

LAKE YEALERING

ABLUTION BLOCK OPTIONS



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Issued by: Rosalie Pech Eva



PLEASE CONTACT US AT:

Office of Regional Architecture

T: (08) 9699 6474

M: 0429 421 287

E: rpecheva@regionalarchitect.com.au

W: www.regionalarchitect.com.au

I: @ora_pechev

A: 2 Lennard Street, Brookton WA



PROJECT CONTEXT & SITE INSPECTION

The Lake Yealering Ablution Block is a single leaf brick and corrugated steel sheet roofed public ablutions building situated in the townsite of Yealering close to the shores of Lake Yealering in the Shire of Wickepin, at Sewell Street, and is used by Lake users, and the players and spectators of the Yealering Tennis Club.

The primary structure was built circa 1963, as mens and womens ablutions comprising a large changeroom each side containing a handbasin, two WCs (women) or a WC & urinal (men), and two showers, with no hot water supply provided. The plan aligns east-west, with the respective entrances either end with a screen privacy wall. The ablutions are available 24/7 for use by the public, but currently the showers are out of order, and the facilities are not designed to meet universal access requirements.

With a long term strategy to upgrade facilities at Lake Yealering, in accordance with the Yealering Foreshore Development Plan dated March 2017 prepared by GRAB Creative Co and EPCAD Pty Ltd, the Shire of Wickepin wish to consider the available options to redevelop, refurbish, or demolish and replace the existing ablution facilities and distinguish the constraints and opportunities of each option together with the associated costs.

The Yealering Foreshore Development Plan notes:

“The Ablution building is retained in its original location for cost benefit. Further planning of this site will need to take place as there is a possibility to modify the existing structure or to rebuild (Figure 9). External and internal improvements could be made to these amenities including a bench surrounding the basin, disabled toilet (currently available at the town hall site), a working shower for people to rinse off after being in the lake (consider an outside rinse shower) and infant change table. The proposed paths enable easy access for people of all abilities and provide a link to the carpark, foreshore area, playground and the eastern ski beach.” (page 14, see Appendix A)

Rosalie Pech Eva of Office of Regional Architecture, attended the building and site on Thursday 16th of December 2021, to visually inspect the building, discuss the project with Shire of Wickepin CEO Mark Hook and Works Manager Gary Rassmussen and obtain some high level input about the Shire’s aspirations for the project.

This report captures a record of this site visit, as well as documenting a spatial brief and providing some indicative costs associated with the redevelopment options. The report will also touch on the following considerations:

- project timeframes
- project budget
- project scope, finishes and materials
- coordination with additional consultants
- the likely approvals process for the works
- style / aesthetic approach to the works
- client ideas on the resolved design
- ORA’s capacity to undertake the work

Discussion on site touched on the following considerations:

- redevelopment options - refurbish/replace/ construction types and costs
- sewerage treatment requirements
- the sensitivity of the Lake environment
- future plans for the Precinct development in accordance with the Plan previously developed
- current user profile and maximum number of users (outside major events, when portable facilities are brought in), being 30-40 persons for tennis events
- the need for outdoor showers only
- the need for Universal Access facilities
- the condition of the existing building including cracking and fretting of brickwork
- alternative locations for the ablution block were it to be replaced

Rosalie Pech Eva

Director

Office of Regional Architecture

EXISTING CONDITIONS - Site

LAKE YEALERING LANDSCAPED FORESHORE



DISCUSSION ON SITE REVEALED THE FOLLOWING:

1. The existing site location is proximate and convenient to the Lake foreshore, the Childrens' Playground, and the Tennis Club, adjacent a large gravelled carpark , and amid large mature shady eucalypt trees.
2. The site is part of an environmentally fragile ecosystem, and is at the same time a harsh building environment due to acid sulphate soils, high saline watertable, and reactive claysoils.
3. The site is in a bushfire prone arera, as defined by DFES. Refer Appendix B.
4. The painted mural by James Giddy of pink and grey galahs has considerable artistic merit and is worth retaining, as it adds to the attractiveness of the Foreshore.
5. The steep gravelled access to the Ablution Block is unsuitable for safe and universal access to the facilities.
6. If the option to demolish and rebuild the Ablution Block is selected, alternate sites should be considered in consultation with the Yealering Foreshore Redevelopment Plan, proximilty to the Lake Foreshore, Childrens Playground, and Tennis Club, the requirements for installation of site-appropriate sewerage treatment apparatus.

