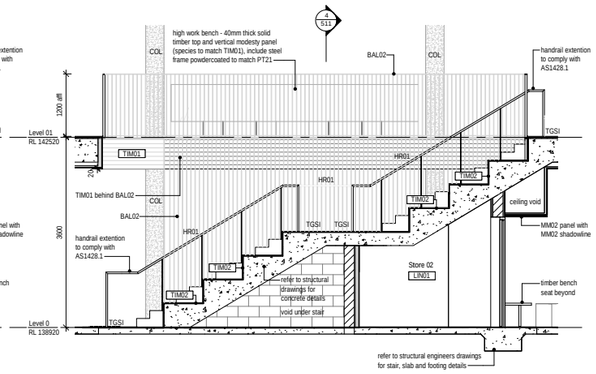

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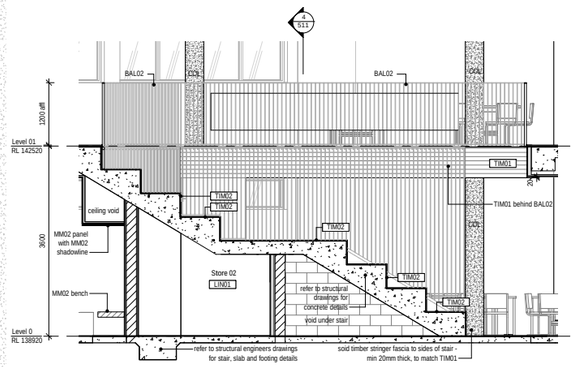

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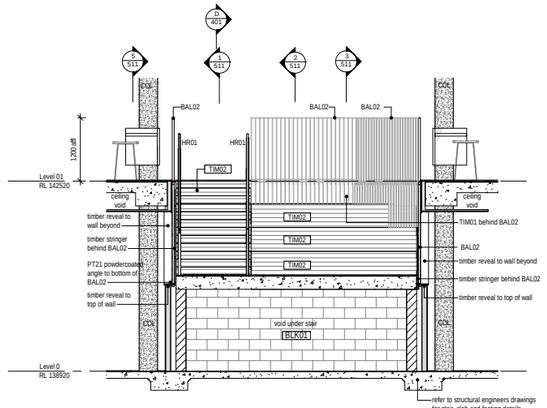

4 511 Stair 2 - Section 04
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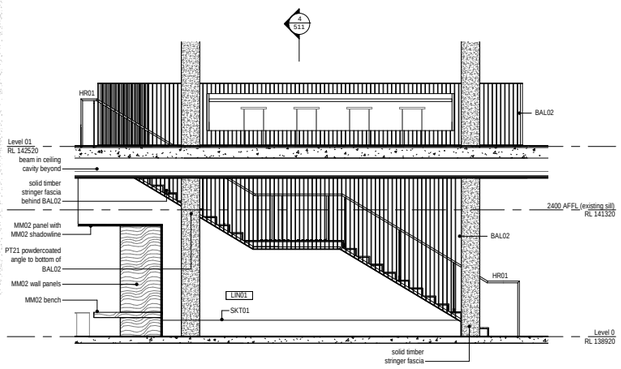

5 Stair 2 - Section 05
SCALE @ A1 1 : 50

DESIGN DEVELOPMENT

LEGEND
1. To be read in conjunction with SCH01 Materials Schedule.
2. To be read in conjunction with services consultant reports and drawings.
3. Refer structural engineering drawings for details and sizing of structural members.

FIXTURES AND FINISHES

BAL02	- Timber balustrade
BLK01	- Blockwork standard
COL	- Structural column
HR01	- Stair / ramp handrail
LIN01	- Wall linings (Gyprock Impact PB)
TGSI	- Tactile indicators
TIM01	- Timber floor
TIM02	- Timber stairs

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PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

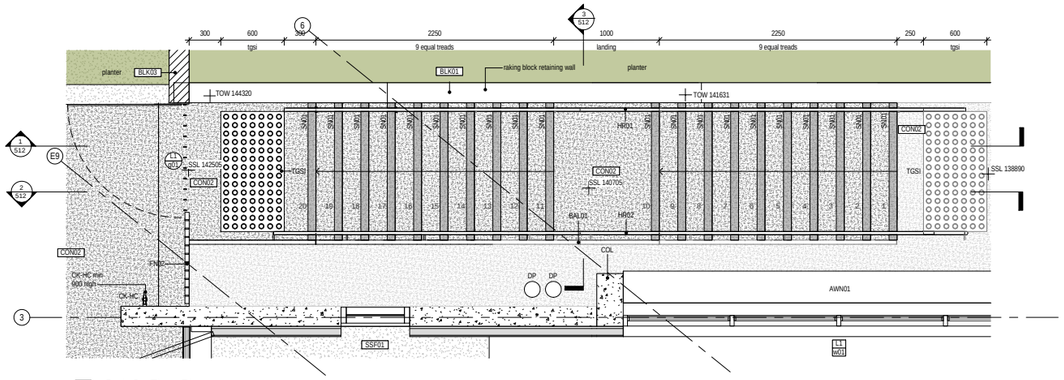
CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

DRAWING NAME
STAIR DETAILS
SHEET 2

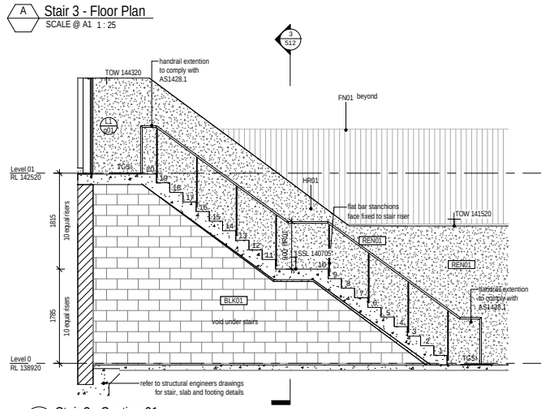
100mm LINE @ A1 — 10mm — scale: As indicated

PROJECT NO 2010 — A1

PHASE	DWG No.	REV.
DD	511	C



A Stair 3 - Floor Plan
SCALE @ A1 1 : 25



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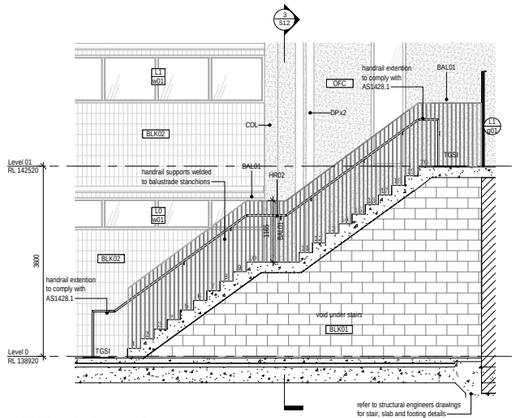

2 512 Stair 3 - Section 02
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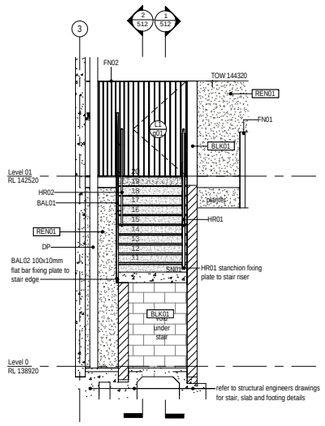

3 512 Stair 3 - Section 03
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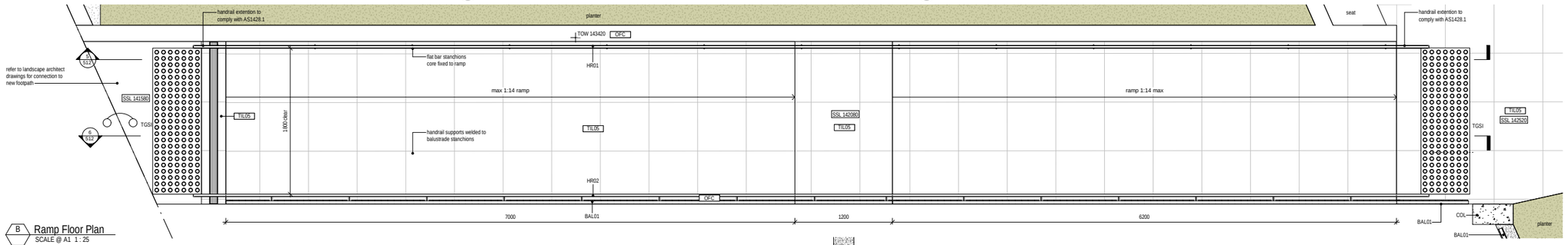
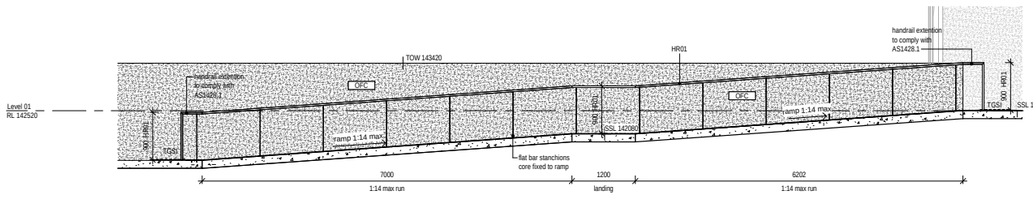
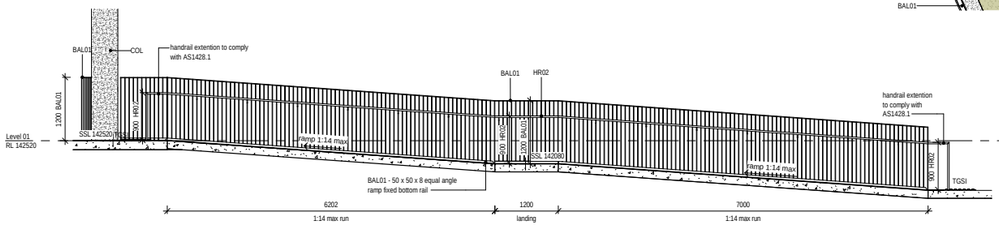


B Ramp Floor Plan
SCALE @ A1 1 : 25



5 512 Ramp - Section 05
SCALE @ A1 1 : 50



6 512 Ramp - Section 06
SCALE @ A1 1 : 50

DESIGN DEVELOPMENT

LEGEND
1. To be read in conjunction with SCH01 Materials Schedule.
2. To be read in conjunction with services consultant reports and drawings.
3. Refer structural engineering drawings for details and sizing of structural members.

FIXTURES AND FINISHES

AWN01	- Window awning
BAL01	- Steel flat bar balustrade
BLK01	- Blockwork standard
BLK02	- Blockwork feature (ribbed)
BLK03	- Blockwork feature (smooth)
CK-HC	- Hose cock
COL	- Structural column
CON02	- Broom finish concrete
DP	- Downpipe
FN01	- Timber fence
FN02	- Batten fence
HR01	- Stair / ramp handrail
HR02	- Stair handrail
OFC	- Off-form concrete - min. class 2 finish
REN01	- Textured paint finish
SN01	- Stair nosing
SSF01	- Marmoleum
TGSI	- Tactile indicators
TIL05	- Floor tile (external)

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REV	DATE	ISSUE	DRAWN	CHECK
A	31.01.2022	Issue for cost estimate	SR	CW
B	04.02.2022	Issue for client review	SR	CW
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PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

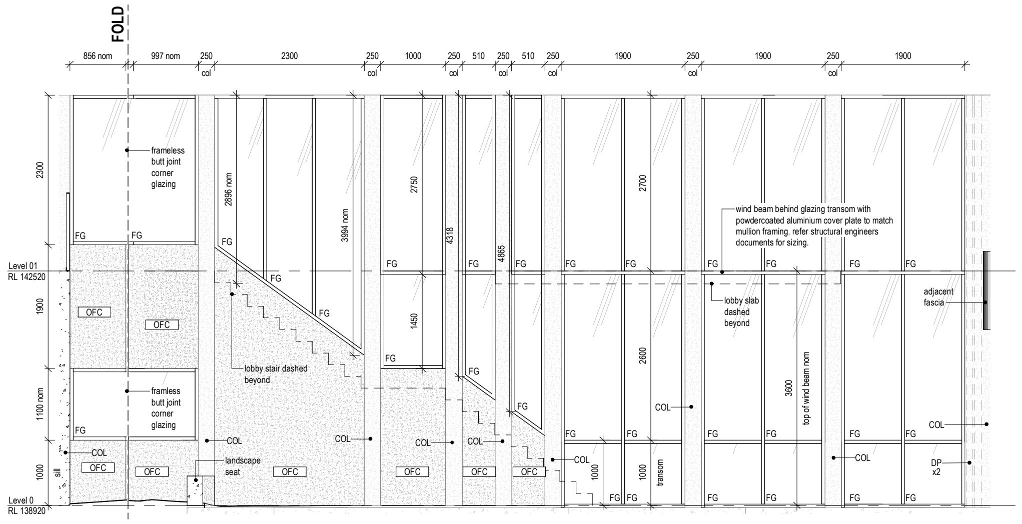
CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

DRAWING NAME
STAIR & RAMP DETAILS

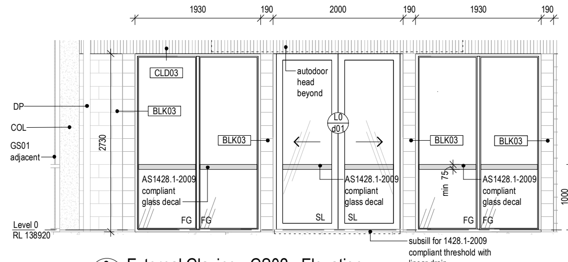
100mm LINE @ A1 — 10mm — scale: As indicated

PROJECT NO 2010 — A1

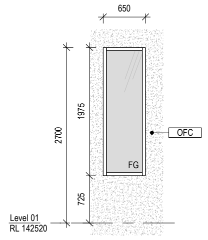
PHASE	DWG No.	REV.
DD	512	C



1 External Glazing - GS01 - Elevation
SCALE @ A1 1 : 50



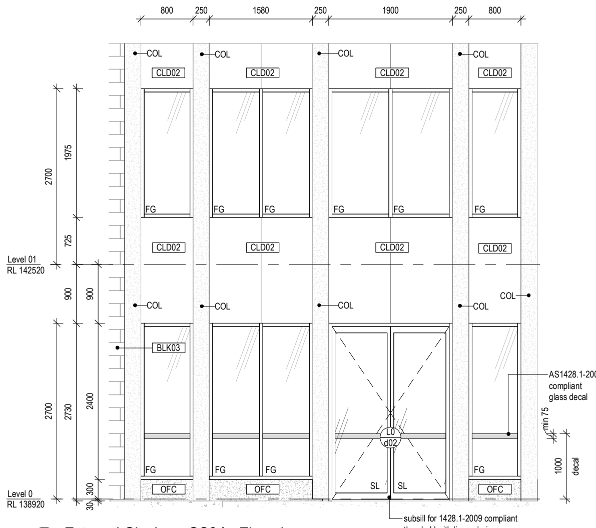
2 External Glazing - GS02 - Elevation
SCALE @ A1 1 : 50



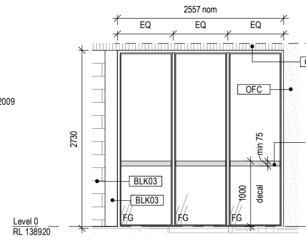
3 External Glazing - GS03 - Elevation
SCALE @ A1 1 : 50

Location	South western external glazing to staff work room & lobby	North eastern external glazing to foyer	North external glazing at external services stair
Proprietary System	ALSPEC McArthur EVO 150mm centre pocket frame	ALSPEC McArthur EVO 150mm centre pocket frame with double sliding door	ALSPEC McArthur EVO 101.6mm centre pocket frame
Frame	Powder coated aluminium	Powder coated aluminium	Powder coated aluminium
Glass	6.38mm comfort plus grey glass	6.38mm comfort plus grey glass	6.38mm comfort plus grey glass - frosted
Reveals	tbc	tbc	tbc
Blinds	Locations **tbc**	Locations **tbc**	Locations **tbc**
Screen	n/a	n/a	n/a
Hardware	n/a	Automatic door head to sliding door with locking mechanism and emergency exit function	n/a
Acoustic rating	n/a	n/a	minimum RW32
Subhead and subsills	commercial subhead and subsill required	commercial subhead and subsill required - flush threshold with linear drain required at sliding door to comply with AS1428.1 - 2009	commercial subhead and subsill required
U-Value	≤ 5.9	≤ 5.9	≤ 5.9
SHGC Value	≤ 0.8	≤ 0.8	≤ 0.8
Notes			

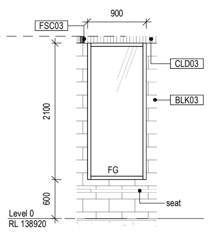
All ground level external glazing setdown 30mm from internal SSL to assist with waterproofing.



