

# Shellharbour Cemetery Masterplan

September 2020





# ACKNOWLEDGMENTS

We acknowledge and thank the following people who contributed to the formulation of this Masterplan and report.

## SHELLHARBOUR CITY COUNCIL STAFF

Bailey Angeloski	Trainee Civil Engineer
Daniel Brilsky	Manager Projects
Joanne Crandell	Cemetery services Officer
Rosemary Crowhurst	Group Manager Services
Michael Dee	Civil Coordinator
Ben Rawson	Construction and Maintenance Manager

## OUR SUB-CONSULTANTS

Debra Page Design	Signage
Rodney Vapp and Associates	Quantity Surveyor
Stormy Water Solutions	Stormwater Specialist
Virteer	3-D rendering

We acknowledge and thank our **staff** for their effort, expertise and dedication:

Shika Maleki  
Florence McIver-Jaquet  
Xuyao Wang

VERSION	DATE	PREPARED BY	COMMENTS
1	04/02/2020	FJ/XW	Draft for comments
2	21/02/2020	FJ/XW	Final Draft
3	04/09/2020	FJ/XW	Draft for consultation

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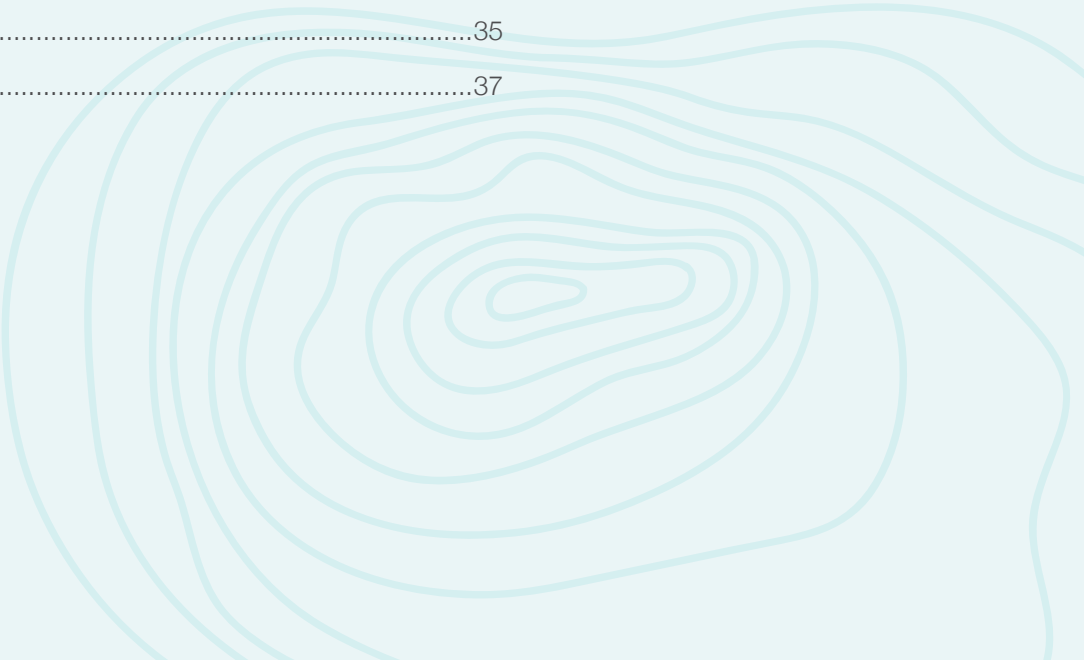
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## EXECUTIVE SUMMARY

In November 2019, Florence Jaquet Landscape architect (FJLA) was commissioned to prepare a Masterplan for Shellharbour Cemetery, which is under the responsibility of the Shellharbour City Council (SCC). Within the organisational structure, the cemetery is part of the Services Group (Parks, Workshop, Aquatic Recreation, Works Team).

The overall objective of the masterplanning exercise is to provide a Masterplan of the Shellharbour Cemetery in order to:

- improve amenity for members of the public and,
- incorporate a number of recommendations from the “Strategic Plan for Albion Park and Shellharbour Cemeteries” report by Changing Places, dated in August 2019, a document aimed at improving the operation and profitability of the Council cemeteries. In particular:
  - Identify and incorporate a location for possible natural burials at both sites (CPR 23 & CPR 24)
  - Identify and develop way finding signage for both sites (CPR 21)
  - Identify and develop additional locations for cremated remains
  - Include within the Shellharbour Masterplan the replacement of the existing toilet block (CPR 40)
  - Include within the Shellharbour Master Plan the inclusion of a memorial rock and plaque
  - Develop a Map which is suitable for public use (CPR 21)

A thorough analysis of the site by two specialists in their fields has found that a number of opportunities exist for the cemetery:

- Release of new lawn & monumental graves (390 N °)
- Development of a new high quality memorial gardens on the upper section of the site (subject to further geotechnical investigations)
- Introduction of artwork to be memorialised
- New children & natural burial sections
- Improved amenities for staff and visitors
- Improved signage & wayfinding.

The masterplan offers solutions to most of the issues raised and ensure the site remains a viable and respectful proposal for the interments of the town for the next few decades.

Armed with this plan Council next challenge will be to raise the revenue of the cemetery and allocate the funds required for the implementation of the prioritised recommendations within this report.

## SUMMARY OF RECOMMENDATIONS:

### **Recommendation One**

*Investigate stormwater incoming run-offs & potential for capture.*

### **Recommendation Two**

*Conduct a comprehensive Geotechnical investigation in the “unused” western burial area. Memorial Gardens for cremated remains should only be developed if and when the area has been confirmed as unsuitable for burial.*

### **Recommendation Three**

*Establish shrubs (between 0.5m and 3m in height) against all boundary fences to soften its appearance and create a better visual buffer to the adjacent residential area and improve street presentation.*

**Recommendation Four**

*Establish some avenue planting along the main entrance and around the roundabout to improve the sense of arrival and provide additional shade.*

**Recommendation Five**

*Consider shade provision in new and highly visited areas.*

**Recommendation Six**

*Conduct Arboricultural Audit of all trees with safety of staff and visitors in mind. To be carried out every 2 years by a qualified arborist.*

**Recommendation Seven**

*Provide irrigation to all ornamental garden beds, with priority given to those hosting interments.*

**Recommendation Eight**

*Relocate the north-east boundary fence to its correct position ie. on title boundary.*

**Recommendation Nine**

*Upgrade fencing to bus depot to match front fence.*

**Recommendation Ten**

*Provide grass reinforced parking bays within the roundabout, thus providing another 14 parking spaces.*

**Recommendation Eleven**

*Consider some additional fill and parking bays on the eastern side of the entry road, thus providing another 6 parking spaces.*

**Recommendation Twelve**

*Extend the road into the western higher grounds, with 2 disabled-only parking bays and associated turning bay for those in need. Block public access past this point.*