EXISTING CONDITION - Exterior

WEST, NORTH, SOUTH & EAST ELEVATIONS



WEST ELEVATION

Entrance to Womens Ablutions showing screen privacy wall and gravelled access.



NORTH ELEVATION

Facing the gravel carpark and Yealering Tennis Club, featuring painted mural by noted artist James Giddy to the northern wall.



EAST ELEVATION

Entrance to Mens Ablutions showing screen privacy wall and steep gravelled access.



SOUTH ELEVATION

Facing Lake Yealering, exhibiting fretting of brickwork to a height of 450mm from ground level for the length of the southern wall

EXISTING CONDITION - Women's



WOMENS ABLUTIONS

DISCUSSION ON SITE REVEALED THE FOLLOWING:

1. Both showers are non operational, and could be replaced with Unisex outdoor showers as internal showers are not required.
2. No hot water supply available.
3. Plenty of room to include UA WC facilities if refurbishment option is selected.

EXISTING CONDITION - Mens



MENS ABLUTIONS

DISCUSSION ON SITE REVEALED THE FOLLOWING:

1. Both showers are non operational, and could be replaced with Unisex outdoor showers as internal showers are not required.
2. No hot water supply available.
3. Plenty of room to include UA WC facilities if refurbishment option is selected.

**EXISTING CONDITION -
Considerations for Refurbishment Option**



Existing services should be assessed for compliance and capacity to ensure risk minimisation and functionality to cope with future (increased) useage requirements



Deterioration of single leaf brickwork to height of 450mm AGL to whole length of southern elevation will require works to rectify.



The existing mural to the north elevation has artistic merit and provides the area with a delightful unique character, so is worth retaining

Any redevelopment of the existing facility should be done in conjunction with a nuanced understanding of the master plan for the Foreshore Redevelopment, previously



The natural environment of the Lake Foreshore is both fragile and harsh, and care must be taken to mitigate risks both to the Lake area, and to buildings located within it's environs.



Design of both sewage treatment installation, and safe and Universal access to the facility should be in the forefront of redevelopment considerations.



WC FACILITIES REFERENCE IMAGES



MODULAR/TRANSPORTABLE
New construction completed off-site and installed, connected to services and finished at a pre-prepared on-site location. This mode of building procurement will likely have cost and time advantages. Pictured example one of a range of manufactured units available 'Forbes ' from modusaustralia.com.au



PURPOSEDESIGNED-UNIQUECONSTRUCTION
This category would include refurbishment and modification to an existing retained facility in it's current location (such as the subject of this report) or a new custom designed and constructed facility at a considered new, or the same, location. Note, it may be relevant to co-locate other functions in a custom-designed structure, such as a covered BBQ area, meeting place, campers' kitchen, etc, so other proposed infrastructure for the Lake foreshore should be considered as a candidate for possible co-location, in order to add functional value, and capitalise on project mobilisation. Pictured example designed by Townsend Associates, Architects, for Floriade, Canberra



MODULAR/TRANSPORTABLE
New modular unit integrated into an existing landscaped precinct and given a local identity via landscaping elements and custom selection of materials and finishes. Pictured example from Kwinana Adventure Park from modusaustralia.com.au