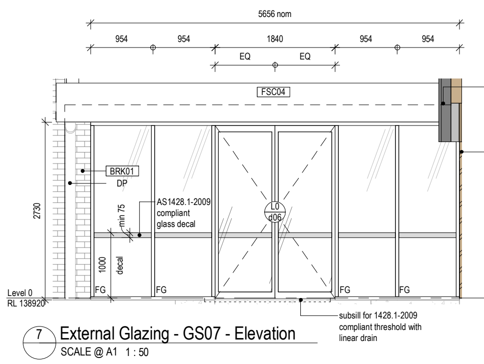
4 External Glazing - GS04 - Elevation
SCALE @ A1 1 : 50



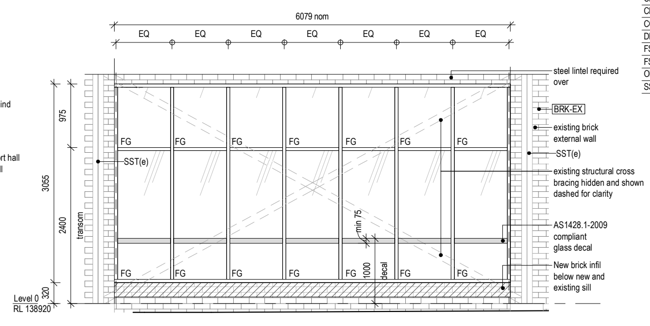
5 External Glazing - GS05 - Elevation
SCALE @ A1 1 : 50



6 External Glazing - GS06 - Elevation
SCALE @ A1 1 : 50



7 External Glazing - GS07 - Elevation
SCALE @ A1 1 : 50



8 External Glazing - GS08 - Elevation
SCALE @ A1 1 : 50

Location	North east external glazing at ground level rear courtyard	North external glazing at amentities corridor	North eastern external glazing at amentities corridor	South eastern external glazing to rear foyer entrance	South eastern glazing to theatre
System	ALSPEC McArthur EVO 101.6mm centre pocket frame with swan evo swing doors	ALSPEC McArthur EVO 101.6mm centre pocket frame	ALSPEC McArthur EVO 101.6mm centre pocket frame	ALSPEC McArthur EVO 101.6mm centre pocket frame with swan evo swing doors	ALSPEC McArthur EVO 101.6mm centre pocket frame
Frame	Powder coated aluminium	Powder coated aluminium	Powder coated aluminium	Powder coated aluminium	Powder coated aluminium
Glass	6.38mm comfort plus grey glass	6.38mm comfort plus grey glass	6.38mm comfort plus grey glass	6.38mm comfort plus grey glass	6.38mm comfort plus grey glass
Reveals	tbc	tbc	tbc	tbc	tbc
Blinds	Locations **tbc**	Locations **tbc**	Locations **tbc**	Locations **tbc**	Locations **tbc**
Screen	n/a	n/a	n/a	n/a	n/a
Hardware	n/a	n/a	n/a	n/a	n/a
Minimum acoustic requirements	minimum RW32	n/a	n/a	n/a	minimum RW30
Subhead and subsills	commercial subhead and subsill required - flush threshold with linear drain required at swing door to comply with AS1428.1 - 2009	commercial subhead and subsill required	commercial subhead and subsill required	commercial subhead and subsill required - flush threshold with linear drain required at swing door to comply with AS1428.1 - 2009	commercial subhead and subsill required
U-Value	≤ 5.9	≤ 5.9	≤ 5.9	≤ 5.9	≤ 5.9
SHGC Value	≤ 0.8	≤ 0.8	≤ 0.8	≤ 0.8	≤ 0.8
Notes					

DESIGN DEVELOPMENT

NOTES
- All windows elevated from outside
- All dimensions should be confirmed on site following completion of structure
- Nominated glass thickness and type is required to meet AS3959-2009
- Direction of all sliding doors and windows to be confirmed on elevations
- FG denotes fixed glass
- All frosted glass to be acid etched, Matelux or white translucent
- Install window flashing to all windows
- Any discrepancies should be brought to the attention of the architect
- The window system shall be manufactured to comply with the requirements of AS2047 and AS1288 in particular the Wind performance, Water penetration and Air Infiltration performance requirement of AS2047
- Glazing system to comply with energy efficiciency requirements in section J report prepared by Built Environment Collective.
- All glazed hinged doors to comply with AS1428.1-2021 requirements including sill/thresholds, size, clearance, weight etc.
- All dimensions of glazing in existing walls are nominal and subject to confirmation of existing structural and walls on site

WINDOW LEGEND
Refer to ***Fixtures and Fittings Schedule*** for details on window hardware
FG Fixed glass
SL Sliding window/door

FINISHES
Refer to ***Materials and Finishes Schedule*** for paint colour
- Aluminium frames: Powdercoat
Colour: **tbc**

HARDWARE
- Windows to be fitted with key locks where noted

DRAWING TO BE READ IN CONJUNCTION WITH
- 200 series drawings for general arrangement plans
- 220 series drawings for structural setout
- 230 series drawings for blockwork setout plans
- 300 series drawings for elevations
- 400 series drawings for building sections
- 610 series drawings for wall types and sections
- 620 for ceiling types
- 710 for glazing elevations
- 720 for window schedule
- 730 for door schedule
- 800 series drawings for internal elevations

REQUIRED EXTERNAL GLAZING PERFORMANCE

All new external glazing that form the thermal envelope:
U-Value: **5.9 or less**
SHGC: **0.8**
All new internal glazing that form the thermal envelope:
U-Value: **7.0 or less**
SHGC: **0.99**

MATERIALS LEGEND
To be read in conjunction with *SCH01-Materials schedule*

BLK03	- Blockwork feature (smooth)
BRK01	- Brick type 01
BRK-EX	- Existing brick
CLD02	- Prefinished CFC cladding (dark)
CLD03	- Prefinished CFC cladding (white)
COL	- Structural column
DP	- Downpipe
FSC03	- Parapet fascia (lower foyer)
FSC04	- Custom folded metal fascia (theatre / sports hall)
OFC	- Off-form concrete - min. class 2 finish
SST(e)	- Existing Structural steel

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Do not scale from drawings. Dimensions are to be checked on site prior to commencement of work. Discrepancies to be brought to the attention of the author.

REV	DATE	ISSUE	DRAWN	CHECK
A	12.11.2021	Prelim for energy efficiency	SR	CM
B	03.12.2021	Issued for client review	SR	CM
C	21.01.2022	Issue for cost estimate	SR	CM
D	04.02.2022	Issue for client review	SR	CM
E	08.04.2022	Development Application	SR	CM
F	17.03.2023	drawings for DA RFI response	CM	KO

100mm LINE @ A1 10mm scale : As indicated

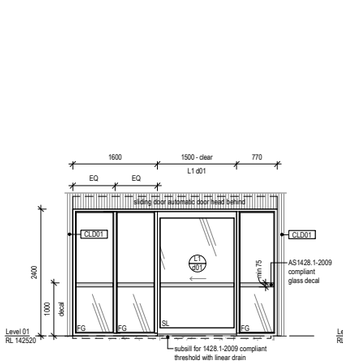
PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

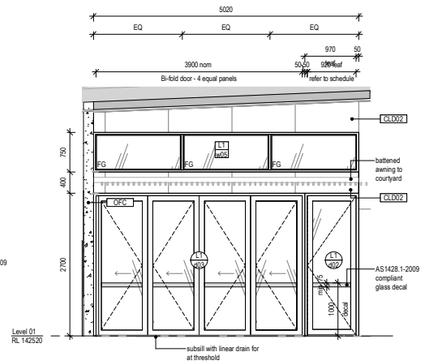
DRAWING NAME
GLAZING ELEVATIONS
SHEET 1

PROJECT NO: 2010 at plot 1:1 A1

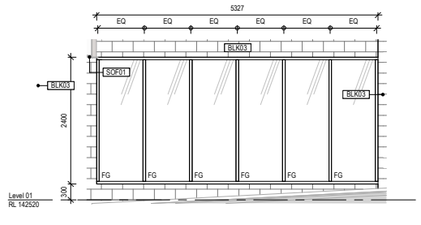
PHASE	DWG No.	REV.
DD	710	F



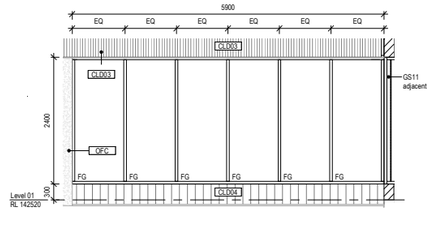
1 External Glazing - GS09 - Elevation
SCALE @ A1 1 : 50



2 External Glazing - GS10 - Elevation
SCALE @ A1 1 : 50

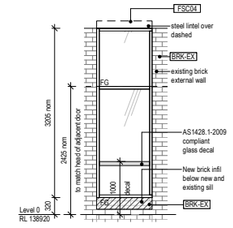


3 External Glazing - GS11 - Elevation
SCALE @ A1 1 : 50

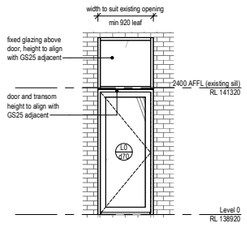


4 External Glazing - GS12 - Elevation
SCALE @ A1 1 : 50

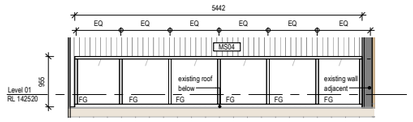
Location	North western external glazing to library entry	North western external glazing to childrens area	North eastern external glazing to foyer	North external glazing at external services stair
Proprietary system	ALSPEC McArthur EVO 150mm centre pocket frame with sliding auto door	ALSPEC Hawkesbury multi fold door coupled to swan evo swing door	McArthur EVO 101.6mm centre pocket frame	McArthur EVO 101.6mm centre pocket frame
Frame	Powder coated aluminium	Powder coated aluminium	Powder coated aluminium	Powder coated aluminium
Glass	6.38mm comfort plus grey glass	6.38mm comfort plus grey glass	6.38mm comfort plus translucent (frosted) glass	6.38mm comfort plus translucent (frosted) glass
Reveals	tbc	tbc	tbc	tbc
Blinds	Locations **tbc**	Locations **tbc**	Locations **tbc**	Locations **tbc**
Hardware	Automatic door head to sliding door with locking mechanism and emergency exit function	n/a	n/a	n/a
Minimum acoustic requirements	minimum RW32	minimum RW32	RW32 targeted	n/a
Subhead and subsills	commercial subhead and subsill required - flush threshold with linear drain required at sliding door to comply with AS1428.1 - 2009	commercial subhead and subsill required - flush threshold with linear drain required to comply with AS1428.1 - 2009	commercial subhead and subsill required - flush threshold with linear drain required at sliding door to comply with AS1428.1 - 2009	commercial subhead and subsill required
U-Value	≤ 5.9	≤ 5.9	≤ 5.9	≤ 5.9
SHGC Value	≤ 0.8	≤ 0.8	≤ 0.8	≤ 0.8
Notes				



5 External Glazing - GS23 - Elevation
SCALE @ A1 1 : 50 GS24, GS25 similar



7 External Glazing - GS26 - Elevation
SCALE @ A1 1 : 50



6 External Glazing - GS27 - Elevation
SCALE @ A1 1 : 50

Location	Full height glazing to dressing rooms & stage stairs adjacent	Western dressing room	North eastern high level glazing to replacement existing in existing foyer
System	McArthur EVO 101.6mm centre pocket frame	ALSPEC McArthur EVO 101.6mm centre pocket frame with swan evo swing door	McArthur EVO 101.6mm centre pocket frame
Frame	Powder coated aluminium	Powder coated aluminium	Powder coated aluminium
Glass	6.38mm comfort plus grey glass	6.38mm comfort plus grey **opaque** glass	6.38mm comfort plus grey glass
Reveals	tbc	tbc	tbc
Blinds	Locations **tbc**	Locations **tbc**	Locations **tbc**
Screen	n/a	n/a	n/a
Hardware	n/a	n/a	n/a
Minimum acoustic requirements	minimum RW30	minimum RW30	n/a
Subhead and subsills	commercial subhead and subsill required	commercial subhead and subsill required - flush threshold to comply with AS1428.1 - 2009	commercial subhead and subsill required
U-Value	≤ 5.9	≤ 5.9	≤ 5.9
SHGC Value	≤ 0.8	≤ 0.8	≤ 0.8
Notes			

DESIGN DEVELOPMENT

NOTES
- All windows elevated from outside
- All dimensions should be confirmed on site following completion of structure
- Nominated glass thickness and type is required to meet AS3959-2009
- Direction of all sliding doors and windows to be confirmed on elevations
- FG denotes fixed glass
- All frosted glass to be acid etched, Matelux or white translucent
- Install window flashing to all windows
- Any discrepancies should be brought to the attention of the architect
- The window system shall be manufactured to comply with the requirements of AS2047 and AS1288 in particular the Wind performance, Water penetration and Air Infiltration performance requirement of AS2047
- Glazing system to comply with energy efficiciency requirements in section J report prepared by Built Environment Collective.
- All glazed hinged doors to comply with AS1428.1-2021 requirements including sill/thresholds, size, clearance, weight etc.
- All dimensions of glazing in existing walls are nominal and subject to confirmation of existing structural and walls on site

WINDOW LEGEND
Refer to ***Fixtures and Fittings Schedule*** for details on window hardware
FG Fixed glass
SL Sliding window/door

FINISHES
Refer to ***Materials and Finishes Schedule*** for paint colour
- Aluminium frames: Powdercoat
  Colour: **tbc**

HARDWARE
- Windows to be fitted with key locks where noted

DRAWING TO BE READ IN CONJUNCTION WITH
- 200 series drawings for general arrangement plans
- 220 series drawings for structural setout
- 230 series drawings for blockwork setout plans
- 300 series drawings for elevations
- 400 series drawings for building sections
- 610 series drawings for wall types and sections
- 620 for ceiling types
- 710 for glazing elevations
- 720 for window schedule
- 730 for door schedule
- 800 series drawings for internal elevations

REQUIRED EXTERNAL GLAZING PERFORMANCE

All new external glazing that form the thermal envelope:
U-Value: **5.9 or less**
SHGC: **0.8**
All new internal glazing that form the thermal envelope:
U-Value: **7.0 or less**
SHGC: **0.99**

MATERIALS LEGEND
To be read in conjunction with *SCH01-Materials schedule*

BLK03	- Blockwork feature (smooth)
BRK-EX	- Existing brick
CLD01	- Prefinished CFC cladding (green)
CLD02	- Prefinished CFC cladding (dark)
CLD03	- Prefinished CFC cladding (white)
CLD04	- Metal Sheet (type 01)
FSC04	- Custom folded metal fascia (theatre / sports hall)
MS04	- Insulated wall sheeting
OFC	- Off-form concrete - min. class 2 finish
SOF01	- Soffit lining

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F	17.02.2023	drawings for DA RFI response	CM	KO

PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

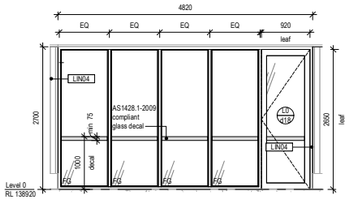
CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

DRAWING NAME
GLAZING ELEVATIONS
SHEET 2

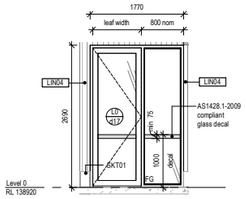
100mm LINE @ A1 — 10mm — scale: As indicated

PROJECT NO 2010 — A1

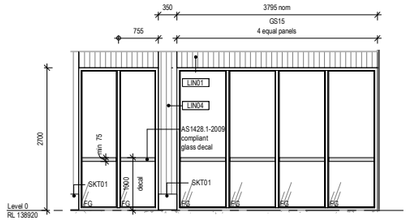
PHASE	DWG No.	REV.
DD	711	F



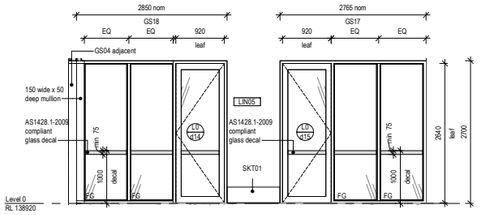
1 Internal Glazing - GS13 - Elevation
SCALE @ A1 1 : 50