**Recommendation Thirteen**

*Replace “post and rail” vehicular barriers with bollards (timber or durable recycled plastic).*

**Recommendation Fourteen**

*Replace existing toilets with nominated toilet block.*

**Recommendation Fifteen**

*Provide a large shelter on site for community use, shelter from rain and sun, in accordance with Council’s chosen design.*

**Recommendation Sixteen**

*Consider providing staff with better pre-fabricated storage facilities in keeping with other buildings’ styles and materials (Short term). Remove and re-use elsewhere in municipality when cemetery is full (Long term) and use space for burial.*

**Recommendation Seventeen**

*Extend pipe and taps to areas of new development (western side) and near new facilities (Shelter/staff amenities).*

**Recommendation Eighteen**

*Investigate alternative water sourcing from adjacent bus depot property.*

**Recommendation Nineteen**

*Implement the recommendations from the signage strategy, including entry signs, maps, section naming & interpretation signage.*

**Recommendation Twenty**

*Introduce sculptures from local artists to enhance the landscape setting. Provide cremation interments around it to offset cost of artwork.*

**Recommendation Twenty-One**

*Develop new memorial gardens for cremated remains with contemporary design, more choice and more visual appeal.*

**Recommendation Twenty-Two**

*Provide new lawn beam sections and new monumental sections in areas highlighted as “spare land”, the proportion of each one defined by demand.*

**Recommendation Twenty-Three**

*Allocate an area for Natural Burial and beautify to attract patronage. Test market first and revert to other grave types if uptake fails.*

**Recommendation Twenty-Four**

*Consider a single size for all rights of burial on site, preferably no more than 1.2m wide and 2.4m long.*

**Recommendation Twenty-Five**

*Consider double rows in all Monumental sections with a 1.2m path access between rows. Purchase appropriate equipment if current one does not fit.*

**Recommendation Twenty-Six**

*Consider a children section, subject to market demand.*

A detailed Masterplan, enlargements of key areas & costings are available in the Appendices.





# INTRODUCTION

## BACKGROUND

In November 2019, Florence Jaquet Landscape architect (FJLA) was commissioned to prepare a Masterplan for Shellharbour Cemetery, which is under the responsibility of the Shellharbour City Council (SCC). Within the organisational structure, the cemetery is part of the Services Group (Parks, Workshop, Aquatic Recreation, Works Team).

The site was established in the late 1800's(?). It has not provided for new burials for a number of years. Currently, the cemetery only accommodates interments for previously reserved burial sites and ash placements.

## OBJECTIVES

The overall objective is to provide a Master Plan of the Shellharbour Cemetery in order to:

- improve amenity for members of the public and,
- incorporate a number of recommendations from the “Strategic Plan for Albion Park and Shellharbour Cemeteries” report by Changing Places, dated in August 2019, a document aimed at improving the operation and profitability of the Council cemeteries. In particular:
  - Identify and incorporate a location for possible natural burials at both sites (CPR 23 & CPR 24)
  - Identify and develop way finding signage for both sites (CPR 21)
  - Identify and develop additional locations for cremated remains
  - Include within the Shellharbour Masterplan the replacement of the existing toilet block (CPR 40)
  - Include within the Shellharbour Master Plan the inclusion of a memorial rock and plaque
  - Develop a Map which is suitable for public use (CPR 21)

The Masterplan will inform the development of the site over the next many decades. It also needs to recognise current trends in terms of burials and associated bereavement services. Over time, these trends can change, so the masterplan may need to be reviewed at regular intervals.

The Masterplan should address the project purpose, objectives and key issues and include the following:

- Land use and layout
- Access
- Character and experience (including vegetation)
- Infrastructure and maintenance
- Revenue opportunities and yield.

## SCOPE

The scope of this project is to

- Present the site analysis findings in written and graphic form.
- Incorporate ideas borne out of the consultation with key stakeholders and community.
- Produce a vision for the future of the cemetery that is underpinned by Shellharbour City Council's key core values listed below and realised through a series of projects.

- **Respect:**
  - Embracing diversity and welcoming differences in backgrounds, experiences and viewpoints.
  - Supporting a safe and healthy work environment...
- **Sustainability:**
  - Reflecting community needs in the delivered services.
  - Making decisions that will positively impact the City, and its environment for generations.
  - Adopting a long-term view to deliver enduring benefits.
  - Encouraging creativity, innovation and continuous improvement to achieve a lasting impact.
- Provide costings, staging and priorities for implementation.

## METHODOLOGY

### Briefing:

An onsite briefing session took place on 27th November 2019 with Council officers from the Services Group together with the current cemetery grounds staff.

### Relevant documents:

A number of documents were made available to assist in defining the current issues facing the cemetery

- Base plan –with Lidar contours only and aerial photography.
- Services plans
- “Strategic Plan for Albion Park and Shellharbour Cemeteries” report by Changing Places, dated in August 2019
- Flooding maps.
- Flora and Fauna background info
- Cultural Heritage background info (AHIMS Web search)
- Current concept plans
- Preferred Toilet and shelter plans and elevations.

### Stakeholder consultation:

A number of interested parties were contacted for their input into the consultation process:

#### INTERNAL PARTICIPANTS

Bailey Angeloski  
Daniel Brilsky  
Joanne Crandell  
Rosemary Crowhurst  
Michael Dee  
Ben Rawson

#### SHELLHARBOUR CITY COUNCIL

Trainee Civil Engineer  
Manager Projects  
Cemetery services Officer  
Group Manager Services  
Civil Coordinator  
Construction and Maintenance Manager

#### EXTERNAL PARTICIPANTS

(to be advised - subject to public consultation's response)



## Analysis

A visual analysis was carried out by FJLA, cemetery specialist and landscape architects, the findings of which are detailed within the next chapter.

**Draft Masterplan:** Based on the findings of the various analysis and the issues highlighted during the stakeholder's consultation process, a list of issues was formulated. This provides a preliminary proposals with realistic proposals attempting to resolve wide-ranging issues under a limited budget.

**Final Draft and Final Masterplan:** Upon approval of the Draft Masterplan, the Final Draft Masterplan was drawn and is to be read in conjunction with this report. The plan is to be exhibited for 4 weeks in September 2020 and public comments sought. Upon receipt of feedback, both documents will be modified and re-submitted for approval and endorsement by the SCC.

The report is meant as a management tool to guide implementation as well as staff inductions.

The Final Masterplan provides a preliminary "yield" calculation for the site to estimate its remaining "life expectancy".

**Implementation:** The main recommendations of the masterplan were formulated as a series of capital works tasks and prioritised into three main categories:

- Stage 1:            -Immediate needs/First priorities
- Stage 2:            -Medium term (should finances permit)
- Stage 3:            -Long-term (should finances permit)

The capital works cost estimation is to be prepared by a qualified Quantity Surveyor.