PURPOSEDESIGNED-REPEATCONSTRUCTION
This purposedesigned modular style of facility has been designed to be used repeatedly through a large park or minicipal area, with the design reflecting the unique characteristics of the environment in which it is situated, with a light and airy individual character. Pictured example as used in National Parks from dynamicarchitecture.com.au

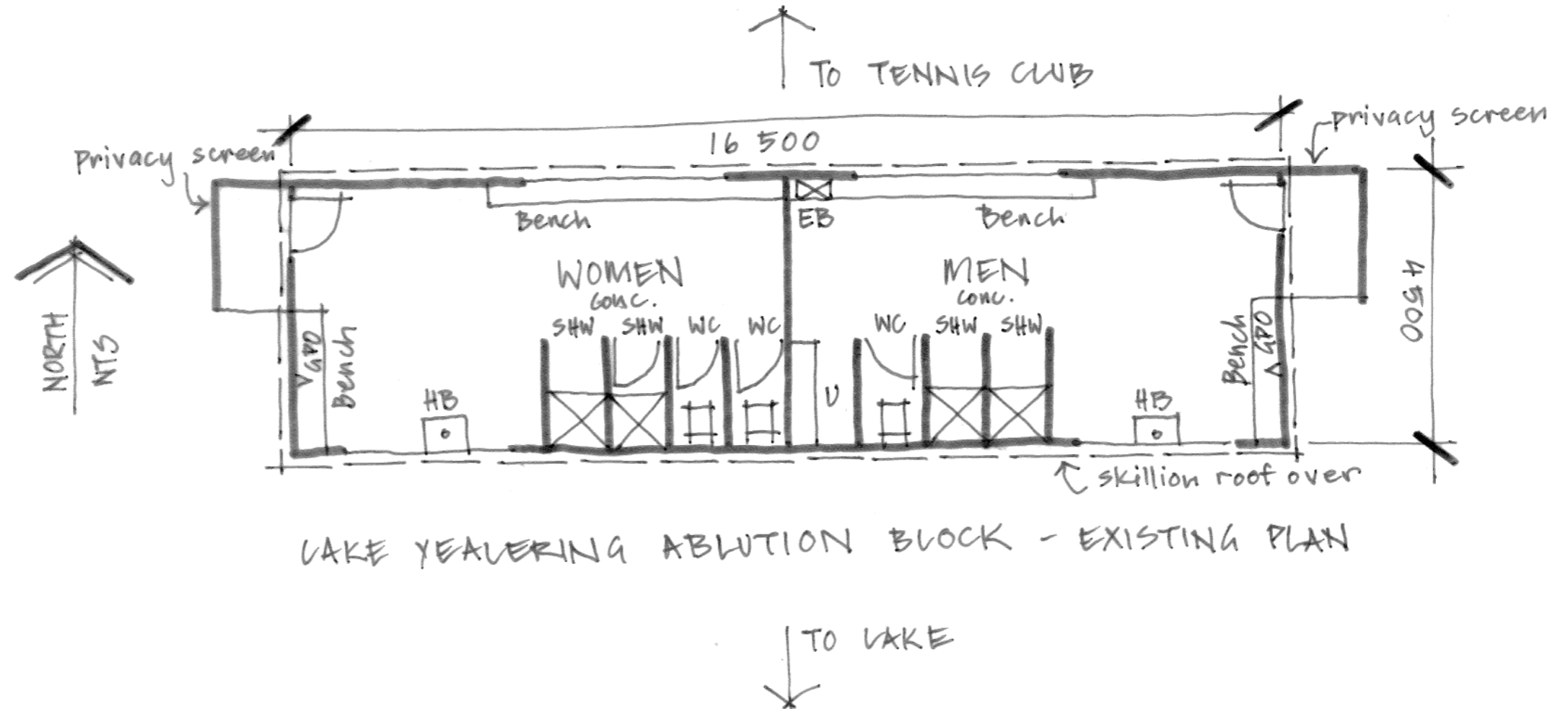
EXISTING FLOOR PLAN

CONSTRUCTION NOTES

1. Construction type is single leaf brick walls and corrugated steel and polycarbonate sheet on timber framed roofed public ablutions building built circa 1963
2. Separate mens and womens ablutions comprising a large changeroom each side containing a handbasin, two WCs (women) or a WC & urinal (men), and two showers, with no hot water supply provided. A power outlet to each side and lighting are available.
3. The plan aligns east-west, with the respective entrances either end with a screen privacy wall.
4. The ablutions are available 24/7 for use by the public, but currently the showers are out of order.
5. Facilities are not designed to meet universal access requirements.
6. The single leaf brick walls exhibit some cracking (to the north mural, and over the entrance to the mens side) consistent with reactive clay soil foundations and presence of large trees adjacent. Acid sulphate soils and proximity to the Lake have contributed to fretting of brickwork to a height of 450mm from ground level for the length of the southern wall.
7. There is a notable painted mural of pink and grey galahs to the full extent of the northern wall
8. Compliance of existing services to meet current regulatory requirements should be determined by qualified tradespeople.

PROJECT BRIEF

The Yealering Foreshore Development Plan notes: "The Ablution building is retained in its original location for cost benefit. Further planning of this site will need to take place as there is a possibility to modify the existing structure or to rebuild. External and internal improvements could be made to these amenities including a bench surrounding the basin, disabled toilet (currently available at the town hall site), a working shower for people to rinse off after being in the lake (consider an outside rinse shower) and infant change table.



EXISTING PLAN
1:100

ASSESSING PROJECT BUDGET

CONSTRUCTION BUDGET PLANNING