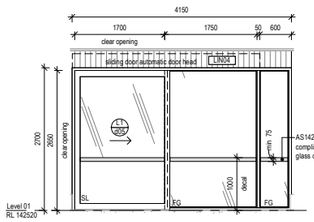
2 Internal Glazing - GS14 - Elevation
SCALE @ A1 1 : 50



3 Internal Glazing - GS15 & 16 - Elevation
SCALE @ A1 1 : 50

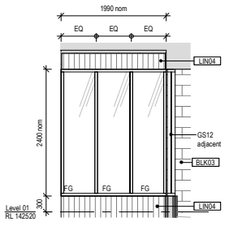


4 Internal Glazing - GS17 & 18 - Elevation
SCALE @ A1 1 : 50

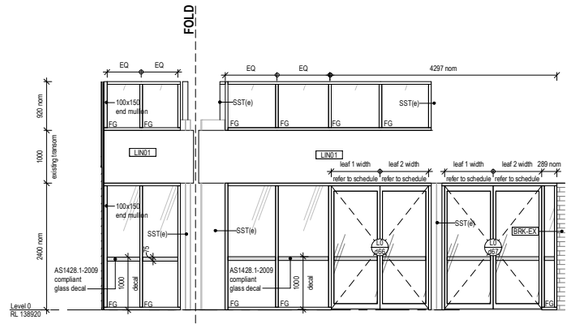


5 811 Internal Glazing - GS19 - Elevation
SCALE @ A1 1 : 50

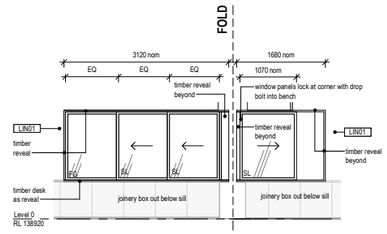
Location	Glazing to Meeting room / Atrium	Glazing to Library / Atrium	Glazing to Library / meeting room	Glazing to Library / meeting room	Level 01 library entry from foyer
Proprietary system	ALSPEC McArthur EVO 101.6mm centre pocket frame with swan evo swing door	ALSPEC McArthur EVO 101.6mm centre pocket frame with swan evo swing door	ALSPEC McArthur EVO 101.6mm centre pocket frame	ALSPEC McArthur EVO 101.6mm centre pocket frame with swan evo swing door	ALSPEC McArthur EVO 101.6mm centre pocket frame with sliding auto door
Frame	Powder coated aluminium	Powder coated aluminium	Powder coated aluminium	Powder coated aluminium	Powder coated aluminium
Glass	Clear 12.5mm VLAM hush glass	Clear 12.5mm VLAM hush glass	Clear 12.5mm VLAM hush glass	Clear 12.5mm VLAM hush glass	Clear 12.5mm VLAM hush glass
Reveals	tbc	tbc	tbc	tbc	tbc
Blinds	Locations **tbc**	Locations **tbc**	Locations **tbc**	Locations **tbc**	Locations **tbc**
Hardware	n/a	n/a	n/a	n/a	Automatic door head to sliding door with locking mechanism and emergency exit function
Minimum acoustic requirements	RW35 targeted	RW35 targeted	RW35 targeted	RW35 targeted	RW35 targeted
Subhead and subsills	commercial subhead required	commercial subhead required	commercial subhead required	commercial subhead required	commercial subhead required
U-Value	≤ 7.0	≤ 7.0	≤ 7.0	≤ 7.0	≤ 7.0
SHGC Value	≤ 0.99	≤ 0.99	≤ 0.99	≤ 0.99	≤ 0.99
Notes					



6 811 Internal Glazing - GS20 - Elevation
SCALE @ A1 1 : 50



7 Internal Glazing - GS21 - Elevation
SCALE @ A1 1 : 50



8 Internal Glazing - GS22 - Elevation
SCALE @ A1 1 : 50

Location	Level 01 glazing between library & foyer void	Level 01 glazing between existing foyer and sports hall	Level 0 reception corner window
System	ALSPEC McArthur EVO 101.6mm centre pocket frame	ALSPEC McArthur EVO 101.6mm centre pocket frame	Custom timber framed window
Frame	Powder coated aluminium	Powder coated aluminium	Hardwood timber - tbc
Glass	Clear 12.5mm VLAM hush glass	Clear glass	Clear glass
Reveals	tbc	tbc	Hardwood timber to match frame
Blinds	Locations **tbc**	Locations **tbc**	n/a
Screen	n/a	n/a	n/a
Hardware	n/a	n/a	tbc
Minimum acoustic requirements	RW35 targeted	n/a	RW35 targeted
Subhead and subsills	commercial subhead required	commercial subhead required	n/a
U-Value	≤ 7.0	≤ 7.0	≤ 7.0
SHGC Value	≤ 0.99	≤ 0.99	≤ 0.99
Notes			

DESIGN DEVELOPMENT

NOTES
- All windows elevated from outside
- All dimensions should be confirmed on site following completion of structure
- Nominated glass thickness and type is required to meet AS3959-2009
- Direction of all sliding doors and windows to be confirmed on elevations
- FG denotes fixed glass
- All frosted glass to be acid etched, Matelux or white translucent
- Install window flashing to all windows
- Any discrepancies should be brought to the attention of the architect
- The window system shall be manufactured to comply with the requirements of AS2047 and AS1288 in particular the Wind performance, Water penetration and Air Infiltration performance requirement of AS2047
- Glazing system to comply with energy efficiency requirements in section J report prepared by Built Environment Collective.
- All glazed hinged doors to comply with AS1428.1-2021 requirements including sill/thresholds, size, clearance, weight etc.
- All dimensions of glazing in existing walls are nominal and subject to confirmation of existing structural and walls on site

WINDOW LEGEND
Refer to ***Fixtures and Fittings Schedule*** for details on window hardware
FG Fixed glass
SL Sliding window/door

FINISHES
Refer to ***Materials and Finishes Schedule*** for paint colour
- Aluminium frames: Powdercoat
  Colour: **tbc**

HARDWARE
- Windows to be fitted with key locks where noted

DRAWING TO BE READ IN CONJUNCTION WITH
- 200 series drawings for general arrangement plans
- 220 series drawings for structural setout
- 230 series drawings for blockwork setout plans
- 300 series drawings for elevations
- 400 series drawings for building sections
- 610 series drawings for wall types and sections
- 620 for ceiling types
- 710 for glazing elevations
- 720 for window schedule
- 730 for door schedule
- 800 series drawings for internal elevations

REQUIRED EXTERNAL GLAZING PERFORMANCE

All new external glazing that form the thermal envelope:
U-Value: **5.9 or less**
SHGC: **0.8**
All new internal glazing that form the thermal envelope:
U-Value: **7.0 or less**
SHGC: **0.99**

MATERIALS LEGEND
To be read in conjunction with *SCH01-Materials schedule*

BLK03	- Blockwork feature (smooth)
BRK-EX	- Existing brick
LIN01	- Wall linings (Gyprock Impact PB)
LIN04	- Wall linings (Supawood Veneer)
LIN05	- Wall linings (Gyprock Impact MR PB)
SKT01	- Skirting
SST(e)	- Existing Structural steel

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REV	DATE	ISSUE
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DRAWN	CHECK
DR	CM
DR	CM
DR	CM
DR	CM
CM	KO

PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

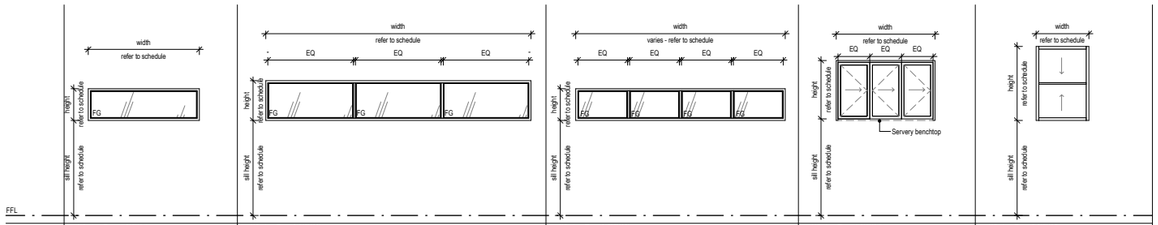
CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

DRAWING NAME
GLAZING ELEVATIONS
SHEET 3

100mm LINE @ A1 — 10mm — scale: As indicated

PROJECT NO 2010 — A1

PHASE	DWG No.	REV.
DD	712	E



Type	**Window Type 1 (WIN01)** Aluminium framed single bay fixed window	**Window Type 2 (WIN02)** Aluminium framed 3 bay fixed window	**Window Type 3 (WIN03)** Aluminium framed 4 bay fixed window	**Window Type 4 (WIN04)** Aluminium framed 2 panel bifold window	**Window Type 5 (WIN05)** Aluminium framed double hung window
Proprietary system	ALSPEC McArthur EVO 101.6mm centre pocket frame	ALSPEC McArthur EVO 101.6mm centre pocket frame	ALSPEC McArthur EVO 101.6mm centre pocket frame	ALSPEC Hawkesbury multi fold door	ALSPEC Evo plus double hung
Frame	Powder coated aluminium	Powder coated aluminium	Powder coated aluminium	Powder coated aluminium	Powder coated aluminium
Glass	Clear 12.5mm VLAM hush glass	Clear 12.5mm VLAM hush glass	Clear 12.5mm VLAM hush glass	Clear glass	Clear glass
Reveals	**tbc**	**tbc**	**tbc**	**tbc**	**tbc**
Blinds	Refer to SCH02 for blind type, locations **tbc**	Refer to SCH02 for blind type, locations **tbc**	Refer to SCH02 for blind type, locations **tbc**	Refer to SCH02 for blind type, locations **tbc**	Refer to SCH02 for blind type, locations **tbc**
Hardware	n/a	n/a	n/a	n/a	n/a
Subhead and subsills	subhead and subsill required where located externally	subhead and subsill required	subhead and subsill required	subhead required	subhead required
U-Value	**n/a**	≤ 5.9	≤ 5.9	**n/a**	**n/a**
SHGC Value	**n/a**	≤ 0.8	≤ 0.8	**n/a**	**n/a**
Notes					

Window Schedule

Window Number	Room	Type Mark	Sill Height	Width	Height	Head Height	Min Acoustic requirements	Notes
Level 0								
L0 w01	Study/Reading	WIN03	2100	4080	600	2700	minimum RW32	
L0 w02	Study/Reading	WIN03	2100	4080	600	2700	minimum RW32	
L0 w03	Study/Reading	WIN03	2100	4080	600	2700	minimum RW32	
L0 w04	Study/Reading	WIN03	2100	4080	600	2700	minimum RW32	
L0 w05	Servery	WIN04	900	1800	1100	2000	n/a	
L0 w06	Reception / Office	WIN01	1460	1300	600	2060	RW35 targeted	
L0 w07	Reception / Office	WIN05	1000	1000	1400	2400	RW35 targeted	
Level 01								
L1 w01	Children's Area	WIN03	1800	4080	900	2700	minimum RW32	
L1 w02	Study/Reading	WIN03	1800	4080	900	2700	minimum RW32	
L1 w03	Study/Reading	WIN03	1800	4080	900	2700	minimum RW32	
L1 w04	Study/Reading	WIN03	1800	4080	900	2700	minimum RW32	
L1 w05	Children's Area	WIN02	3100	5020	750	3850	minimum RW32	

DESIGN DEVELOPMENT

NOTES
- All windows elevated from outside
- All dimensions should be confirmed on site following completion of structure
- Nominated glass thickness and type is required to meet AS3959-2009
- Direction of all sliding doors and windows to be confirmed on elevations
- FG denotes fixed glass
- All frosted glass to be acid etched, Matelux or white translucent
- Install window flashing to all windows
- Any discrepancies should be brought to the attention of the architect
- The window system shall be manufactured to comply with the requirements of AS2047 and AS1288 in particular the Wind performance, Water penetration and Air Infiltration performance requirement of AS2047
- Glazing system to comply with energy efficiency requirements in section J report prepared by Built Environment Collective.
- All glazed hinged doors to comply with AS1428.1-2021 requirements including sill/thresholds, size, clearance, weight etc.
- All dimensions of glazing in existing walls are nominal and subject to confirmation of existing structural and walls on site

WINDOW LEGEND
Refer to ***Fixtures and Fittings Schedule*** for details on window hardware
FG Fixed glass
SL Sliding window/door

FINISHES
Refer to ***Materials and Finishes Schedule*** for paint colour
- Aluminium frames: Powdercoat
  Colour: **tbc**

HARDWARE
- Windows to be fitted with key locks where noted

DRAWING TO BE READ IN CONJUNCTION WITH
- 200 series drawings for general arrangement plans
- 220 series drawings for structural setout
- 230 series drawings for blockwork setout plans
- 300 series drawings for elevations
- 400 series drawings for building sections
- 610 series drawings for wall types and sections
- 620 for ceiling types
- 710 for glazing elevations
- 720 for window schedule
- 730 for door schedule
- 800 series drawings for internal elevations

REQUIRED EXTERNAL GLAZING PERFORMANCE

All new external glazing that form the thermal envelope:
U-Value: **5.9 or less**
SHGC: **0.8**
All new internal glazing that form the thermal envelope:
U-Value: **7.0 or less**
SHGC: **0.99**

MATERIALS LEGEND
To be read in conjunction with *SCH01-Materials schedule*

KO AND CO ARCHITECTURE
KO&CoArchitecture Pty Ltd | PO Box 490 Red Hill Q 4059 | P: 07 3367 1878
E: mail@koandcompany.com.au | W: koandcompany.com.au

REV	DATE	ISSUE	DRAWN	CHECK
A	12.11.2021	Prelim for energy efficiency	SR	CM
B	03.12.2021	Issued for client review	SR	CM
C	21.01.2022	Issue for cost estimate	SR	CM
D	04.02.2022	Issue for client review	SR	CM
E	09.04.2022	Development Application	SR	CM
F	11.05.2022	drawings for DA RFI response	CM	RC

PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

DRAWING NAME
WINDOW SCHEDULE
SHEET 1

100mm LINE @ A1 — 10mm — scale: As indicated

PROJECT NO 2010 — at print 11 — **A1**

PHASE	DWG No.	REV.
DD	720	F

Door Schedule

Door number	Room	Door type	Leaf Dimensions Height	Leaf 1 Width	Leaf 2 Width	Clear opening width	Clear opening height	Fire Rating	Acoustic Rating	Hardware	Door Comments
Level 0											
L0 d01	Foyer	GD				1900	2700	n/a	n/a	CR	Exit door, Emergency exit function, Forms part of GS02 Refer to 710 series glazing elevations for details
L0 d02	Study/Reading	GD	2660	900	900			n/a	min Rw 32 targeted	CR	Exit door, Emergency exit function, Forms part of GS04 Refer to 710 series glazing elevations for details. FOB access after hours externally only
L0 d03	Sports Hall	DT03	2040	970				n/a	n/a	CR	Exit door
L0 d04	Sports Hall	DT06	2340	1020	1020			n/a	n/a	CR, HO	Exit door
L0 d05	Sports Hall	DT06	2340	1020	1020			n/a	n/a	CR, HO	Exit door
L0 d06	Foyer	GD	2660	920	920			n/a	n/a	CR	Exit door, CR security for after hours, Forms part of GS07 Refer to 710 series glazing elevations for details
L0 d07	MSB cupboard	DT13				3700	2500	/120/30	n/a	CR	
L0 d09	Servery	DT03	2340	1020				n/a	n/a	CR, HO,	Exit door, CR access to outside only
L0 d10	Lift	DT15				1100	2100	n/a	n/a		Stainless Steel, by lift manufacturer
L0 d11	Lift	DT15				1100	2100	n/a	n/a		Stainless Steel, by lift manufacturer
L0 d12	Staff Work Rm	DT10	2340	1200				n/a	min Rw 35 targeted	CR	
L0 d13	Store 02	DT11	2040	920				/60/30	n/a	CR, HO	
L0 d14	Meeting Rm	GD	2640	920				n/a	min Rw 35 targeted	CR	Exit door, Forms part of GS18 Refer to 710 series glazing elevations for details
L0 d15	Meeting Rm	GD	2640	920				n/a	min Rw 35 targeted	CR	Exit door, Forms part of GS17 Refer to 710 series glazing elevations for details
L0 d16	unisex PWD 02	DT01	2040	970				n/a	Rw+Ctr 50 targeted	PS, PI	Door grille required, refer mechanical engineers drawings
L0 d17	Foyer	GD	2640	920				n/a	min Rw 35 targeted	CR	Exit door, Refer to 710 series glazing elevations for details
L0 d18	Foyer	GD	2650	920				n/a	min Rw 35 targeted	CR	Exit door, Forms part of GS13 Refer to 710 series glazing elevations for details
L0 d19	Comms	DT12	2040	920				n/a	min Rw 45 targeted	CR	
L0 d20	Meeting Rm	DT07	2340	920				n/a	min Rw 35 targeted	CR, DS	
L0 d21	Store 03	DT04	2040	720	720			n/a	min Rw 45 targeted	CR	
L0 d22	Cleaner	DT01	2040	920				n/a	min Rw 45 targeted	CR	
L0 d23	Unisex PWD 04	DT01	2040	970				n/a	min Rw 45 targeted	PS, PI	Door grille required, refer mechanical engineers drawings
L0 d24	Umpire	DT01	2040	920				n/a	min Rw 45 targeted	PS, PI	Door grille required, refer mechanical engineers drawings
L0 d25	Sports storage	DT05	2040	920	920			n/a	n/a	CR, DS	
L0 d26	Amenities Corridor	DT07	2040	920				n/a	n/a		
L0 d27	Male	DT01	2040	920				n/a	min Rw 45 targeted		Door grille required, refer mechanical engineers drawings
L0 d28	Female	DT01	2040	920				n/a	min Rw 45 targeted		Door grille required, refer mechanical engineers drawings
L0 d29	Foyer	DT07	2040	920				n/a	n/a		
L0 d30	Unisex PWD 03	DT01	2040	920				n/a	min Rw 45 targeted	PS, PI	Door grille required, refer mechanical engineers drawings
L0 d31	Unisex Dressing	DT17	2375	1200				n/a	n/a	CR	Exit door
L0 d32	PWD 06	DT01	2040	920				n/a	min Rw 45 targeted	PS, PI	
L0 d33	Unisex Dressing	DT17	2375	1200				n/a	n/a	CR	Exit door

Door Schedule

Door number	Room	Door type	Leaf Dimensions Height	Leaf 1 Width	Leaf 2 Width	Clear opening width	Clear opening height	Fire Rating	Acoustic Rating	Hardware	Door Comments
L0 d34	PWD 05	DT01	2040	920				n/a	min Rw 45 targeted	PS, PI	
L0 d35	Theatre	DT04	2040	720	720			n/a	n/a	KL, DS	
L0 d36	Theatre	DT04	2040	720	720			n/a	n/a	KL, DS	
L0 d37	Servery	DT01	2040	920				n/a	n/a	CR	Exit door
L0 d38	Servery	DT07	2040	920				n/a	n/a	CR	
L0 d39	Reception / Office	DT07	2040	920				n/a	min Rw 35 targeted	CR	
L0 d41	Meeting Rm	DT09				4800	2040	n/a	min Rw 45 targeted		
L0 d42	Meeting Rm	DT09				3212	2040	n/a	min Rw 45 targeted		
L0 d43	Female	DT14	2200	700				n/a	n/a	PS, PI	Refer to 800 series drawings, by toilet partition contractor
L0 d44	Female	DT14	2200	700				n/a	n/a	PS, PI	Refer to 800 series drawings, by toilet partition contractor
L0 d45	Female	DT14	2200	700				n/a	n/a	PS, PI	Refer to 800 series drawings, by toilet partition contractor
L0 d46	Female	DT14	2200	700				n/a	n/a	PS, PI	Refer to 800 series drawings, by toilet partition contractor
L0 d47	Female	DT14	2200	700				n/a	n/a	PS, PI	Refer to 800 series drawings, by toilet partition contractor
L0 d48	Female	DT14	2200	700				n/a	n/a	PS, PI	Refer to 800 series drawings, by toilet partition contractor
L0 d49	Female	DT14	2200	700				n/a	n/a	PS, PI	Refer to 800 series drawings, by toilet partition contractor
L0 d50	Female	DT14	2200	700				n/a	n/a	PS, PI	opens out, ambulant, Refer to 800 series drawings, by toilet partition contractor
L0 d51	Male	DT14	2200	700				n/a	n/a	PS, PI	opens out, ambulant, Refer to 800 series drawings, by toilet
L0 d52	Male	DT14	2200	700				n/a	n/a	PS, PI	Refer to 800 series drawings, by toilet partition contractor
L0 d53	Male SHR	DT01	2040	920				n/a	n/a		Door grille required, refer mechanical engineers drawings
L0 d54	Male SHR	DT14	2000	700				n/a	n/a	PS, PI	Refer to 800 series drawings, by toilet partition contractor
L0 d55	Male SHR	DT14	2000	700				n/a	n/a	PS, PI	Refer to 800 series drawings, by toilet partition contractor
L0 d56	Male SHR	DT14	2000	700				n/a	n/a	PS, PI	Refer to 800 series drawings, by toilet partition contractor
L0 d57	Male SHR	DT14	2000	700				n/a	n/a	PS, PI	Refer to 800 series drawings, by toilet partition contractor
L0 d58	Female SHR	DT14	2000	700				n/a	n/a	PS, PI	Refer to 800 series drawings, by toilet partition contractor
L0 d59	Female SHR	DT14	2000	700				n/a	n/a	PS, PI	Refer to 800 series drawings, by toilet partition contractor
L0 d60	Female SHR	DT14	2000	700				n/a	n/a	PS, PI	Refer to 800 series drawings, by toilet partition contractor
L0 d61	Female SHR	DT14	2000	700				n/a	n/a	PS, PI	Refer to 800 series drawings, by toilet partition contractor
L0 d62	Female SHR	DT01	2040	920				n/a	n/a		Door grille required, refer mechanical engineers drawings
L0 d63	RAL	DT01	2040	920				n/a	min Rw 45 targeted	CR	Door grille required, refer mechanical engineers drawings
L0 d64	Foyer	DT08	2040	1020	1020			n/a	n/a	CR, HO,	Exit door
L0 d65	Foyer	DT07	2040	920				n/a	n/a	CR, HO,	Exit door, Coupled to L0d65
L0 d66	Foyer	GD	2330	920	920			n/a	n/a	HO	Exit door, Forms part of GS21 Refer to 710 series glazing elevations for details
L0 d67	Foyer	GD	2330	920	920			n/a	n/a	HO	Exit door, Forms part of GS21 Refer to 710 series glazing elevations for details
L0 d68	Umpire	DT14	2200	700				n/a	n/a	PS, PI	Refer to 800 series drawings, by toilet partition contractor
L0 d69	Umpire	DT14	2200	700				n/a	n/a	PS, PI	Refer to 800 series drawings, by toilet partition contractor
L0 d70	Unisex Dressing	GD	2300	950				n/a	n/a	CR	Exit door, dimensions nominal, refer to 711 glazing elevations
L0 d72	Foyer	DT02	2040	670				n/a	n/a	KL	Invisible EZ concept invisible/flush access door with LIN04

Door Schedule

Door number	Room	Door type	Leaf Dimensions Height	Leaf 1 Width	Leaf 2 Width	Clear opening width	Clear opening height	Fire Rating	Acoustic Rating	Hardware	Door Comments
L0 d73	Theatre	DT28									
L0 d75	Theatre	DT28									
Level 01											
L1 d01	Upper Foyer	GD				1500	2320	n/a	n/a	CR	Exit door, Automated with fob security for after hours, Forms part of GS09 Refer to 710 series glazing elevations for details
L1 d02	Children's Area	GD	2640	920				n/a	min Rw 32 targeted	KL	Forms part of GS10 Refer to 710 series glazing elevations for details
L1 d03	Children's Area	GD				3900	2700	n/a	min Rw 32 targeted	KL	Forms part of GS10 Refer to 710 series glazing elevations for details
L1 d04	Upper Foyer	DT02	2640	620				n/a	min Rw 50 targeted	KL	invisible EZ concept invisible/flush access door with LIN04
L1 d05	Library Entry	GD				1700	2640	n/a	min Rw 35 targeted	CR	Exit door, Forms part of GS19 Refer to 710 series glazing elevations for details
L1 d06	Lift	DT15				1100	2100	n/a	n/a		Stainless Steel, by lift manufacturer
L1 d07	Lift	DT15				1100	2100	n/a	n/a		Stainless Steel, by lift manufacturer
L1 d09	Comms	DT02	2040	920				n/a	min Rw 50 targeted	KL	invisible EZ concept invisible/flush access door with LIN04
L1 d10	Plant mezzanine	DT17				2500	2400	n/a	tbc	KL	Key lock to mezzanine side, Door size tbc pending mechanical equipment sizing
L1 d11	Plant mezzanine	DT16	2040	1020				n/a	tbc	KL	Key lock internal and external

Existing Door schedule

Door number	Location	Hardware upgrade	Door Comments
Level 0			
EX d01	Sports Hall	CR, HO	Exit door
EX d02	Elec	CR, HO	CR access to outside only
EX d03	Theatre	CR, HO	Exit door, CR access to outside only
EX d04	Backstage/ store	CR	Exit door
EX d05	Theatre	CR, HO	Exit door, CR access to outside only
EX d06	Foyer	KL, HO,	Exit door
EX d09	Elec	CR	
EX d10	Unisex Dressing		
EX d12	Unisex Dressing		

NOTE
Doors designated 'GD' door type in the schedule are glazed doors that form part of internal or external glazing suites. refer to 710 series drawing for suite details.

DESIGN DEVELOPMENT

DOOR NOTES
1. Refer to fire engineering brief
2. Schedule to be read in conjunction with plans and elevations including glazing elevations.
3. All dimensions should be confirmed on site following completion of structure
4.Frosted glass to be acid etched, Matelux or white translucent
5. Nominated glass thickness and type is required to meet AS3959-2009
6.Direction of all sliding doors to be confirmed on plans and elevations
7.Direction of hinged door opening to be confirmed on plans
8.Provide heavy duty stainless steel hinges to all hinge doors, minimum 3 hinges per door
9.Provide lift off hinges to all bathroom doors
10.All lever sets to be positioned at 1000mm AFFL
11.Any discrepancies should be brought to the attention of the architect
12.All paint colours to be confirmed with architect
13. Size of window reveal must be suitable for wall type (e.g. double stud or brick veneer walls require increased reveal sizes)
14. All glazing and window systems are to comply with SHGC and U value requirements noted in the energy efficiency report by Built Environment Collective
15. All doors to common areas to be compliant with AS1428.1-2009
16. - All glazed hinged doors to comply with AS1428.1-2021 requirements including sill/thresholds, size, clearance, weight etc.

REQUIRED GLAZING PERFORMANCE
Refer to 710 series glazing elevation drawings and JV3 report prepared by Built Environment collective for external glazing performance

LEGEND

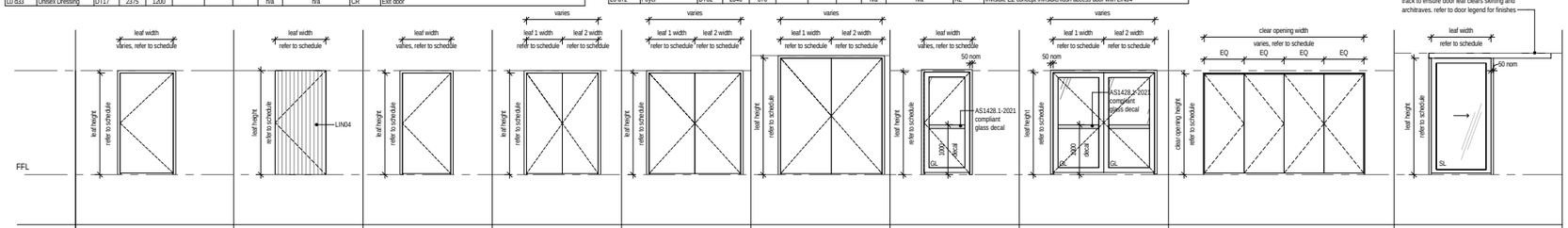
DT*	Door Type
SL	Sliding glass door
GL	Glazed swing door panel
GD	Glazed door as part of internal or external glazing suite. refer to 710 series drawing for suite details.

FINISHES
Refer to *Materials and Finishes Schedule* for paint colour
- Aluminium frames: Powdercoat
Colour: TBC

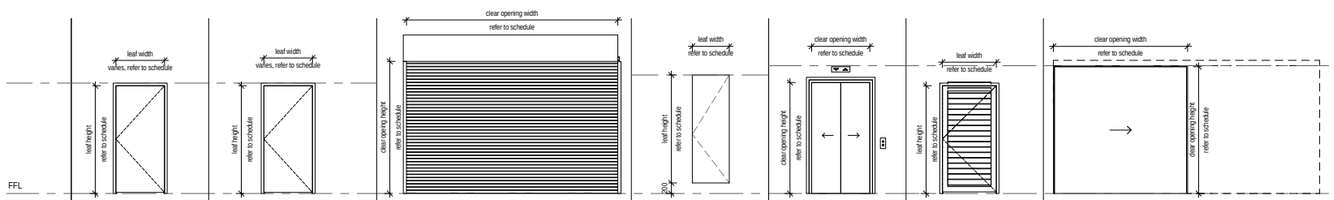
SIGNAGE
Refer to SCH01 for signage details

DOOR HARDWARE
Door access control hardware has been noted only, all other hardware types are TBC, allow for a provisional allowance.

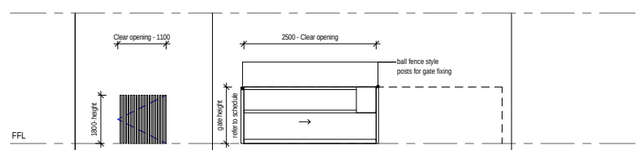
CR	Proximity swipe card access, refer electrical docs
KL	Key lock
HO	Hold open device
DS	Magnetic door stops
PS	Privacy smb
PI	Privacy indicator



Type	DT01 - Door Type 1 Internal hinged single swing solid core door	DT02 - Door Type 2 Internal hinged single swing solid core door to match LIN04	DT03 - Door Type 3 External hinged single swing exit door (high moisture resistance)	DT04 - Door Type 4 Internal hinged double swing solid cord door with kick to inside face	DT05 - Door Type 5 External hinged double swing solid core door with kick	DT06 - Door Type 6 External hinged 180 swing double swing exit door (high moisture resistance)	DT07 - Door Type 7 Internal hinged single swing glazed door	DT08 - Door Type 8 Internal hinged double swing glazed door	DT09 - Door Type 9 Internal acoustic operable wall	DT10 - Door Type 10 Internal face sliding glazed door
Frame	Powdercoated aluminium frame	Proprietary frame	Pressed steel door frame	Powdercoated aluminium frame	Powdercoated aluminium frame	Pressed steel door frame	Powdercoated aluminium frame	Powdercoated aluminium frame	Side stack system	Powdercoated aluminium frame
Proprietary system	n/a	EZ concept Accessdor	n/a	n/a	n/a	n/a	Alspec swan evo hinged door	Alspec swan evo hinged door	Lotus 100 series	CS Cavity sliders WallMountTrack
Infill	Solid core door leaf	Door panel to match LIN04	External Solid core door leaf	Solid core door leaf	Solid core door leaf	External Solid core door leaf	10.5mm Vlam Hush glass panel typically Door L0 D39 to be frosted	10.5mm Vlam Hush glass panel	Overlay panel junction with spotted gum timber veneer finish and full height door panel closure - ensure door panel is AS1428.1-2009 compliant.	Opaque glazed, aluminium framed door panel
Hardware	Refer to schedule for door access control, all other hardware tbc	Refer to schedule for door access control, all other hardware tbc	Refer to schedule for door access control, all other hardware tbc	Refer to schedule for door access control, all other hardware tbc	Refer to schedule for door access control, all other hardware tbc	Refer to schedule for door access control, all other hardware tbc	Refer to schedule for door access control, all other hardware tbc	Refer to schedule for door access control, all other hardware tbc	Hardware by manufacturer - matt black typically. Provide seals required to achieve min Rw rating.	Refer to schedule for door access control, all other hardware tbc
Threshold	Flush	Flush	n/a	Flush	Flush	Flush	Flush	Flush	n/a	Flush
Rw value	refer to schedule	refer to schedule	refer to schedule	refer to schedule	refer to schedule	refer to schedule	refer to schedule	refer to schedule	refer to schedule	refer to schedule
Kick	n/a	n/a	kick to L0 d09 serveryside only	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Door grille	refer to schedule	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Notes		Concealed hinges							Ensure structural steel is provided above the central track and the side stacking track.	Softstop closer option