Fig 1. Context Map

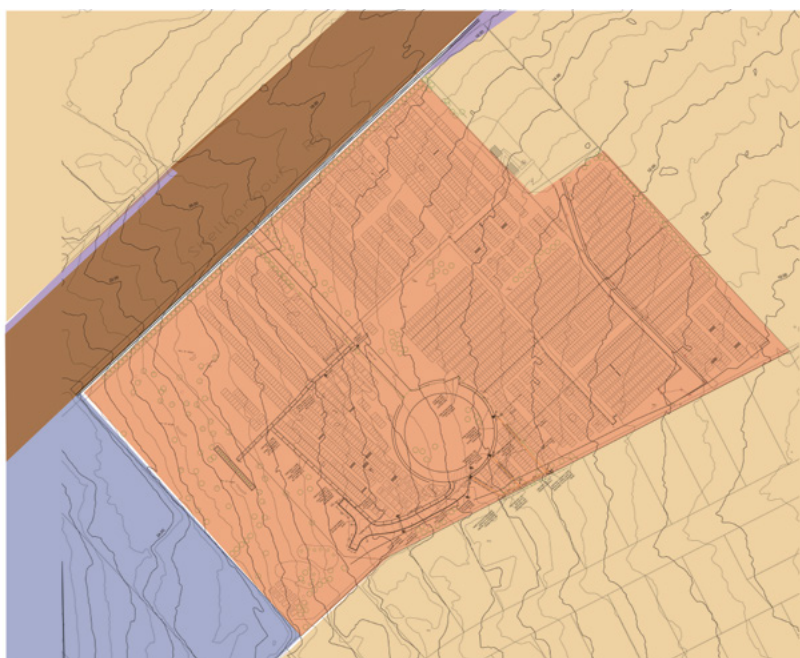


Fig 2. Zoning

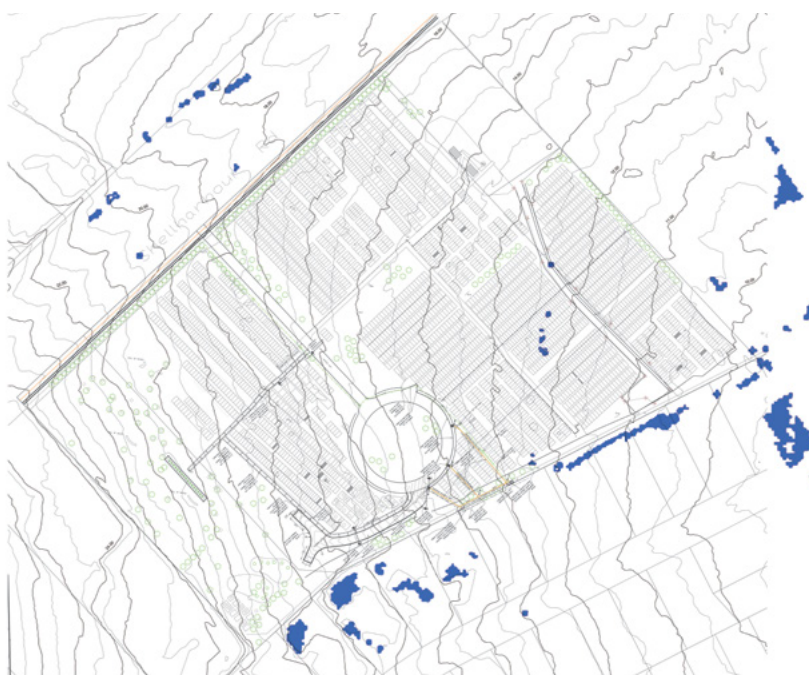


Fig 3. Flooding

## ANALYSIS

Analysing the site thematically helps deal with the site issues. It also helps generate key recommendations in a systematic and thorough fashion.

These key recommendations will then form the basis for the Masterplan concept design, which are detailed in the next Chapter “Proposals”.

### GENERAL

The site is approximately 2.74 Hectares (195m long x 120 to 160m wide approximately) and located at 441-443 Shellharbour Rd, in Shellharbour. It is zoned SP1-“Special Activities” under the Shellharbour Local Environmental Plan 2013.

### TOPOGRAPHY AND CHARACTER

The land generally slopes towards the East with a high point on the western tip of the site.

The western, higher ground is steeper (average 1V:12H), whilst the eastern, lower ground is flatter (1V:25H). Access in this area is more difficult (refer “access and roads” chapter)

The site is away from the town centre. It is bordered by residential properties on 2 sides, Shellharbour Rd on another and the “Premier Illawarra” Bus depot to the west.

### FLOODING

The site is not subject to any 1:100-year flooding.

Staff indicated that water overflows into the site from the bus depot during heavy rains.

#### **Recommendation One**

*Investigate stormwater incoming run-offs & potential for capture.*

### VIEWS

The upper part of the cemetery offers great views onto Shellharbour Village, unfortunately without sea views.

Depending on one's position on site, these views are filtered through large established trees growing on site

### SOIL

According to grave digging staff, soils on the western side of the site are shallow (1m deep approximately), described as a “rock shelf” and have impeded excavation for burials in places. However, as no Geotechnical testing has been conducted, the true extent of the “rock shelf” remains unknown. It is possible that pockets could accommodate a single-depth burial or that the rock is friable enough to be excavated into.

The landscape soils are sandy with little water retention.

#### **Recommendation Two**

*Conduct a comprehensive Geotechnical investigation in the “unused” western burial area. Memorial Gardens for cremated remains should only be developed if and when the area has been confirmed as unsuitable for burial.*

### VEGETATION

The cemetery's frontage is adorned with large, impressive Norfolk Island Pines which gives it its identity and should be retained. There is no low-level planting and views into the cemetery are unobstructed.

The south-eastern boundary is planted with large and well established native trees. These trees frame the cemetery but offer a visual buffer to the adjacent residential estate only in selected places. Due to the high canopies, views in and out over the paling fence and onto the paling fence are not screened.

The north-east boundary is devoid of planting as it was removed when the adjacent residential estate was built.





Fig 4. Vegetation

The south west boundary (to the bus depot) is also devoid of screen planting.

There are no established treed avenue within the cemetery, whether along paths or roads.

A dozen established trees are scattered randomly around the edges of burial zones, offering little shade to mourners. In contrast the western part of the site host a large number of trees, random both in species and location. It is important to provide some shade within areas which are being developed/used for burial and visitation is usually higher than in older parts.

It appears that the lack of watering has led to planting failures in all ornamental garden beds, rendering them extremely unsightly and almost unsellable.

All trees also have the potential to decline under the pressures of adjacent burial excavations, free draining soils and lack of watering. It is therefore imperative, for public liability reasons, to either continue to or start auditing these trees to assess and monitor their health (current practice unknown).

It is important to note that the vegetation has the potential to enhance the site greatly. It will provide structure, shade, habitat and visual appeal in a site which is primarily used for reflexion and contemplation.