A current construction budget has not yet been determined by the Shire of Wickepin, due to the number of options available to redevelop the Ablution Block facilities.

These options are:

1. Refurbish Existing Ablution Block
2. Demolish Existing Ablution Block, and
3. Construct new Individual WC Building on same or another site
4. Construct new Modular WC Building on same or another site

To consider the merit of the available options on a cost of construction basis, we can provide cost estimates for each based on square metre rates, for those components which are currently known. Factors varying those rates include:

- distance from Perth Metro (Regional Indice for Yealering is 120%) affecting freight and contractors costs
- volatility of the current construction environment brought about by the governments Covid-19 pandemic economic stimulus measures
- type of construction - modular, transportable, conventional
- premium for BAL, reactive soil conditions and earthquake zone compliant construction if required
- BCA compliance - sanitary provisions for Building Class
- presence of Hazardous Materials or unknown site conditions. The Shire of Wickepin Asbestos Materials Register should be consulted prior to any demolition works, and the presence of hazardous materials established prior to commencement, with appropriate risk mitigation strategies complied with.

COMPLIANCE WITH BCA REQUIREMENTS

A new WC Building capable of servicing 30-40 people at peak use would require (reference BCA sanitary provisions for a Class 9b building - sports facilities)

- for 20 men - 1 closet pan, 2 urinals, and 2 washbasins,
- for 20 women - 2 closet pans and 2 washbasins,
- There is also a requirement to provide 2 showers each for both men and women. However, this requirement may be negotiated if unisex external showers are to be supplied.
- Additionally, one unisex, or one each mens and womens Universal Access WC with shower will need to be provided. We note that there is room available to provide separate mens and womens UA facilities under the existing roof cover.
- The Existing Ablution Block has a covered area of 16.5m x 4.5m, equivalent to 74.25m². This is extra spacious for the necessary sanitary provision (see above), which would require approximately 63.5m².

BUILDING AREA ESTIMATES

The Existing Ablution Block has a covered area of 16.5m x 4.5m, equivalent to 74.25m². This is extra spacious for the necessary sanitary provision (see below), which would require approximately 63.5m².