Type	DT11 - Door Type 11 1 hour Fire rated hinged single swing door	DT12 - Door Type 12 Internal hinged single swing smoke sealed door to comms room	DT13 - Door Type 13 2 hour Fire rated roller shutter to MSB	DT14 - Door Type 14 Hinged single swing toilet partition	DT15 - Door Type 15 Lift door	DT16 - Door Type 16 Louvred plant room door	DT17 - Door Type 17 Face sliding top hung track door
Frame	Fire rated steel door frame	Powdercoated aluminium frame	Proprietary steel frame	tbc	Stainless steel, by lift manufacturer	Powdercoated aluminium frame	Powdercoated aluminium top track - colour tbc
Proprietary system	tbc	n/a	Mirage S100 fire rated roller shutter	Polytec toilet partition system	Otis premier 5 lift	tbc	tbc
Infill	1 hour fire rated solid core door leaf	Solid core door leaf	steel interlocking slats, powdercoat finish, colourTBC	Compact laminate, colour tbc	Satin finish stainless steel doors & car	Powdercoated Aluminium louvered door to mechanical engineer's air flow requirements	Solid core door leaf
Hardware	Refer to schedule for door access control, all other hardware tbc	Refer to schedule for door access control, all other hardware tbc	Refer to schedule for door access control, all other hardware tbc Electric operation, ensure connection to building FIP	Refer to schedule for door access control, all other hardware tbc	Refer to schedule for door access control, all other hardware tbc	Refer to schedule for door access control, all other hardware tbc	Refer to schedule for door access control, all other hardware tbc
Threshold	Flush	Flush	n/a	n/a	Flush	n/a	Flush
Rw value	refer to schedule	refer to schedule	n/a	refer to schedule	refer to schedule	refer to schedule	refer to schedule
Kick	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Door grille	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Notes			FRL - / 120 / 30 required drum size 219mm diameter				custom folded steel pelmet to sliding door track - for theatre stage doors only



Type	GT01 - Gate Type 01 - L1 g01 Aluminium swing gate to match FN02	GT02 - Gate Type 02 - L1 g02 Mezzanine "Ball fence roller gate "
Frame	to match FN02	Aluminium
Infill	to match FN02	n/a
Hardware	tbc	Proprietary
Minimum door clearance required	1000mm	2500mm
Notes		Proprietary "Ball fence roller gate" from trafffic safety systems Code: SKU: BFRG2500-MFA

KO&CoArchitecture Pty Ltd | PO Box 490 Red Hill Q 4059 | P: 07 3367 1878
E: mail@koandcompany.com.au | W: koandcompany.com.au

REV	DATE	ISSUE
A	01.11.2021	Issued for client review
B	21.01.2022	Issue for cost estimate
C	04.02.2022	Issue for client review
D	08.04.2022	Development Application

DRAWN	CHECK
SR	CW
SR	CW
SR	CW
SR	CW

100mm LINE @ A1 — 10mm — scale 1 : 50

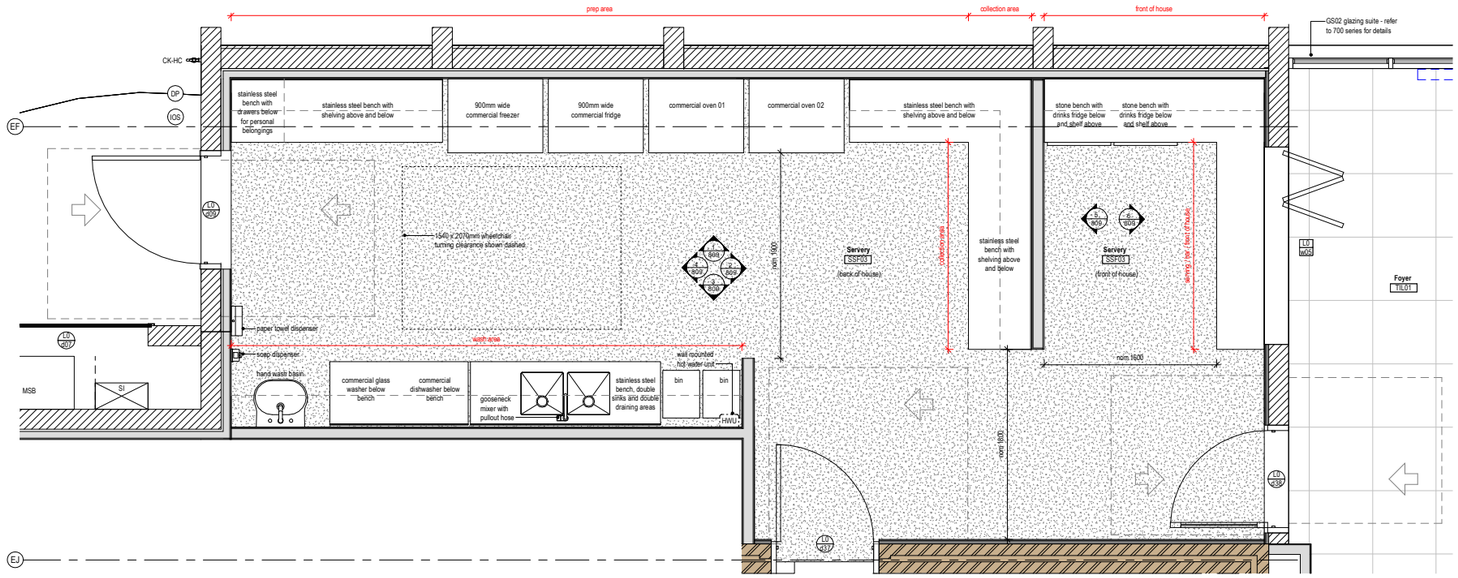
PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

DRAWING NAME
DOOR SCHEDULE
SHEET 1

PROJECT NO 2010 — A1

PHASE	DWG No.	REV.
DD	730	D



A Servery Floor Plan
SCALE @ A1 1 : 25

NOTES

servery

- layout is shown indicatively only
- full height WVYL wall vinyl to all walls in 'back of house' area, feature wall lining to all walls in 'front of house' area
- plasterboard ceiling generally
- SKT02 coved skirting to all walls with wall vinyl
- allow for the following appliances / fixtures:
  - 1 x 900mm wide commercial fridge
  - 1 x 900mm wide commercial freezer
  - 2 x commercial under bench drinks fridges
  - stainless steel benching and shelving as shown
  - 2 x stainless steel sinks with drainers to both sides
  - 1 x commercial dishwasher
  - 1 x commercial glass washer
  - 2 x commercial ovens
  - 1 x hand wash basin and mixer as shown

DESIGN DEVELOPMENT

NOTES

- adj denotes adjustable shelf
- all doors and drawer fronts to be MRMDF
- all carcasses to be HMRPB
- all drawer runners to have soft close mechanisms with a minimum 40kg capacity and 500mm minimum, 600mm where possible, extension opening. Runners to be Blum, Hafele, Hettich or similar smooth operating type
- all high drawers to have high sides or side rails above standard drawer height
- if additional gables will be visible compared to gables shown on drawings, please advise architect to discuss detail options
- builder to provide adequate support and noggins in wall for all wall hung fixtures, accessories and cabinets

FINISHES

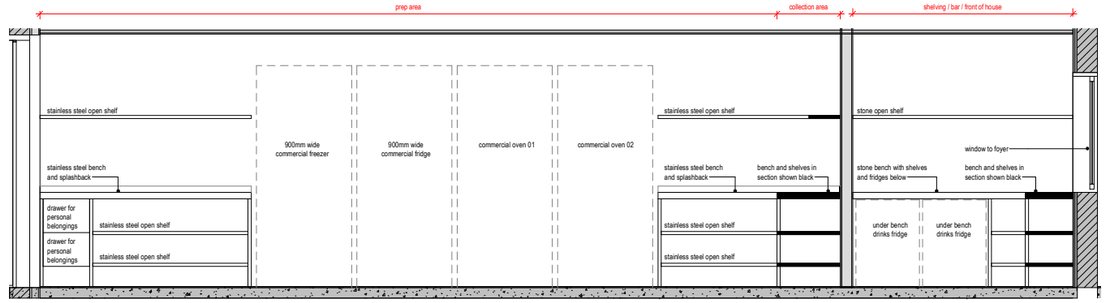
Finishes aredescribed generally in the legend below - please refer to *SCHXY-Materials and Finishes Schedule* for details on all finishes.

FIXTURES & ACCESSORIES

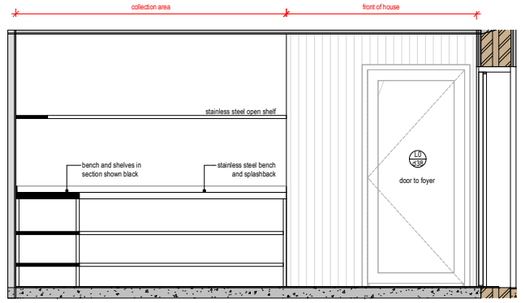
Items are described generally in the legend below. Please refer to attached Tradelink Fixtures & Equipment Schedule for details on all sanitary fixtures.

CODES / ABBREVIATIONS

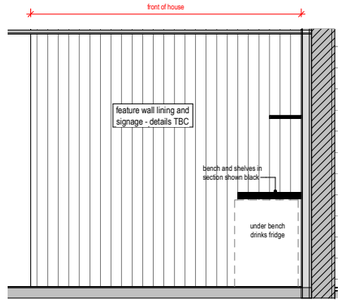
CK-HC	- Hose cock
DP	- Downpipe
HWU	- Hot water system
IOS	- Inspection outlet - refer hydraulic docs
MSB	- Main switchboard
SI	- Solar inverter
SSF03	- Seamless sheet vinyl
TIL01	- Floor tile (internal)



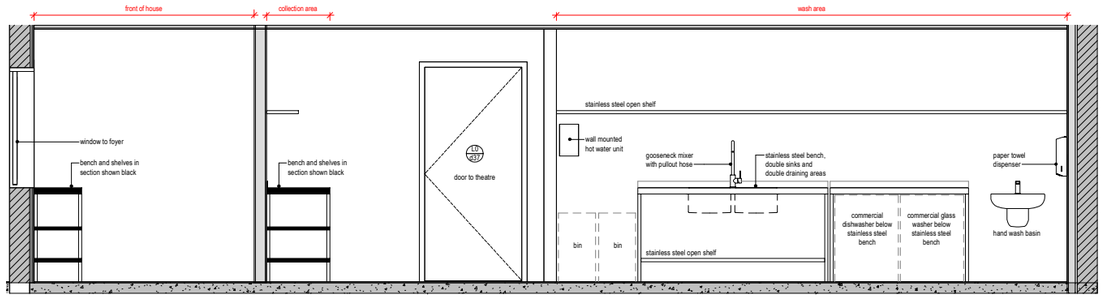
1 Servery - Detailed Elevation 1
SCALE @ A1 1 : 25



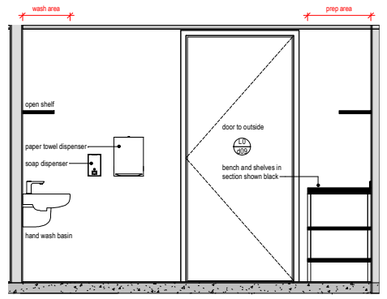
2 Servery - Detailed Elevation 2
SCALE @ A1 1 : 25



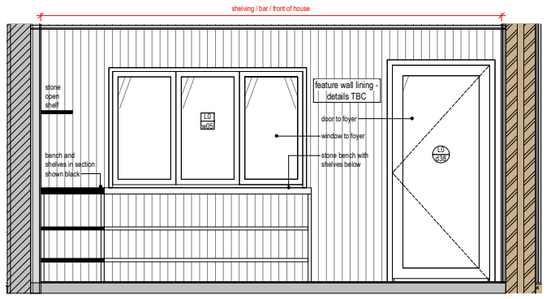
5 Servery - Detailed Elevation 5
SCALE @ A1 1 : 25



3 Servery - Detailed Elevation 3
SCALE @ A1 1 : 25



4 Servery - Detailed Elevation 4
SCALE @ A1 1 : 25



6 Servery - Detailed Elevation 6
SCALE @ A1 1 : 25

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REV	DATE	ISSUE	DRAWN	CHECK
A	31.01.2022	Issue for cost estimate	GR	CM
B	04.02.2022	Issue for Client review	GR	CM
C	28.02.2022	DA RFI drawings for review	CM	KO
D	17.03.2022	drawings for DA RFI response	CM	KO

PROJECT
ALSTONVILLE CULTURAL CENTRE
REFURBISHMENT AND LIBRARY EXTENSION

CLIENT
BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

DRAWING NAME
INTERIOR DETAILS
SERVERY

100mm LINE @ A1 — 50mm — scale 1 : 20

PROJECT NO: 2010 — at size A1

PHASE	DWG No.	REV.
DD	809	D

5.7 Alstonville Cultural Centre - Update

DESIGN DEVELOPMENT

perspective 01 | ground level courtyard entry

perspective 02 | level 1 library entry

perspective 03 | northern library courtyard

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REV	DATE	ISSUE	DRAWN	CHECK
A	06.12.2021	Perspectives for client review	GB	CM
B	21.01.2022	Issue for cost estimate	BR	CM
C	04.02.2022	Issue for client review	BR	CM
D	08.04.2022	Development Application	BR	CM
E	28.02.2023	DA RFI drawings for review	CM	KO
F	01.03.2023	DA RFI perspectives for review	CM	KO
G	11.03.2023	drawings for DA RFI response	CM	KO

PROJECT
ALSTONVILLE CULTURAL CENTRE

REFURBISHMENT AND LIBRARY EXTENSION

CLIENT
BALLINA SHIRE COUNCIL

42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

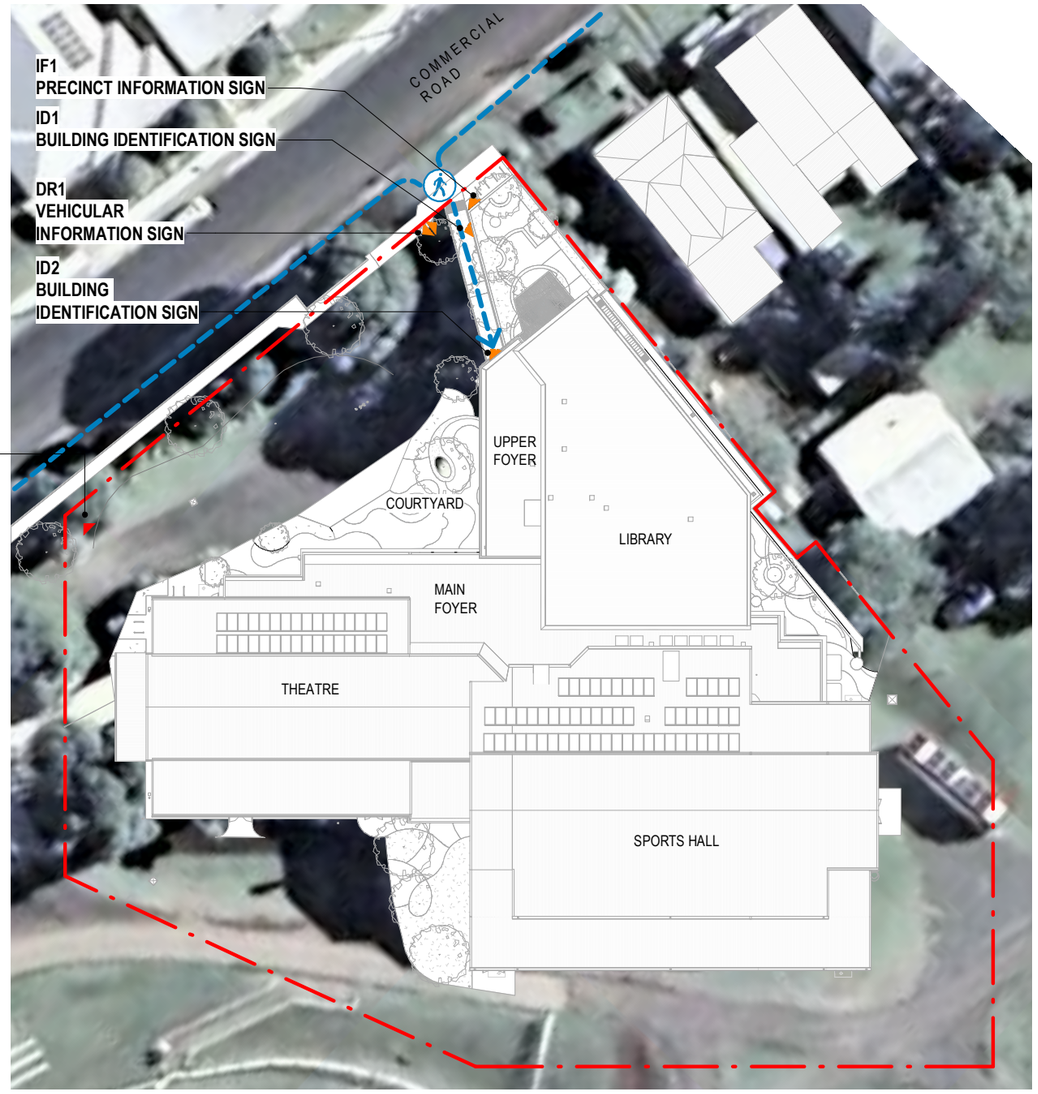
DRAWING NAME
PERSPECTIVES

100mm LINE @ A1 | 10mm | scale -

PROJECT NO 2010 | scale (A1) A1

PHASE	DWG No.	REV.
DD	900	G

SIGN LOCATION PLAN



NOTES

- concepts are shown for preliminary external wayfinding signage only, project scope tbc
- signage concepts subject to further design consultation for colour, font and materiality
- refer to landscape architect drawings for landscape layout - layout is shown indicative only on architectural drawings
- ongoing development of signage to align with relevant requirements outlined within Section 3.4 of the Ballina Shire Development Control Plan 2012

DESIGN DEVELOPMENT

DESTINATION HIERARCHY

The pedestrain visitor experience starts at Commercial Road.