It is also important to acknowledge that the supply and maintenance of vegetation can be costly and that Council's funds are limited.

However, as noted in the cemetery's strategic report by Changing Places, the memorial gardens are a source of income and the return on investment will be commensurate with the effort put into their on-going presentation. Irrigation will be an integral part of on-going maintenance.

### **Recommendation Three**

*Establish shrubs (between 0.5m and 3m in height) against all boundary fences to soften its appearance and create a better visual buffer to the adjacent residential area and improve street presentation.*

### **Recommendation Four**

*Establish some avenue planting along the main entrance and around the roundabout to improve the sense of arrival and provide additional shade.*

### **Recommendation Five**

*Consider shade provision in new and highly visited areas*

### **Recommendation Six**

*Conduct Arboricultural Audit of all trees with safety of staff and visitors in mind. To be carried out every 2 years by a qualified arborist.*

### **Recommendation Seven**

*Provide irrigation to all ornamental garden beds, with priority given to those hosting interments.*

## **FENCES AND GATES**

Fencing types differ greatly on site:

- The front (north-west) and north-east boundary fences consist of a 1.5m high, black metal picket fence. However the north-eastern boundary fence has not been built on the property boundary and sits within the cemetery site approximately 2 metres off the title boundary.
- The south west boundary is lined with a 1.8m high chainmesh wire fence with 3 strands of barbed-wires on top.
- The south-east boundary consists of a 1.8m painted timber paling fence.

There are two (2) vehicular gates at each entrances (Main car park and main internal road) which are also used by pedestrians. They are locked at dusk.

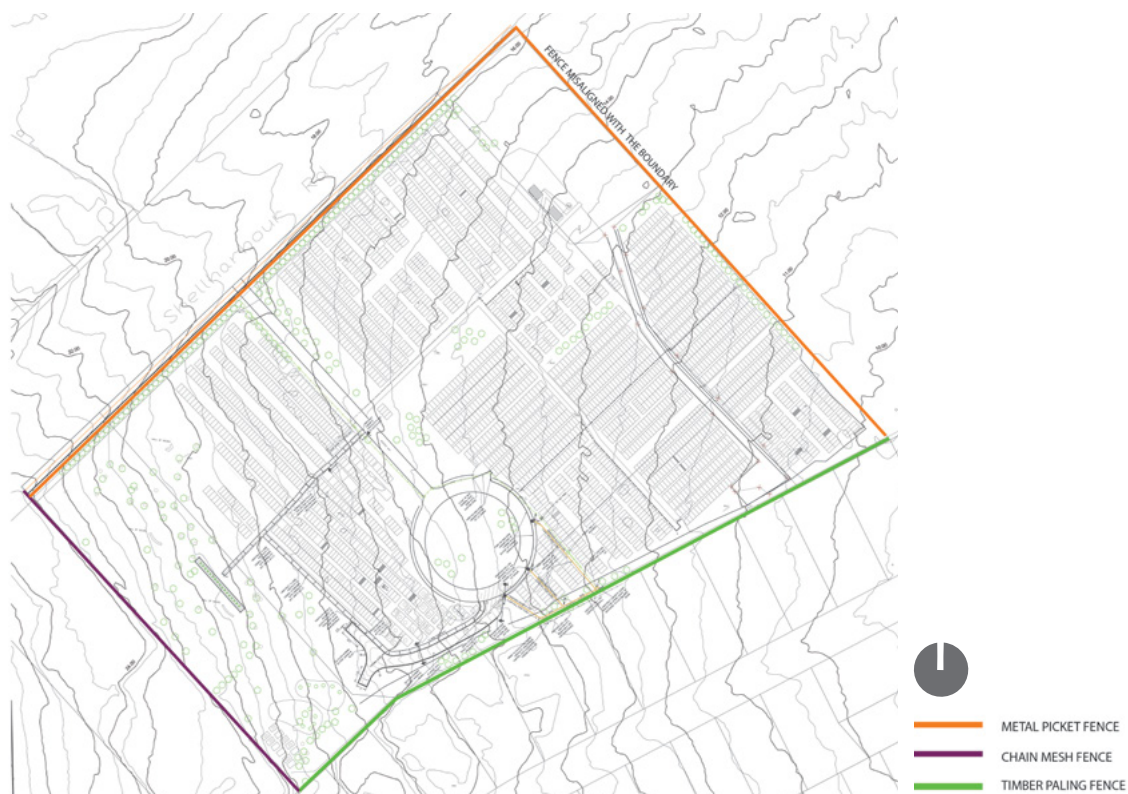


Fig 5. Fences



Fig 6. Access



Fig 7. Post & log barrier



Fig 8. Informal parking on lawns



Fencing along the boundary of the bus depot should be upgraded to match front fence.

#### **Recommendation Eight**

*Relocate the north-east boundary fence to its correct position ie. on title boundary.*

#### **Recommendation Nine**

*Upgrade fencing to bus depot to match front fence.*

## **ACCESS AND ROADS**

### **Vehicular**

As previously mentioned, the site is accessible via two (2) main gated entry points along Shellharbour Rd. One leads to a large sealed carpark accommodating up to 35 cars. The other leads to a dead-end roundabout. Parking tends to occur randomly on the grassed roundabout, the road being too narrow to park without blocking traffic. This informal and uncontrolled parking tends to occur mostly under the shade of existing trees. This may cause root damage and excessive compaction which shortens the life of these trees or creates management costs.

The circular road layout at the end of a straight road ("lolly-pop-like") is remnant of the original layout and should be retained. Any formalised parking bays within the circle should not compromise the look of "grassed and green circle".

All roads are lined with low post and rail fencing to stop car access onto burial zones. These are out-dated and could be upgraded to bollards when budget allows.

### **Pedestrian**

Pedestrian access radiates from the main access road and main carpark.

This means that most areas of the cemetery can be accessed by foot within a 80m radius, which is a manageable distance. The preferred maximal pedestrian walking distance would be around 50m, however it is no longer possible to retrofit additional road access within this established and highly developed site.

Pedestrian use existing concrete paths and maintenance access alleys between graves to access the graves, which is both common practice and acceptable.

It should be noted that the western grounds are steeper (up to 1V:10H gradient) and that pedestrian access is therefore neither easy for the elderly nor DDA compliant. This should be remedied where possible by either providing a DDA compliant path network and/or dedicated disable-access carparking bays in the upper part of the cemetery.