Replacement cost for this building would be in the order of \$2805-\$3025/m² Perth, therefore \$252,000-\$272,000 Yealering with 120% regional indice applied

A new WC Building capable of servicing 30-40 people at peak use would require (reference BCA sanitary provisions for a Class 9b building - sports facilities) an allowance of approximately 7.0 x 6.5 or 45.5m² floor space should be made to fully accomodate this program.

Additionally, one unisex, or one each mens and womens Universal Access WC with shower (allow approximatly 3.0 x2.0, or 6m² each instance) will need to be provided. We note that there is room available to provide separate mens and womens UA facilities under the existing roof cover.

If the Construct New options were selected, a floor area of 57.5m² would be required to accomodate the program (inclusive of showers and a Unisex UA facility, less without showers), say 65m² overall.

OPTION COMPARATIVE COSTS

1. Refurbish Existing Ablution Block - allow say \$1800-\$2000/m² Perth, therefore \$140,000-\$156,000 Yealering with 120% regional indice applied PLUS allowance for rectification of building defects (fretting and cracking brickwork, service compliance, etc) say \$20,000, total construction cost \$160,000-\$176,000.
2. Demolish Existing Ablution Block - allow say \$10,000.
3. Construct new Individual WC Building on same or another site - allow say \$2805-\$3025/m² Perth, therefore \$220,000-\$235,000 Yealering with 120% regional indice applied. Add demolition costs, total construction cost \$230,000- \$245,000
4. Construct new Modular WC Building on same or another site - obtain quotation from manufacturer based on BCA compliant specification for more accurate estimate, allow \$150,000. A similar size and specification Ablution Block was supplied to Shire of Bruce Rock this year by Modular WA for supply only price of \$116,500. Add demolition costs, total construction cost \$160,000.

These referenced comparative costs do not include site works, parking areas, access ramps, landscaping, premiums for high level statutory compliance requirements, decommissioning of redundant services (septic system), non-standard sewerage treatment solutions, loose or special equipment, furniture, furnishings, legal and professional fees, permit fees.

The costs indications provided can be used for initial feasibility studies only, we recommend thereafter that detailed cost estimates be prepared by a Quantity Surveyor.

Reference: Rawlinsons Construction Cost Guide 2021 as amended for 4th Quarter.

RECOMMENDATION - WHICH OPTION?

ORA recommends that the Shire of Wickepin consider the refurbishment of the existing Ablution Block at the Lake Yealering Foreshore, in preference to the other available options, for the following reasons:

- Refurbishment constitutes a cost effective solution compared to demolition and rebuilding or replacing the facility with a modular building.
- The Refurbishment option is least environmentally wasteful of materials and of human resources including building labour, keeping demolition waste out of landfill
- The existing painted mural can be retained, and enjoyed by Precinct visitors
- Sufficient (indeed, surplus) covered area is available within the existing building footprint to house even the most stringent reading of the BCA sanitary provisions requirements.
- It will be possible, with a considered design contribution, to make the existing building very aesthetically attractive and functionally suitable, with the added possibility of co-locating other infrastructure requirements to in order to add functional value, and capitalise on project mobilisation.
- Cost savings by choosing a cost effective solution such as refurbishment could permit reallocation of funds to other proposed works in the Precinct
- Lower associated professional and statutory fees

DETAILED COST PLANNING

There are three strategies for determining a cost for a project of this nature.

- An Architect can prepare a cost estimate based on square metre rates.
- Quantity Surveyor (QS) Report (Approx \$1500-\$3000, most detailed and accurate method) - this route requires preparation of detailed drawings and specifications to describe the work for assessment by the QS.
- Builder's Quote (often included in part of their quoting procedure at no cost. Alternatively a fee may be charged. Not generally suitable for LGA projects, due to statutory tendering requirements.)

CONSTRUCTION VS OTHER PROJECT COSTS

- Construction Costs (builder's work and margins)
- Authority Approvals (DA and Building Permit)
- Other Consultant Fees as required

AUTHORITY APPROVALS

Development Approval (DA)

- As the building site is within a Reserve and the land is vested in the Shire of Wickepin, we understand a DA will not be required in the event new construction is proposed.