With no on site car parking, the majority of visitors will access the building via a complaint access ramp access directs users to the upper foyer and circulation hub.

Users will need to identify when they have arrived at the precinct and then gather information at the entry point.

Key sign types will include:

IF1 - PRECINCT INFORMATION SIGN
Information sign at precinct entry

ID1 - BUILDING IDENTIFICATION SIGN
Building sign at precinct entry - along library entry ramp

ID2 - BUILDING IDENTIFICATION SIGN
Building sign to upper foyer roof

For vehiles that may access the site off Commercial Rd, there may be some signage included to provide directions to approaching traffic (DR1)

There is currently no consideration for advertising signage at this site however this may be considered in further project briefing ie temporary signage for events

EXISTING SIGNAGE

All existing signage to be removed.
All new precinct signage to support new precinct identity and naming conventions.
There is no advertising signage on site currently.

BRANDING AND LOGO

Development of signage and wayfinding will consider Ballina Shire Council branding requirements, logo and colours, to support the precinct identity and establish a clear graphic strategy for the cultural centre.

community spaces

ballina shire council

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REV	DATE	ISSUE	DRAWN	CHECK
A	28.02.2023	DA RFI drawings for review	CM	KO
B	17.03.2023	drawings for DA RFI response	CM	KO

100mm LINE @ A3 — 10mm — scale : 1 : 500

PROJECT: ALSTONVILLE CULTURAL CENTRE REFURBISHMENT AND LIBRARY EXTENSION

CLIENT: BALLINA SHIRE COUNCIL
42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

DRAWING NAME: EXTERNAL WAYFINDING SIGNAGE
SIGN LOCATION PLAN

PROJECT NO: 2010 — at plot 1:1 — A3

PHASE	DWG No.	REV.
DD	SK027	B

KEY SIGNAGE CONCEPTS

IF1 PRECINCT IDENTIFICATION SIGN - 1:50

- Identifies precinct and provides entry information
- Approx 600mm wide x 1600mm high, mounted at 300affl
- May contain precinct information outlining amenities (library, theatre, sports hall) and map
- May contain facility opening hours
- Can incorporate interactive screen for events information and/or advertising
- Can be integrated as part of architectural wall or offset as a freestanding feature
- Powdercoated aluminimium sign face with laser cut graphics applied
- Illuminated to provide entry beacon
- QR code to provide additional precinct information
- Branding and colours tbc
- Materials palette to be complimentary to architectural features and finishes

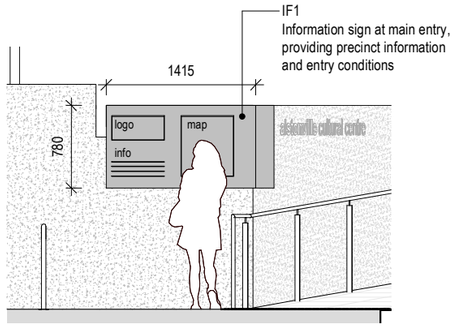
ID1 BUILDING IDENTIFICATION SIGN - 1:50

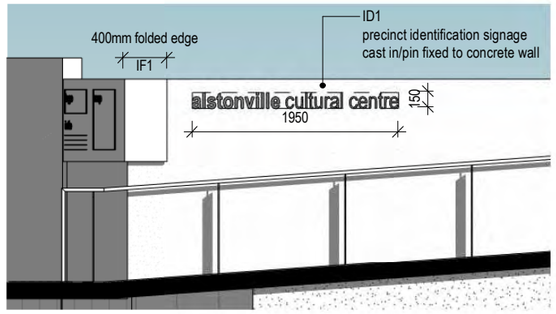
- Identifies precinct along main pedestrian entry
- Approx 1950mm wide x 150mm high
- Sign can be cast into concrete wall or metal signage pin-fixed off face of wall
- Identification to be further reviewed as part of the wayfinding strategy
- Branding and colours tbc

ID2 BUILDING IDENTIFICATION SIGN - 1:100

- Identifies precinct amenity
- Approx 3300mm wide x 250mm high
- Powdercoated aluminimium sign fixed to rail along leading edge of roof fascia
- Fascia lit (during operation and events) to provide back lighting or signage is illuminated - TBC
- Identification to be further reviewed as part of the wayfinding strategy
- Branding and colours tbc

DETAIL





REFERENCE IMAGES

DESIGN DEVELOPMENT

INFORMATION SIGNAGE FOR VEHICLES

Vehicle signage nominated on the plan aims to assist visitors to understand that there is limited access for vehicles on site.

Branding and colours tbc, reference image below shown for information only.

OTHER WAYFINDING OPPORTUNITIES

Other external wayfinding opportunties may be explored to support the overall precinct.

These include environmental graphics such as inset text/graphics to architectural elements (such as concrete) and graphics applied to glazing.

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REV	DATE	ISSUE	DRAWN	CHECK
A	28.02.2023	DA RFI drawings for review	CM	KO
B	17.03.2023	drawings for DA RFI response	CM	KO