#### **Recommendation Ten**

*Provide grass reinforced parking bays within the roundabout, thus providing another 14 parking spaces.*

#### **Recommendation Eleven**

*Consider some additional fill and parking bays on the eastern side of the entry road, thus providing another 6 parking spaces.*

#### **Recommendation Twelve**

*Extend the road into the western higher grounds, with 2 disabled-only parking bays and associated turning bay for those in need. Block public access past this point.*



Fig 9. Buildings

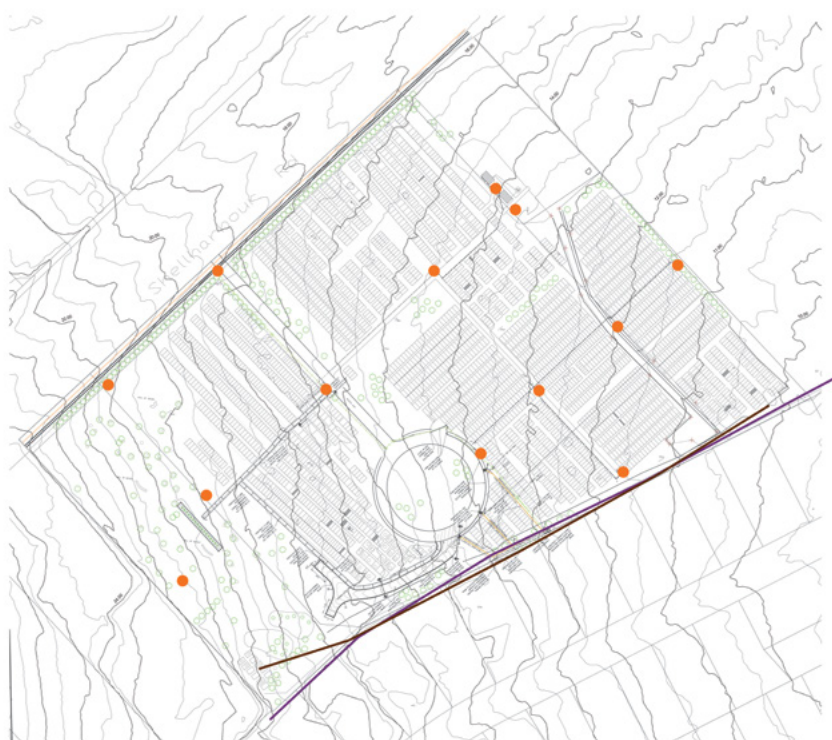


Fig 10. Services

**Recommendation Thirteen**

*Replace “post and rail” vehicular barriers with bollards (timber or durable recycled plastic)*

**BUILDINGS****Toilets**

There are two (2) gender-specific toilets on site which are dated and earmarked for replacement. Council has already chosen the replacement structures.(supplied with the consultancy brief)

**Shelters**

Some sections of the community (Maronites in particular) use the site for large functions and have expressed the need for a large shelter to host large mourning events. Others simply visit and rest and would benefit from such facility. Council has already chosen the structure.(supplied with the consultancy brief).

**Staff facility/workshop**

The staff shed is an old ship container sitting along the south-west boundary. It overlooks the site and is unsightly. It gives the impression that either the investment in a new staff facilities is not warranted due to the limited interments on site or that staff is not valued. However, it appears that large areas of land may still be available for burial which would warrant either a presence on site and/or better staff facilities (refer “Interment” chapter). When the cemetery is full this facility will be redundant can be relocated elsewhere in the municipality. The land on which it sits can be reused for burial.

As part of standard cemetery operations, storage bays (for soil, mulch, gravel etc...) are typically held on site. At Shellharbour, these are located at the end of the main carpark for ease of access.

The bays are currently in a state of disrepair & should be replaced, with screening & gated access.

**Recommendation Fourteen**

*Replace existing toilets with nominated toilet block.*

**Recommendation Fifteen**

*Provide a large shelter on site for community use, shelter from rain and sun, in accordance with Council’s chosen design.*

**Recommendation Sixteen**

*Consider providing staff with better pre-fabricated storage facilities in keeping with other buildings’ styles and materials (Short term). Remove and re-use elsewhere in municipality when cemetery is full (Long term) and use space for burial.*

**SERVICES**

Water taps are currently provided throughout the site at 30 to 50 m intervals which is adequate. Additional taps should be provided on the western end of the site (light on taps as currently under-developed) and adjacent to the new shelter.

Should the cost of potable water for irrigation be considered inappropriate (due to sustainability issues or cost), the capture and use of surface run-offs from the large, mostly sealed bus depot (uphill of the site) may provide a suitable alternative or additional water source for much needed irrigation.

According to supplied records, a number of pipes run along the south-east boundary





Fig 11. Existing signage

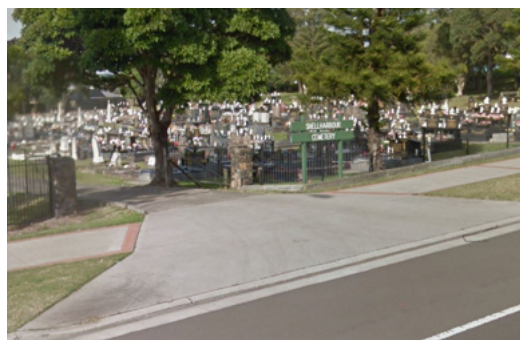


Fig 12. Existing signage



Fig 13. Existing lawn graves



Fig 14. Existing monumental graves



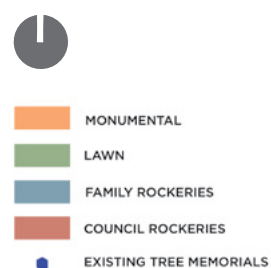
Fig 15. Existing niche walls



Fig 16. Existing memorial gardens  
(common & individual in background)



Fig 17. Interment types & their location





### **Recommendation Seventeen**

*Extent pipe and taps to areas of new development (western side) and near new facilities (Shelter/staff amenities)*

### **Recommendation Eighteen**

*Investigate alternative water sourcing from adjacent bus depot property.*

## **SIGNAGE**

There is little to no directional signage.

Signs denoting interment sections are typically green painted treated pine. They are outdated and display incorrect terminology (e.g. Headstone instead of Monumental).

There is no suitable site map/information board on site to assist visitors with wayfinding.

Signage, although within the scope of this consultancy, is outside the scope of this report. It is the subject a separate report produced by our sub-consultants “Debra Page Design” (DPD)

The network of wheelchair accessible paths would make an ideal location for any historical interpretation of the cemetery and its notable occupants.

### **Recommendation Nineteen**

*Implement the recommendations from the signage strategy, including entry signs, maps, section naming & interpretation signage.*

## **ARTWORK**

The use of focal points is an essential tool in park landscape design and, in the case of this cemetery, will create some interesting views for visitors travelling through the site.

The use of sculptures from local artists should be encouraged within the new memorial gardens and Children’s section. Such features should be memorialised (within the pedestal or around it) and positions sold as a premium product.

### **Recommendation Twenty**

*Introduce sculptures from local artists to enhance the landscape setting. Provide cremation interments around it to offset cost of artwork.*

## **INTERMENT TYPES**

### **Burial**

The site offers mostly monumental graves (Headstone and ledger) and lawn graves with plaques on sloped concrete beams.