Building Permit (BP)

- Based on the proposed scope a BP may be required for these works. Changes to the sewerage treatment system will require a permit. The necessity for a BP will be largely determined statutory requirements and the final construction cost of the project.

Bushfire Attack Level (BAL)

- The DFES bushfire [website](#) indicates that this site falls within a Bushfire Prone area and therefore a BAL assessment is required.

ARCHITECT FEES & SCOPE

There are various ways that architects set their fees. This includes hourly rates, percentages and lump sum agreements. ORA typically charge percentage fees, which are based on the construction cost.

On larger projects a percentage based fee typically applies (in the order of 15% of the construction fee, depending on project type and complexity).

ORA can provide the foillowing services:

- Options Planning and concept design including client meetings/feedback
- Documentation Package (drawings and visualisations to confirm you are happy with the design, have a cost estimate prepared by a Quantity Surveyor, find a builder and provide working drawings for the builder to build from
- Completing a Materials and Finishes Schedule
- Liaising with Local Government and other statutory Authorities
- Helping you find a builder and negotiate a fee
- Providing ContractAdmin during the construction phase

More detail on these, and other services can be found in our architectural services proposal, available at your request.

PROJECT PRIORITIES

As the brief develops it might be useful to consider how you would rate the following priorities:

- Budget
- Function
- Aesthetics
- Time frame

FOLLOW UP QUESTIONS

The following questions are raised by the project parameters, which can be answered as the project progresses, and more is learned about the nature of it:

- How long will the build take?
- What alternative facilities are available to be used while the current facility is unavailable - particularly with reference to the Tennis Club patrons and the annual Regatta?
- How can the project be funded, and are grants available for capital works of this kind?

We would be happy to discuss these and any other issues which may occur to you after reviewing this report.

FINAL THOUGHTS

If you have any additional questions or comments please don't hesitate to contact me. We are always looking for feedback on our services, and welcome your input.

APPENDIX A - Lake Yealering Development Plan Excerpt

5 Projects

5C Ablution Upgrade

Survey Results: 84.43% liked the idea of upgrading the ablutions with 49.18% considering this to be high priority, 25.41% medium priority and 9.84% low priority³.

Issues, Condition and Concept Plan Consideration

The brick ablution block are general public toilets open 24hours and service both the foreshore area and the Yealering Tennis Club. Female amenities include two toilets, one shower (currently not in function), and one basin with no bench. Male amenities include one urinal, one toilet, one shower (not in function) and one basin with no bench. Currently the ablutions do not cater for people with all abilities as access is limited (Figure 8). The majority of the community considered upgrading these a high priority.

Ablution Design (Legend Item 22)

The Ablution building is retained in its original location for cost benefit. Further planning of this site will need to take place as there is a possibility to modify the existing structure or to rebuild (Figure 9). External and internal improvements could be made to these amenities including a bench surrounding the basin, disabled toilet (currently available at the town hall site), a working shower for people to rinse off after being in the lake (consider an outside rinse shower) and infant change table. The proposed paths enable easy access for people of all abilities and provide a link to the carpark, foreshore area, playground and the eastern ski beach.

Revegetation Scheme (Legend Item 22)

To enhance the surrounding area, plantings of low maintenance easy care shrubs has been proposed.



Figure 8 Existing Ablution limited access



Figure 9 Example Ablution Upgrade

APPENDIX C - Lake Yealering Lot 29612 Reserve 9610



APPENDIX C - Lake Yealering Foreshore Bushfire Prone Map



Office of Regional Architecture
Architects at Large

Office of Regional Architecture

T: (08) 9699 6474

M: 0429 421 287

E: rpecheva@regionalarchitect.com.au

W: www.regionalarchitect.com.au

I: [@ora_pechev](https://www.instagram.com/ora_pechev)

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