100mm LINE @ A3 — 10mm — scale : 1 : 50

PROJECT: ALSTONVILLE CULTURAL CENTRE REFURBISHMENT AND LIBRARY EXTENSION

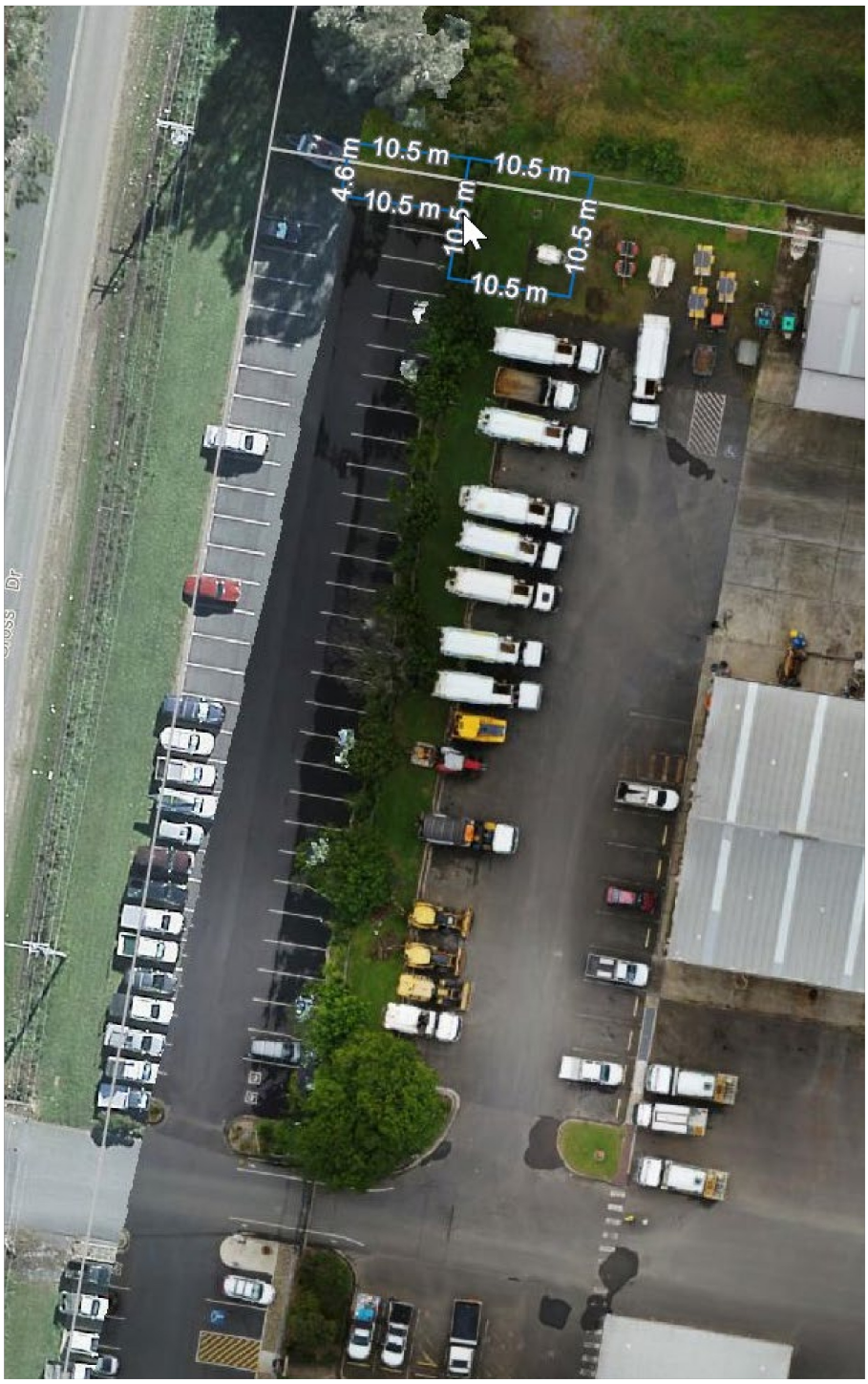
CLIENT: BALLINA SHIRE COUNCIL

42-46 COMMERCIAL ROAD, ALSTONVILLE, NSW

DRAWING NAME: EXTERNAL WAYFINDING SIGNAGE
KEY SIGNAGE CONCEPTS

PROJECT NO: 2010 — at plot 1:1 — A3

PHASE	DWG No.	REV.
DD	SK028	B



ballina shire council

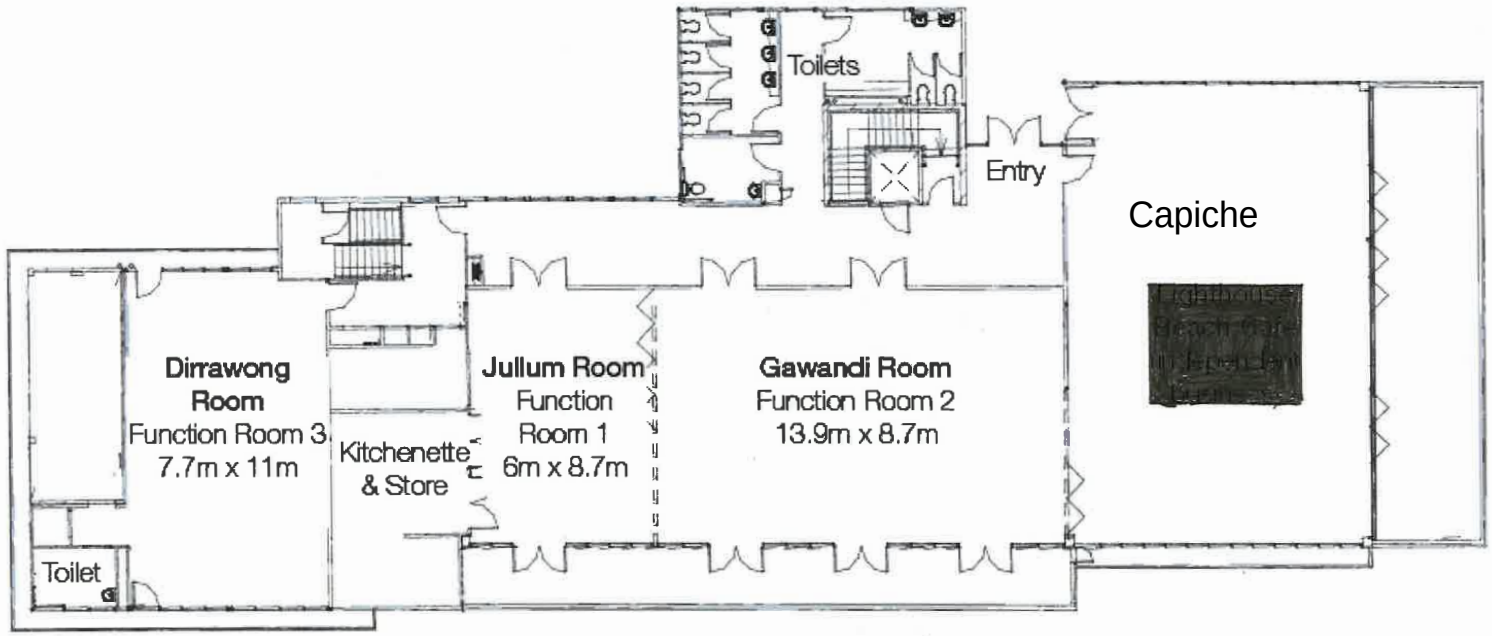
N W E S

Proposed Licence Area – Council Depot
Southern Cross Drive - Lot 67 DP 1022473

HD Ref	Printed
252484	22/7/2024

Attachment 1

Floor Plan



5.10 Ballina Byron Gateway Airport - Long Term Financial Plan

Ballina Byron Gateway Airport - Operating Result - 2002/03 to 2033/34

Actual														Description	Estimated										
2002/03	2004/05	2006/07	2008/09	2010/11	2012/13	2014/15	2016/17	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24		2024/25	31 Oct	%	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
														OPERATING REVENUES											
	129%	21%	5%	6%	9%	3%	7%	1%	(24%)	45%	(10.2%)	20%	(1.7%)	Passenger Numbers (% Change)	3.4%			0.6%	0.8%	0.8%	0.8%	0.8%	0.8%	0.7%	0.7%	0.7%
83,000	**189,000**	**320,000**	**330,000**	**287,000**	**357,000**	**350,000**	**504,000**	**533,000**	**405,000**	**588,000**	**528,000**	**632,000**	**621,000**	**Passengers**	**642,000**	**215,000**	**33**	**646,000**	**651,000**	**656,000**	**661,000**	**666,000**	**671,000**	**676,000**	**681,000**	**686,000**
														Passenger Charges / Landing Fees											
818,900	1,075,400	1,453,700	1,299,600	1,299,300	1,931,200	2,138,600	2,353,100	3,154,800	2,479,400	3,267,400	3,788,400	3,962,500	3,790,100	Income - Passenger Charges (RPT)	4,384,000	1,310,000	30	4,494,000	4,607,000	4,723,000	4,842,000	4,964,000	5,089,000	5,217,000	5,348,000	5,482,000
53,700	113,600	18,700	49,800	80,100	65,000	39,000	47,400	47,700	69,900	145,500	135,500	93,600	113,500	Income - Landing Fees (ABASS)	110,000	22,600	21	113,000	116,000	119,000	122,000	126,000	130,000	134,000	138,000	142,000
0	0	0	0	0	65,000	0	69,300	5,500	8,200	14,300	19,200	26,900	23,900	Income - Landing Fees (ABASS Exemption)	28,000	7,500	27	29,000	30,000	31,000	32,000	33,000	34,000	35,000	36,000	37,000
0	256,700	564,600	1,100,000	751,100	847,700	1,067,000	1,375,400	1,372,500	1,249,300	1,617,400	1,336,900	1,478,200	1,634,200	Income - Security Charges	1,750,000	660,000	38	1,794,000	1,839,000	1,885,000	1,933,000	1,982,000	2,032,000	2,083,000	2,136,000	2,190,000
														Other Fees and Charges											
0	3,600	3,700	4,200	6,400	9,000	5,200	9,400	2,000	0	7,700	0	4,300	5,300	Aviation Security Cards and Access Permits	4,000	600	15	5,000	6,000	7,000	8,000	9,000	10,000	11,000	12,000	13,000
0	0	76,100	175,900	238,600	363,000	467,200	641,200	738,000	544,500	706,600	612,400	1,559,500	1,814,800	Car Parking	1,900,000	680,000	36	1,948,000	2,797,000	2,867,000	2,939,000	3,013,000	3,089,000	3,167,000	3,247,000	3,329,000
0	0	12,000	20,200	20,800	23,200	21,000	34,300	56,200	50,400	45,100	32,000	17,600	11,700	Car Parking Fines	10,000	2,000	20	11,000	12,000	13,000	14,000	15,000	16,000	17,000	18,000	19,000
0	0	1,500	0	0	56,000	67,000	73,300	76,600	76,300	86,600	101,700	120,500	110,800	Advertising and Sundries	155,000	64,500	42	159,000	163,000	168,000	173,000	178,000	183,000	188,000	193,000	198,000
8,500	19,700	56,100	64,800	91,000	210,300	278,500	484,300	572,000	485,300	1,057,800	952,500	1,102,600	926,000	Car Rental Franchises	1,500,000	454,900	30	1,538,000	1,577,000	1,617,000	1,658,000	1,700,000	1,743,000	1,787,000	1,832,000	1,878,000
18,500	21,300	25,900	45,200	47,900	56,000	64,200	62,100	67,300	66,500	68,700	71,200	76,900	79,000	Hanger, Land and Other Building Rentals	85,000	33,000	39	88,000	91,000	94,000	97,000	100,000	103,000	106,000	109,000	112,000
9,500	10,000	10,600	24,500	25,500	27,000	37,000	39,000	45,100	40,600	40,600	41,200	42,700	46,700	Airport Fuel Site Rent	46,000	19,900	43	48,000	50,000	52,000	54,000	56,000	58,000	60,000	62,000	64,000
10,500	10,900	2,900	26,800	25,300	47,300	84,000	63,100	69,600	131,000	167,200	216,500	370,400	365,000	Rental Terminal Building	360,000	156,000	43	369,000	379,000	389,000	399,000	409,000	420,000	431,000	442,000	454,000
3,700	14,100	21,900	20,800	20,300	20,400	23,000	24,400	25,400	22,500	22,500	25,800	28,200	28,900	Rental Administration Building	32,000	12,500	39	33,000	34,000	35,000	36,000	37,000	38,000	39,000	40,000	41,000
0	0	14,000	67,500	112,800	118,000	131,800	143,100	139,100	90,400	73,400	43,600	27,900	44,300	Airport Shuttle Bus Rents	34,000	18,700	55	35,000	36,000	37,000	38,000	39,000	40,000	41,000	43,000	45,000
0	0	0	0	0	0	0	14,700	10,500	10,500	10,500	9,100	4,800	12,600	Airport Lease Rentals	10,000	3,600	36	11,000	12,000	13,000	14,000	15,000	16,000	17,000	18,000	19,000
														Operating Grants											
0	0	0	0	0	0	0	0	0	0	0	0	489,900	234,200	Regional Airports Screening Infrastructure	0	0	100	0	0	0	0	0	0	0	0	0
														Contributions to Council Expenses											
0	0	0	0	0	138,600	240,100	188,800	133,800	81,600	80,400	47,800	13,400	0	Contributions - Loan Interest NSW LIRS	0	0	100	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	99,400	361,600	293,700	520,600	20,200	0	0	Contributions - CAGRO Operations	0	0	100	0	0	0	0	0	0	0	0	0
0	0	0	0	0	3,600	46,200	57,900	49,400	53,500	107,100	92,500	105,300	146,000	Contributions - Fire Station, NDB and Generator	112,000	30,200	27	115,000	118,000	121,000	125,000	129,000	133,000	137,000	141,000	145,000
923,300	**1,525,300**	**2,261,700**	**2,899,300**	**2,719,100**	**3,981,300**	**4,709,800**	**5,780,200**	**6,927,100**	**5,753,600**	**8,039,400**	**7,546,500**	**9,525,200**	**9,387,000**	**Total Operating Revenues**	**10,520,000**	**3,476,000**	**33**	**10,790,000**	**11,867,000**	**12,171,000**	**12,484,000**	**12,805,000**	**13,134,000**	**13,470,000**	**13,815,000**	**14,168,000**
														OPERATING EXPENSES											
														Management and Administration											
9,800	3,100	80,400	168,900	356,600	436,000	654,900	704,100	812,900	888,200	1,039,600	1,028,200	1,109,100	1,518,800	Salaries and Oncosts including Contractors	1,343,000	512,700	38	1,390,000	1,432,000	1,475,000	1,519,000	1,565,000	1,612,000	1,660,000	1,710,000	1,761,000
1,300	(800)	4,400	7,400	13,300	17,000	16,400	20,500	15,400	15,000	4,000	14,500	20,200	36,700	Conferences and Seminars	20,000	13,600	68	21,000	22,000	23,000	24,000	25,000	26,000	27,000	28,000	29,000
0	0	0	12,500	21,000	21,600	20,100	19,000	17,100	17,600	5,900	6,000	6,000	12,000	Vehicle	14,000	4,800	34	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000
0	0	0	1,400	20,200	45,000	32,300	36,000	131,900	16,200	10,300	0	44,600	34,600	Office Expenses	15,000	8,700	58	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
36,300	40,000	36,000	19,800	40,000	76,600	95,300	97,800	75,000	37,100	81,300	120,900	112,900	247,400	Consultancies	150,000	60,900	41	100,000	103,000	106,000	109,000	112,000	115,000	118,000	122,000	126,000
4,800	0	1,400	0	6,400	15,000	1,800	7,900	600	9,100	10,100	17,300	200	15,700	Legal Fees	15,000	5,400	36	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
0	0	0	0	1,500	4,200	6,200	9,300	11,800	7,700	7,000	9,300	3,400	0	Bank Fees	4,000	0	0	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
6,500	8,800	11,000	18,900	22,800	23,000	41,400	69,800	53,800	23,600	28,600	33,000	38,800	42,000	Insurance	52,000	51,900	100	54,000	56,000	58,000	60,000	62,000	64,000	66,000	68,000	70,000
3,000	3,100	3,200	3,500	3,500	6,000	6,400	6,300	6,100	6,400	6,500	7,400	7,000	9,600	Subscriptions - Airport Owners Association	10,000	9,300	93	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
61,700	**54,200**	**136,400**	**232,400**	**485,300**	**644,400**	**874,800**	**970,700**	**1,124,600**	**1,020,900**	**1,193,300**	**1,236,600**	**1,342,200**	**1,916,800**	**Sub Total**	**1,623,000**	**667,300**	**41**	**1,623,000**	**1,671,000**	**1,720,000**	**1,770,000**	**1,822,000**	**1,875,000**	**1,929,000**	**1,986,000**	**2,044,000**

(operating result continued on following page)

5.10 Ballina Byron Gateway Airport - Long Term Financial Plan

Ballina Byron Gateway Airport - Operating Result - 2002/03 to 2033/34

Actual														Description (cont'd)	Estimated										
2002/03	2004/05	2006/07	2008/09	2010/11	2012/13	2014/15	2016/17	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24		2024/25	31 Oct	%	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
														Operations											
2,900	3,700	4,400	4,500	7,800	7,700	7,400	6,900	7,800	15,200	7,100	6,900	10,100	600	Telephone Airport	2,000	1,700	85	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
28,800	29,000	31,600	56,900	89,600	132,000	140,700	106,200	125,700	174,900	202,600	196,200	204,200	192,700	Electricity	180,000	62,600	35	185,000	191,000	197,000	203,000	209,000	215,000	221,000	228,000	235,000
39,200	49,500	89,300	129,700	142,600	121,100	113,700	114,300	121,700	159,700	237,300	264,000	389,300	100,400	Cleaning and Consumables	150,000	19,400	13	155,000	160,000	165,000	170,000	175,000	180,000	185,000	191,000	197,000
11,300	11,600	10,000	31,100	31,700	28,600	46,900	30,600	50,600	59,500	53,600	70,300	97,100	101,600	Rates	105,000	65,900	63	108,000	111,000	114,000	117,000	121,000	125,000	129,000	133,000	137,000
186,200	248,400	520,300	938,500	546,700	758,000	955,600	1,051,800	1,126,600	1,064,600	1,406,700	1,377,000	1,782,800	1,672,600	Security in Departure Lounge	1,675,000	646,100	39	1,704,000	1,747,000	1,791,000	1,836,000	1,883,000	1,930,000	1,979,000	2,029,000	2,081,000
0	21,100	23,000	95,200	100,200	108,500	80,600	67,600	101,100	81,700	86,600	71,700	85,300	84,700	Wildlife, Vermin and Pest Control	92,000	29,300	32	95,000	98,000	101,000	104,000	107,000	110,000	113,000	116,000	119,000
0	2,400	5,600	6,700	5,100	10,600	6,700	8,600	9,500	1,200	4,400	4,400	5,300	7,300	Aviation Security Card and Driving Charges	5,000	1,000	20	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
0	0	0	2,300	4,100	500	300	400	300	100	1,100	300	300	300	Drug and Alcohol Management	1,000	0	0	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
10,200	21,000	16,900	15,700	10,500	21,000	19,000	23,300	9,300	15,800	12,700	5,300	16,200	6,900	Fencing and Security	15,000	19,200	128	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
1,000	1,000	9,300	2,900	1,300	5,000	3,000	2,000	1,600	2,400	0	8,300	16,400	2,600	Airspace Protection	15,000	4,000	27	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
0	0	0	0	0	0	0	0	0	9,400	24,000	9,200	19,900	23,200	Compliance Inspections / Services	35,000	9,700	28	36,000	37,000	38,000	39,000	40,000	41,000	42,000	43,000	44,000
4,300	2,000	6,600	9,300	11,900	8,500	9,300	9,400	16,800	8,300	10,900	3,300	4,800	4,100	Lighting Inspections	10,000	0	0	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2,700	2,500	8,100	3,900	5,000	5,500	2,000	26,400	16,200	4,100	4,400	200	1,100	900	Markers, Cones and Wind Indicators	5,000	2,500	50	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
200	100	300	1,600	2,700	2,600	34,100	17,500	56,800	71,900	96,700	104,400	113,900	134,600	Service Charges	125,000	32,600	26	129,000	133,000	137,000	141,000	145,000	149,000	153,000	158,000	163,000
0	0	200	200	1,900	100	6,600	0	5,500	0	19,700	5,200	400	3,600	Emergency Exercises	10,000	8,500	85	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
0	0	8,000	0	200	2,100	600	3,100	3,900	2,800	6,400	10,300	34,800	7,700	Emergency Generator	10,000	3,700	37	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
5,200	14,100	24,500	33,200	81,300	192,000	163,900	319,500	219,600	224,600	206,600	100,900	91,800	68,200	Promotion	155,000	14,800	10	160,000	164,000	169,000	173,000	178,000	181,000	186,000	192,000	198,000
0	0	35,700	63,700	55,400	65,000	61,500	55,800	78,200	61,700	47,000	28,700	409,800	165,300	Paid Car Parking	140,000	34,200	24	144,000	148,000	152,000	157,000	162,000	167,000	172,000	177,000	182,000
0	0	0	0	15,200	7,000	26,600	2,200	4,000	2,200	8,300	3,300	12,000	18,400	Airport Signs	15,000	1,300	9	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
0	0	0	0	0	0	0	0	0	9,400	260,900	50,900	14,900	0	COVID-19 Response	0		100	0	0	0	0	0	0	0	0	0
0	0	0	0	0	25,500	0	270,200	361,700	293,700	357,800	25,500	0	0	Certified Air Ground Controller (CAGRO)	0		100	0	0	0	0	0	0	0	0	0
0	0	0	0	0	6,000	0	0	0	0	0	12,200	121,500	0	Airport Master Plan	0		100	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	26,700	37,800	0	Flood Impacts	0		100	0	0	0	0	0	0	0	0	0
292,000	**406,400**	**793,800**	**1,395,400**	**1,113,200**	**1,507,300**	**1,678,500**	**2,115,800**	**2,316,900**	**2,263,200**	**3,054,800**	**2,385,200**	**3,469,700**	**2,595,700**	**Sub Total**	**2,745,000**	**956,500**	**35**	**2,804,000**	**2,877,000**	**2,952,000**	**3,028,000**	**3,108,000**	**3,186,000**	**3,268,000**	**3,355,000**	**3,444,000**
														Airport Maintenance											
76,300	102,900	145,200	156,800	158,100	96,000	90,800	28,200	18,500	51,600	59,700	108,900	158,300	137,500	Land Side Maintenance	140,000	13,300	10	144,000	148,000	152,000	157,000	162,000	167,000	172,000	177,000	182,000
0	0	0	0	0	0	0	0	0	0	0	0	90,800	118,000	Apron Maintenance	100,000	71,300	71	102,000	103,000	105,000	106,000	108,000	109,000	111,000	113,000	115,000
0	0	0	0	0	0	0	0	0	0	0	0	16,100	25,300	Runway and Taxiway Maintenance	25,000	5,900	24	26,000	27,000	28,000	29,000	30,000	31,000	32,000	33,000	34,000
24,400	15,300	32,300	17,100	15,500	14,500	9,800	30,600	5,800	26,300	50,300	74,400	40,100	26,100	Electrical Maintenance and Repairs	30,000	12,200	41	31,000	32,000	33,000	34,000	35,000	36,000	37,000	38,000	39,000
47,200	71,400	98,600	108,400	140,900	185,200	134,000	154,200	54,900	65,800	69,400	44,000	118,400	105,500	Buildings Maintenance	110,000	32,700	30	113,000	116,000	119,000	123,000	127,000	131,000	135,000	139,000	143,000
0	0	0	0	0	0	0	51,000	50,000	66,800	44,200	99,900	106,600	155,000	Plant and Equipment Maintenance	120,000	57,100	48	124,000	128,000	132,000	136,000	140,000	144,000	148,000	152,000	157,000
439,900	**189,600**	**276,100**	**282,300**	**314,500**	**295,700**	**234,600**	**264,000**	**129,200**	**210,500**	**223,600**	**327,200**	**530,300**	**567,400**	**Sub Total**	**525,000**	**192,500**	**37**	**540,000**	**554,000**	**569,000**	**585,000**	**602,000**	**618,000**	**635,000**	**652,000**	**670,000**
														Overheads to Airport											
129,500	134,800	88,000	176,000	213,000	280,000	302,000	378,000	431,400	509,000	626,000	678,000	678,500	977,000	Overheads to Airport	1,098,000	366,000	33	1,131,000	1,165,000	1,200,000	1,236,000	1,273,000	1,311,000	1,350,000	1,391,000	1,433,000
														Debt Servicing											
95,600	59,000	41,800	109,500	217,000	423,600	502,300	422,600	306,800	280,900	273,200	176,400	234,700	803,900	Interest On Loans Airport	773,000	(14,100)	(4)	744,000	716,000	687,000	657,000	625,000	592,000	557,000	519,000	481,000
1,018,700	**844,000**	**1,336,100**	**2,195,600**	**2,343,000**	**3,151,000**	**3,592,200**	**4,151,100**	**4,308,900**	**4,284,500**	**5,370,900**	**4,803,400**	**6,255,400**	**6,860,800**	**Sub Total - Cash Expenses**	**6,764,000**	**2,168,200**	**(1)**	**6,842,000**	**6,983,000**	**7,128,000**	**7,276,000**	**7,430,000**	**7,582,000**	**7,739,000**	**7,903,000**	**8,072,000**
														Non-Cash											
167,200	165,000	270,500	271,000	735,000	830,000	770,700	806,800	782,100	786,000	1,010,600	1,086,800	1,178,500	1,319,300	Depreciation - Airport	1,297,000	0	0	1,338,000	1,381,000	1,425,000	1,470,000	1,517,000	1,565,000	1,615,000	1,666,000	1,719,000
0	0	0	0	0	0	0	0	0	2,342,000	0	0	0	369,600	Loss on Disposal of Infrastructure Assets	0	0	100	0	0	0	0	0	0	0	0	0
1,185,900	**1,009,000**	**1,606,600**	**2,466,600**	**3,078,000**	**3,981,000**	**4,362,900**	**4,957,900**	**5,091,000**	**7,412,500**	**6,381,500**	**5,890,200**	**7,433,900**	**8,549,700**	**Total Operating Expenses**	**8,061,000**	**2,168,200**	**27**	**8,180,000**	**8,364,000**	**8,553,000**	**8,746,000**	**8,947,000**	**9,147,000**	**9,354,000**	**9,569,000**	**9,791,000**
(262,600)	**516,300**	**655,100**	**432,700**	**(358,900)**	**300**	**346,900**	**822,300**	**1,836,100**	**(1,658,900)**	**1,657,900**	**1,656,300**	**2,091,300**	**837,300**	***Operating Result - Surplus / (Deficit)***	**2,459,000**	**1,307,800**	**53**	**2,610,000**	**3,503,000**	**3,618,000**	**3,738,000**	**3,858,000**	**3,987,000**	**4,116,000**	**4,246,000**	**4,377,000**
167,200	165,000	270,500	271,000	735,000	830,000	770,700	806,800	782,100	3,128,000	1,010,600	1,086,800	1,178,500	1,688,900	*Add Back Non-cash Items*	1,297,000	0	0	1,338,000	1,381,000	1,425,000	1,470,000	1,517,000	1,565,000	1,615,000	1,666,000	1,719,000
(95,400)	**681,300**	**925,600**	**703,700**	**376,100**	**830,300**	**1,117,600**	**1,629,100**	**2,618,200**	**1,469,100**	**2,668,500**	**2,743,100**	**3,269,800**	**2,526,200**	***Cash Result - Surplus / (Deficit)***	**3,756,000**	**1,307,800**	**35**	**3,948,000**	**4,884,000**	**5,043,000**	**5,208,000**	**5,375,000**	**5,552,000**	**5,731,000**	**5,912,000**	**6,096,000**
														Capital Movements											
0	169,000	185,800	251,400	237,400	532,100	845,500	1,073,300	1,188,700	1,294,900	1,408,600	1,416,000	1,056,000	749,000	Less Loan Principal Repayments	568,000			596,000	566,000	595,000	625,000	657,000	690,000	725,000	763,000	801,000
(95,400)	512,600	927,800	703,600	142,000	298,200	272,100	555,800	1,429,500	2,223,000	591,700	1,327,100	9,170,500	1,777,200	Less Transfer to Reserves	3,188,000			3,352,000	4,318,000	4,448,000	4,583,000	4,718,000	4,862,000	5,006,000	5,149,000	5,295,000
0	636,500	826,800	1,356,500	0	789,900	403,800	700,700	2,155,400	0	0	2,904,100		9,517,400	Add Transfer from Reserves	1,950,000			4,250,000	5,800,000	5,150,000	1,600,000	3,000,000	6,500,000	7,500,000	0	8,600,000
0	0	1,000,000	2,800,000	500,000	4,996,700	725,000	0	3,232,400	3,142,100	405,000	4,256,500	15,528,900	2,029,800	Add Capital Funding	0			0	0	0	0	0	0	0	0	0
0	636,200	1,638,800	3,905,200	496,700	5,786,600	1,128,800	700,700	5,287,800	1,093,300	1,073,200	7,160,600	8,572,200	11,547,200	Less Capital Expenditure	1,950,000			4,250,000	5,800,000	5,150,000	1,600,000	3,000,000	6,500,000	7,500,000	0	8,600,000
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**100,000**	**0**	**0**	**0**	**0**	**0**	***Cash Result after Capital Movements***	**0**			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
200	**740,300**	**967,400**	**813,200**	**593,100**	**1,253,900**	**1,619,900**	**2,051,700**	**2,925,000**	**1,750,000**	**2,941,700**	**2,919,500**	**3,504,500**	**3,330,100**	***Earnings before Interest,Tax, Deprec (EBITDA)***	**4,529,000**			**4,692,000**	**5,600,000**	**5,730,000**	**5,865,000**	**6,000,000**	**6,144,000**	**6,288,000**	**6,431,000**	**6,577,000**
0.00	**0.49**	**0.43**	**0.28**	**0.22**	**0.31**	**0.34**	**0.35**	**0.42**	**0.30**	**0.37**	**0.39**	**0.37**	**0.35**	***EBITDA Ratio to Gross Revenue***	**0.43**			**0.43**	**0.47**	**0.47**	**0.47**	**0.47**	**0.47**	**0.47**	**0.47**	**0.46**