As the site has been deemed full for a decade, no new graves are offered. Interments occur only in reserved graves or as a second interment.

Staff indicated that a Children Section should be accommodated on site, if possible.

### **Cremated remains**

A limited number of options are available on site:

- Niche walls
- Individual rock gardens (freestanding or around trees)
- Positions within a larger rock garden.
- In existing graves

The quality of the products on offer falls short of competitors and neighbouring municipalities. The designs are outdated and the lack of irrigation has resulted in most plants dying, especially in the rock gardens.

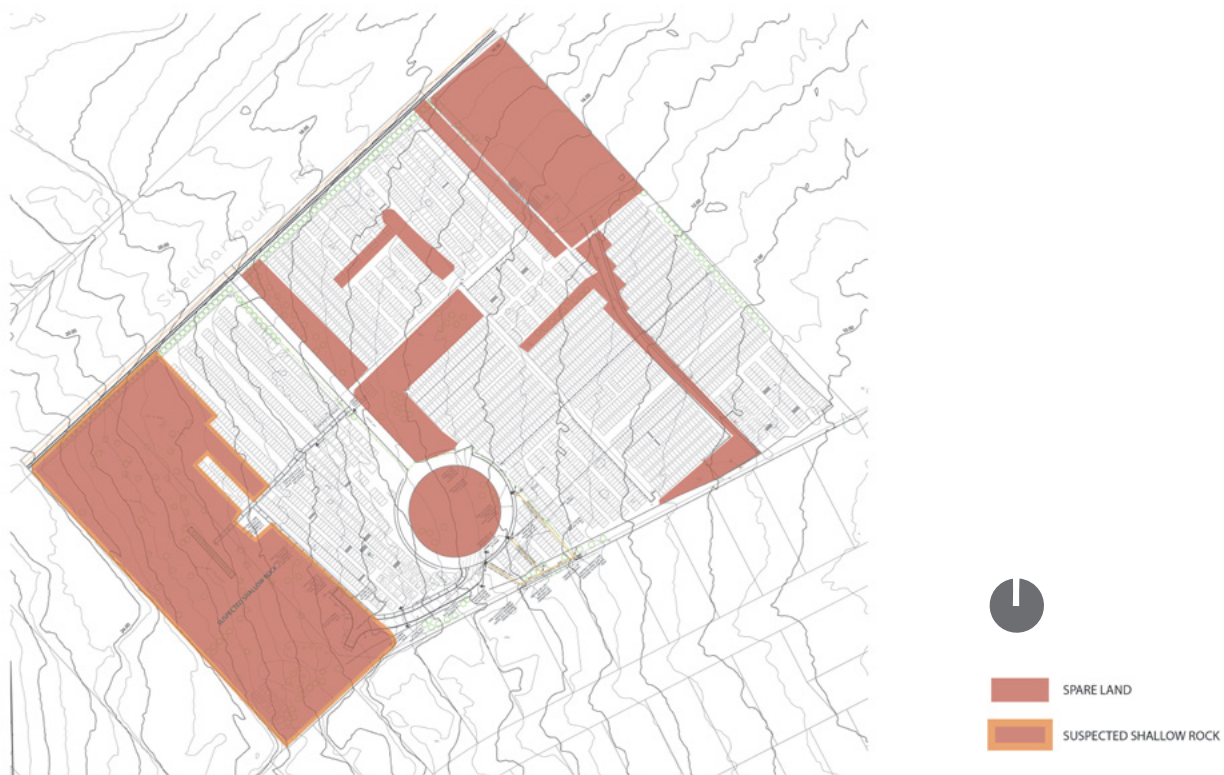


Fig 18. Spare land (to be confirmed)

**Recommendation Twenty-One**

*Develop new memorial gardens for cremated remains with contemporary design, more choice and more visual appeal.*

**Recommendation (refer Recommendation Six)**

*Provide irrigation to all ornamental garden beds, with priority given to those hosting interments.*

**SPARE LAND**

Notwithstanding that the cemetery strategic document prepared by Changing Places in August 2019 offers a number of recommendations in relation to the introduction of the “Good, Better, Best” suite of products and their pricing structure, this consultancy concentrates on the specific objectives listed in the brief:

- Identify and incorporate a location for possible natural burials on site.
- Identify and develop additional locations for cremated remains

However, in carrying out the site analysis it became clear that large areas within the site have the potential to accommodate more interment positions for both burial and cremated remains. These should be checked against burial records and geotechnical investigations.

It also became clear that grave sizes vary enormously on site (anything between 1m and 1.5m). The use of single rows is prevalent, especially in Monumental graves.

**New burial**

In areas where depth of soil allows, burials should be provided in priority to memorial gardens with cremated remains. From a visual point of view, it is preferred to locate new lawn areas adjacent to existing ones and monumental areas adjacent to existing ones to minimise the disparate “patchwork” look created by small pocket of varying styles.

The final allocation of burial types to available areas will ultimately be driven by demand, which currently sits at 50% lawn/50% monumental.

Council has indicated it wishes to consider Natural Burials on the site. An area with the right qualities would need to be set aside for this purpose.

It is important to note that the Natural Burial is, at its roots, a philosophy which precludes the use of non-natural, non-biodegradable materials in its entire process. The term Natural Burial refers to the funeral process as much as the interment process and should also be considered in the context of its ecological benefits post interment. As a philosophy, it has been watered down by many users to suit their need. As a minimum, we recommend the following principles:

- No use of chemicals in the preparation of the body.
- No use of chemicals in the construction of a 100% bio-degradable coffin (timber/cardboard/wicker/cotton shroud), no metal handles, no varnish.
- Mechanical excavation of the graves to be allowed (Manual digging is not viable in the context of a Local Government-run facility)
- Transport by car allowed ((Non-petrol driven vehicles are not viable in the context of a Local Government-run facility)
- Pleasant landscape setting, treed with local species, if possible.
- Double depth allowed.
- Restoration of indigenous ground-covers over the graves for long-term ecological restoration.
- Only bio-degradable memorials (timber – no varnish)
- Metal rods at head and toe of grave to assist with location by metal detector (Please note that GPS markers become unreliable when deeper than 200mm)- please note that Australian natives shed a lot of litter which over time accumulates and may cause an issue.



*Fig 19. Variations in grave sizes & row spacings*



Although prominent in the media and appealing to an ever-increasing environmentally conscious population, Natural Burial uptake has been patchy in Australia. Price structure is important and it may not be appealing if more expensive than the basic grave offering.

As for all new product, it should be tested on the market first for a few years in a dedicated area and, if failing to sell, the area to be reverted to products where demand exceeds supply.

### **Grave size**

- Adjoining municipalities offer graves 1m to 1.2m x 2.4m long. It is important to consider:
- the consistency of graves sizes within each section to provide an equitable product for all who pay for the same right of burial.
- optimisation of land: a 1.5m wide grave take 50% more land than 1m wide one. The cemetery will run out of space much quicker.
- optimisation of land: a single row arrangement take 20% more space than a double row arrangement. The cemetery will run out of space much quicker.

### **Recommendation Twenty-Two**

*Provide new lawn beam sections and new monumental sections in areas highlighted as “spare land”, the proportion of each one defined by demand.*

### **Recommendation Twenty-Three**

*Allocate an area for Natural Burial and beautify to attract patronage. Test market first and revert to other grave types if uptake fails.*

### **Recommendation Twenty-Four**

*Consider a single size for all rights of burial on site, preferably no more than 1.2m wide and 2.4m long.*

### **Recommendation Twenty-Five**

*Consider double rows in all Monumental sections with a 1.2m path access between rows. Purchase appropriate equipment if current one does not fit.*

### **Recommendation Twenty-Six**

*Consider a children section, subject to market demand.*

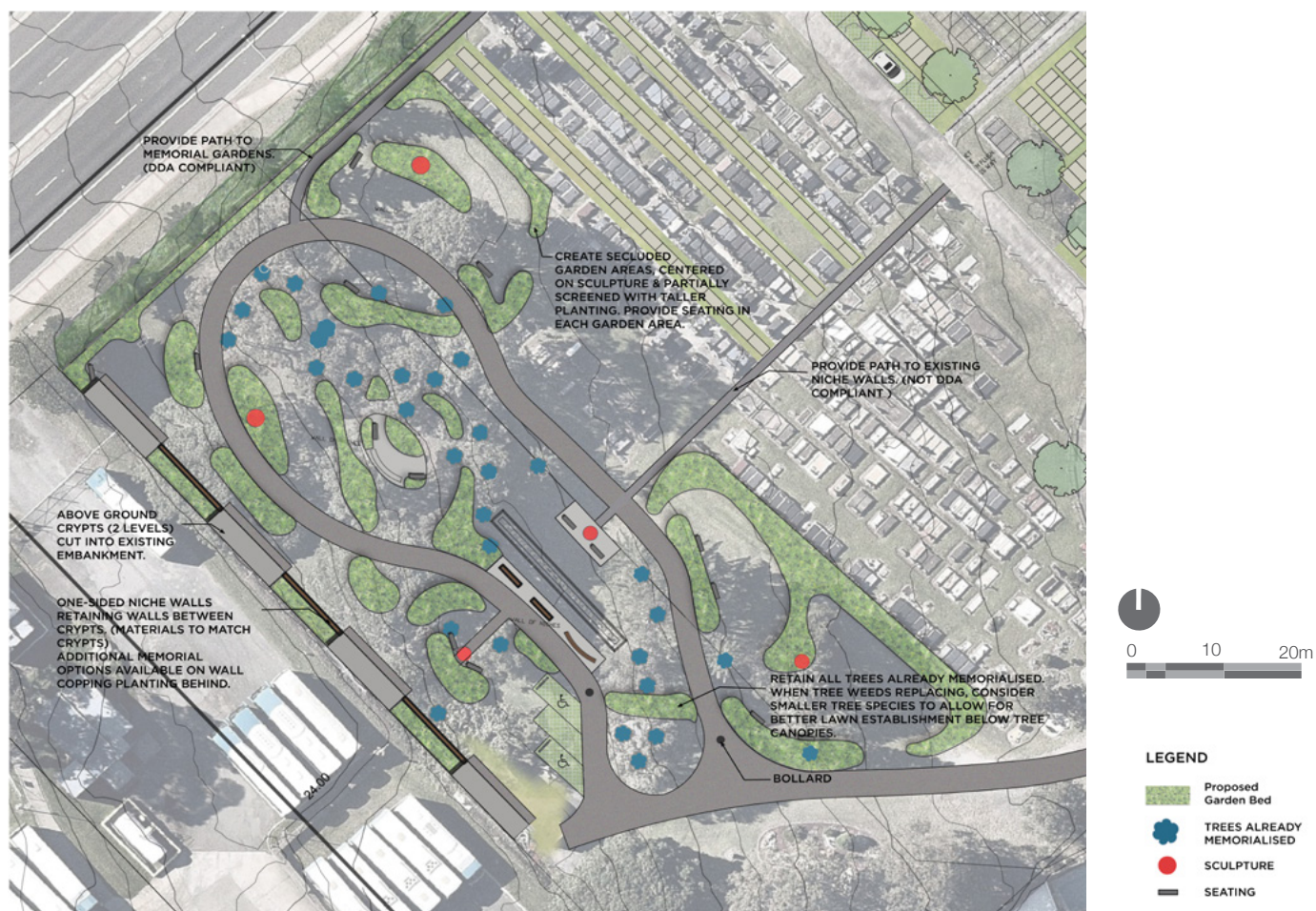


Fig 20. Enlargement Area 1

# PROPOSALS

## VISION

The cemetery already holds a certain charm and is visually appealing with its established trees and tidy appearance. It is very popular with the locals due to its proximity to the town. It has the potential to be developed further into a well presented space, offering products which responds to the community's needs.

The cemetery should also be regarded as providing valuable Public Open Space for the community and adjacent residential areas and receive funding accordingly.

The vision for the site is to provide:

- A well presented and respectful cemetery,
- A cemetery catering for the local Community,
- A cemetery retaining its charm and outlook,
- A Public Open Space which commemorates its history,
- A range of quality products.

## DESIGN RATIONALE

The Masterplan aims to provide a scenic and contemplative setting for funeral visitors as well as the wider community. It is designed as a park, capitalising on views and its rich history, offering walking paths, respite areas, toilet and shelter facilities amongst a wider choice of interments.

In response to the objectives set in the brief seeking to improve amenities for members of the public and to incorporate key recommendations from the cemetery's "strategic Plan (Aug '19), the Masterplan (Appendix #1) offers a range of new non-denominational memorialisation options amongst the existing ones, utilising the site to its fullest and therefore, lengthening the life of the cemetery.

## DISTINCT AREAS

As the site is already largely developed, minus some isolated pockets, the detailed proposals of the Masterplan can best be described in the context of these separate areas.