2002/03	2004/05	2006/07	2008/09	2010/11	2012/13	2014/15	2016/17	2018/19	2019/20	2020/21	2021/22		2023/24	Key Financial Indicators	2024/25			2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
(28%)	34%	29%	15%	(13%)	0%	7%	14%	27%	(29%)	21%	22%		9%	Operating result as a % of income	23%			24%	30%	30%	30%	30%	30%	31%	31%	31%
(10%)	45%	41%	24%	14%	21%	24%	28%	38%	26%	33%	36%		27%	Operating result as a % of income (ex dep)	36%			37%	41%	41%	42%	42%	42%	43%	43%	43%
10%	15%	10%	12%	17%	24%	29%	26%	22%	27%	21%	21%		17%	Debt Ratio	13%			12%	11%	11%	10%	10%	10%	10%	9%	9%
0.00	3.25	4.25	2.25	1.31	1.31	1.20	1.37	1.96	1.11	1.75	1.83		2.14	Debt Service Cover Ratio	3.38			3.50	4.37	4.47	4.57	4.68	4.79	4.90	5.02	5.13
5%	5%	10%	16%	22%	23%	25%	27%	26%	26%	28%	28%		37%	Non-standard income as a % of income	39%			39%	43%	43%	43%	44%	44%	44%	44%	44%
4%	8%	14%	18%	19%	23%	27%	32%	35%	20%	36%	36%		40%	Non-standard income as a % of expenses	51%			52%	62%	62%	62%	62%	62%	63%	63%	63%
5%	9%	17%	20%	25%	30%	33%	38%	42%	35%	43%	44%		50%	Non-standard income as a % of exps (ex dep)	61%			62%	74%	74%	75%	75%	75%	76%	76%	76%

5.10 Ballina Byron Gateway Airport - Long Term Financial Plan

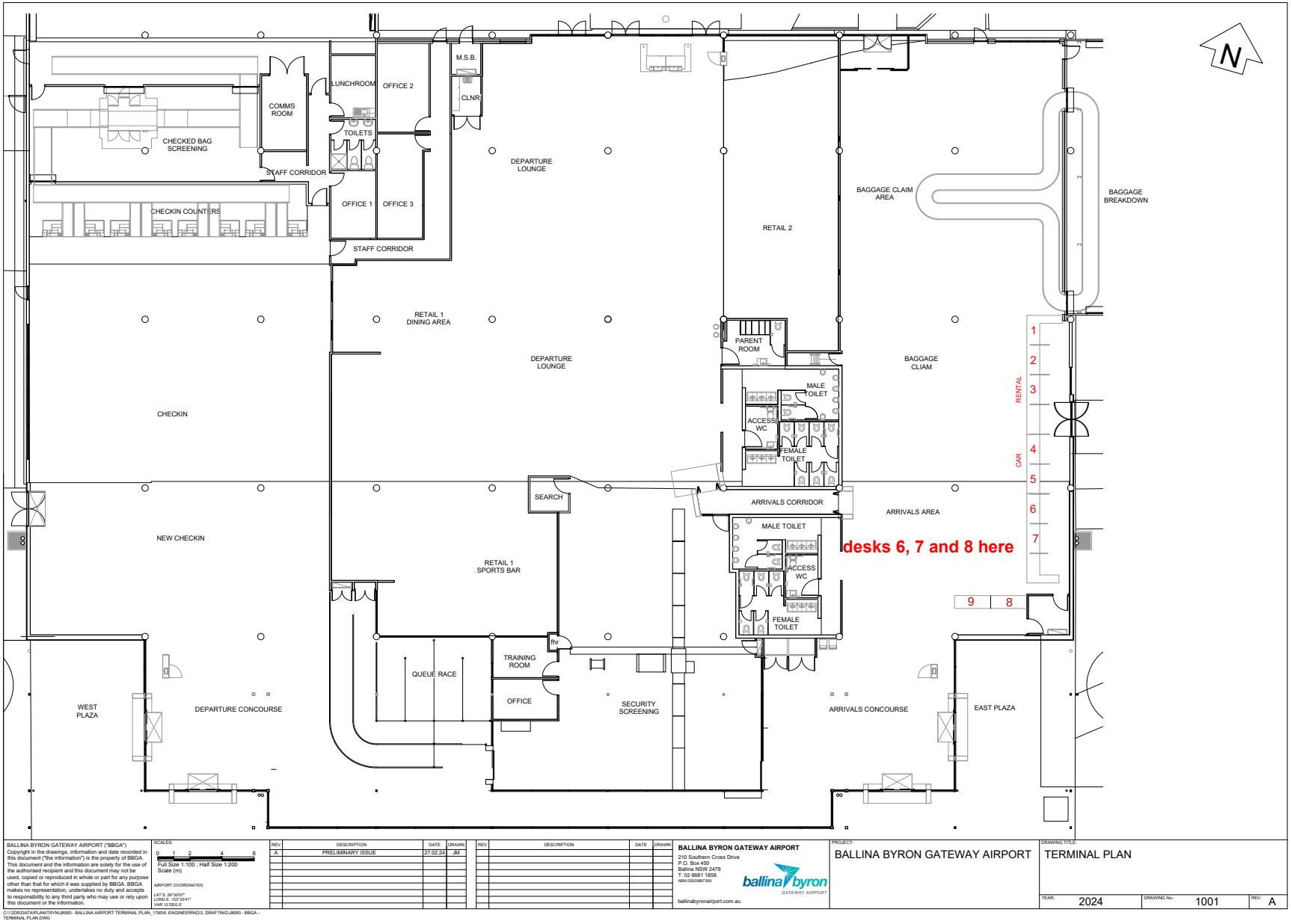
Ballina Byron Gateway Airport - Capital Movements

Capital Expenditure	Actual		Estimated									
Description	**2022/23**	**2023/24**	**2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**
Projects												
Runway - Strengthening and Other	7,627,300	11,486,300	250,000									
Car Park	429,000											
Car Park - Eastern Expansion		51,500	450,000	4,100,000								
Car Park and Walkway - Shade					1,700,000							
Car Park Equipment Upgrade						1,000,000						
Crown Land and Revetment Wall (CASA Compliance)						150,000						
Line Marker		9,400										
Ultimate Airside Layout Concept Plan												
Bays 1, 3 and 4 - Upgrade									2,000,000	2,500,000		
Bay 5 - Construct									4,500,000	5,000,000		
General Aviation Hangars and Taxiways												8,600,000
Hangar Site Preparation (Lot 1 and 5)			200,000									
Taxiways Alpha and Bravo - Upgrade							1,600,000					
Controlled Airspace (Electrical Works)			50,000									
Ultimate Terminal Concept Plan												
Terminal - Air-conditioning			600,000									
Terminal - Checked Baggage Screening			250,000									
Terminal - Common Use Check-in Equipment								3,000,000				
Terminal - Expansion			150,000	150,000	3,000,000	4,000,000						
Terminal - Passenger Screening	515,900											
Terminal - Passenger Screening - Second Lane (Equipment)					1,100,000							
Ultimate General Aviation Concept Plan												
Civil construction works (land development)												
Total	**8,572,200**	**11,547,200**	**1,950,000**	**4,250,000**	**5,800,000**	**5,150,000**	**1,600,000**	**3,000,000**	**6,500,000**	**7,500,000**	**0**	**8,600,000**

Source of Capital Funding	**2022/23**	**2023/24**	**2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**
Capital Grants and Contributions	4,028,900	2,029,800	0	0	0	0	0	0	0	0	0	0
Loan Borrowings	11,500,000	0	0	0	0	0	0	0	0	0	0	0
Airport Reserve	(6,956,700)	9,517,400	1,950,000	4,250,000	5,800,000	5,150,000	1,600,000	3,000,000	6,500,000	7,500,000	0	8,600,000
Total	**8,572,200**	**11,547,200**	**1,950,000**	**4,250,000**	**5,800,000**	**5,150,000**	**1,600,000**	**3,000,000**	**6,500,000**	**7,500,000**	**0**	**8,600,000**

Airport Reserve Balances	**2022/23**	**2023/24**	**2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**
Opening Balance	**1,340,500**	**10,084,400**	**2,430,000**	**3,668,000**	**2,770,000**	**1,288,000**	**586,000**	**3,569,000**	**5,287,000**	**3,649,000**	**1,155,000**	**6,304,000**
Movement	8,743,900	(7,654,400)	1,238,000	(898,000)	(1,482,000)	(702,000)	2,983,000	1,718,000	(1,638,000)	(2,494,000)	5,149,000	(3,305,000)
Closing Balance	**10,084,400**	**2,430,000**	**3,668,000**	**2,770,000**	**1,288,000**	**586,000**	**3,569,000**	**5,287,000**	**3,649,000**	**1,155,000**	**6,304,000**	**2,999,000**

Loan Summary	**2022/23**	**2023/24**	**2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**
Loan Principal Repaid Per Annum	1,056,000	748,500	568,000	596,000	566,000	595,000	625,000	657,000	690,000	725,000	763,000	801,000
Loan Interest Paid Per Annum	254,700	806,400	773,000	744,000	716,000	687,000	657,000	625,000	592,000	557,000	519,000	481,000
Total Principal and Interest	**1,310,700**	**1,554,900**	**1,341,000**	**1,340,000**	**1,282,000**	**1,282,000**	**1,282,000**	**1,282,000**	**1,282,000**	**1,282,000**	**1,282,000**	**1,282,000**
Principal Outstanding - 30 June	**15,906,100**	**15,157,600**	**14,589,600**	**13,993,600**	**13,427,600**	**12,832,600**	**12,207,600**	**11,550,600**	**10,860,600**	**10,135,600**	**9,372,600**	**8,571,600**


N
M.S.B.
LUNCHROOM
OFFICE 2
CLNR
COMMS ROOM
TOILETS
CHECKED BAG SCREENING
STAFF CORRIDOR
CHECKIN COUNTERS
OFFICE 1
OFFICE 3
STAFF CORRIDOR
DEPARTURE LOUNGE
RETAIL 2
BAGGAGE CLAIM AREA
BAGGAGE BREAKDOWN
RETAIL 1 DINING AREA
PARENT ROOM
DEPARTURE LOUNGE
BAGGAGE CLIAM
MALE TOILET
ACCESS WC
FEMALE TOILET
CHECKIN
RENTAL CAR
1
2
3
4
5
6
7
SEARCH
ARRIVALS CORRIDOR
ARRIVALS AREA
MALE TOILET
desks 6, 7 and 8 here
NEW CHECKIN
RETAIL 1 SPORTS BAR
ACCESS WC
FEMALE TOILET
9
8
fhr
TRAINING ROOM
QUEUE RACE
OFFICE
SECURITY SCREENING
WEST PLAZA
DEPARTURE CONCOURSE
ARRIVALS CONCOURSE
EAST PLAZA
BALLINA BYRON GATEWAY AIRPORT ("BBGA")
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SCALES:
0 1 2 4 6
Full Size 1:100 ; Half Size 1:200
Scale (m)
AIRPORT COORDINATES:
LAT S 28°50'07"
LONG E 153°33'41"
VAR 12 DEG E
REV DESCRIPTION DATE DRAWN
A PRELIMINARY ISSUE 27.02.24 JM
BALLINA BYRON GATEWAY AIRPORT
210 Southern Cross Drive
P.O. Box 450
Ballina NSW 2478
T: 02 6681 1858
ABN 53929887369
ballinabyronairport.com.au
ballina byron GATEWAY AIRPORT
PROJECT:
BALLINA BYRON GATEWAY AIRPORT
DRAWING TITLE:
TERMINAL PLAN
YEAR: 2024
DRAWING No.: 1001
REV: A
C:\1DRIDATA\PLANTSYNJ8060 - BALLINA AIRPORT TERMINAL PLAN_17906\6 ENGINEERING\3. DRAFTING\J8060 - BBGA - TERMINAL PLAN.DWG