### Area 1: West end (Fig.20)

- Carry out a detailed Geotechnical Test over the entire area to map out variations in depth and ascertain soil constraints.
- The area will only be used for burial if geotechnical conditions allow.
- Extend vehicular road for maintenance and disabled access (3m wide). Provide two dedicated disabled carparking bays for people with limited mobility. Public vehicular access beyond this point should be restricted.
- Provide a 1:14 path/ramp with balustrade as additional universal access between the main entrance and the western corner.
- Within the memorial gardens main paths should be 2.5m wide to facilitate staff vehicles and tree maintenance equipment access throughout. Secondary paths should be 1.2m minimum.
- Create meandering paths linking pockets of gardens for ash interments, in informal landscape setting.
- Use artwork throughout.
- Provide variety of cremated placements:
  - Niche walls (similar to new ones – taking all of the ashes) (Good)
  - Retaining wall – top of wall positions (Better)
  - Around existing and new trees (individual and family) (Better)



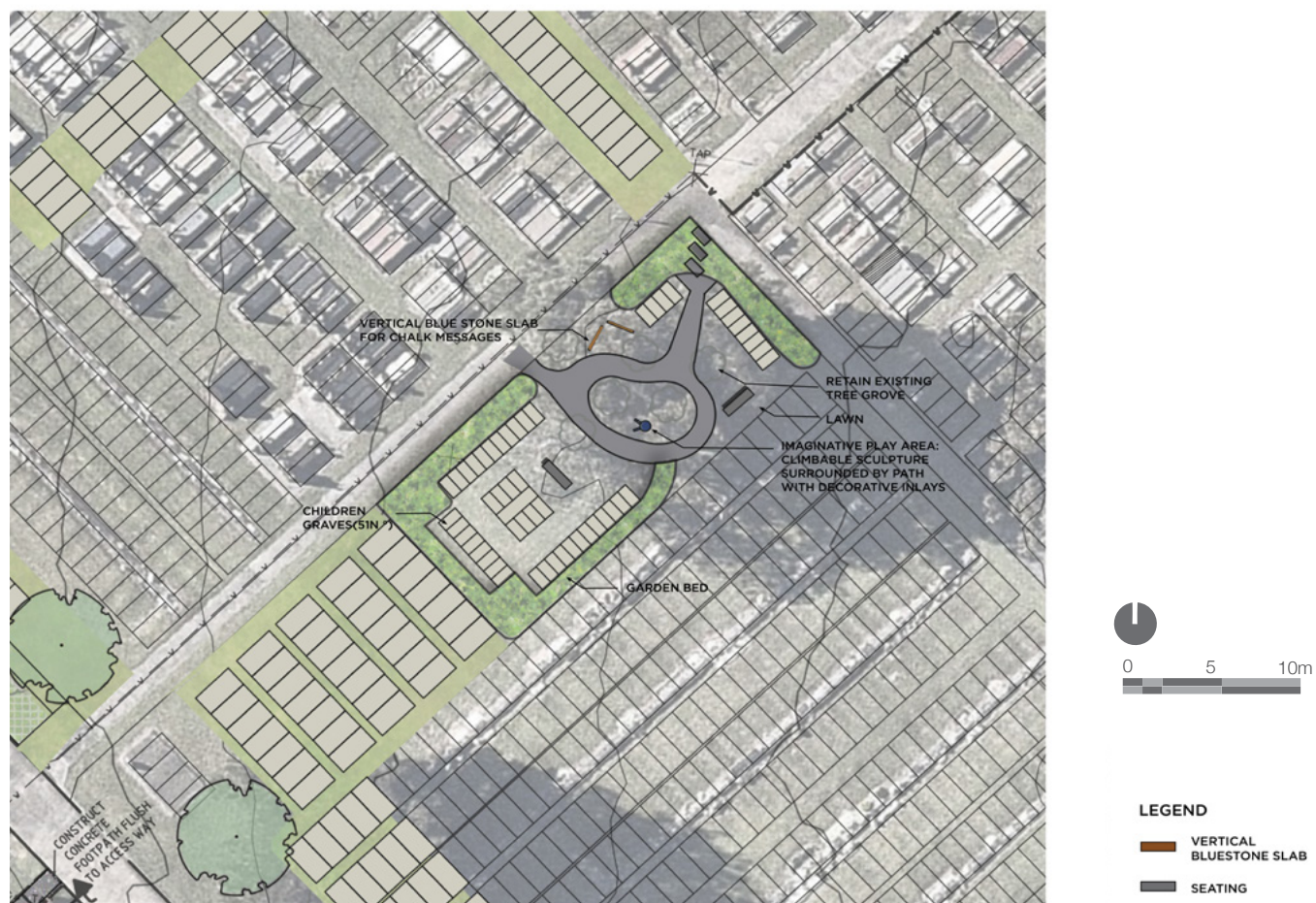


Fig 21. Area 5 - Children Section



- Garden bed edges (with defined private space, and urn receptacle below ground to minimise digging requirements and save time)(Good, Better Best depending on design)
- Provide irrigation to all garden beds to ensure quality landscape.

## Area 2: Roundabout

- Conserve the green circular shape as an important part of the original layout.
- Provide 2 rows of parking reinforced grass (Grass pave or otherwise approved) together with wheel stops.
- Provide 10 x 6m shelter in the centre to accommodate larger function and provide focal point to entry.(Landmark Peninsula K307 model- timber finish)
- Protect the shelter area with bollards.
- Retain all existing trees. Replace them when needed.

## Area 3:

- Extend lawn graves
- Leave suitable gaps in grave rows to allow for tree row to complete entrance avenue planting

## Area 4 : Grave infill

- A: Infill old grassed road with Monumental graves. Existing concrete roads provide sufficient access to monumental section
- B: Lawn graves
- C: Monumental graves – laid out double sided for space efficiencies.

## Area 5: Children section (Fig. 21)

- Children graves (51N<sup>o</sup>)
- Provide path meandering through existing Casuarinas, with respite areas and sculpture onto which messages can be drawn (Chalks) and paper messages can be attached to trees. Provide imaginative and informal play elements for children entertainment to enable parents to tend to their child's grave and grieve.
- Carry out geotechnical review to areas to map out constraints.

## Area 6: Entry driveway

- Provide parallel parking along entrance road (on one side only). Fill area and construct retaining wall to deal with level changes.
- Offer new product in wall (Headstone in wall with lawn graves in front) (Best)
- Interrupt grave rows to allow for tree planting to follow road alignment to provide better entry presentation and shade to cars.

## Area 7: Toilets (Fig. 22)

- New toilet
- Provide large concrete apron all around.

## Area 8: Memorial

- Large flat/sawn seating stones laid flat and randomly for respite amongst the trees and waiting space for toilet.
- Possible location for RSL commemorative rock.



Fig 22. Area 7 - Toilets & Respite area

### **Area 9: Staff amenities**

- Short term: Remove staff container from existing prominent location. Provide better staff facilities (lunchroom & kitchenette) and new storage for equipment in this area.
- Long-term: When cemetery is almost full, remove and return to burial land, including access road.

### **Area 9A: Storage bays**

- Upgrade storage bays with screening and gated access.

### **Area 10: Site office/display**

- Consider small meeting room for product display and meeting families, off main carpark.

### **Area 11: Fencing**

- Establish screen planting. Height to be established through consultation with adjacent property owners.

### **Area 12: Crypts**

- Potential above-ground burials units, maximum 2 levels high, linked by low one-sided niche walls/raised planters, both acting as retaining walls. To be implemented progressively and based on demand. Trees should be retained until they become senescent, after which time construction of niche walls may occur progressively.
- Upgrade fencing to bus depot, to match front metal picket fencing.

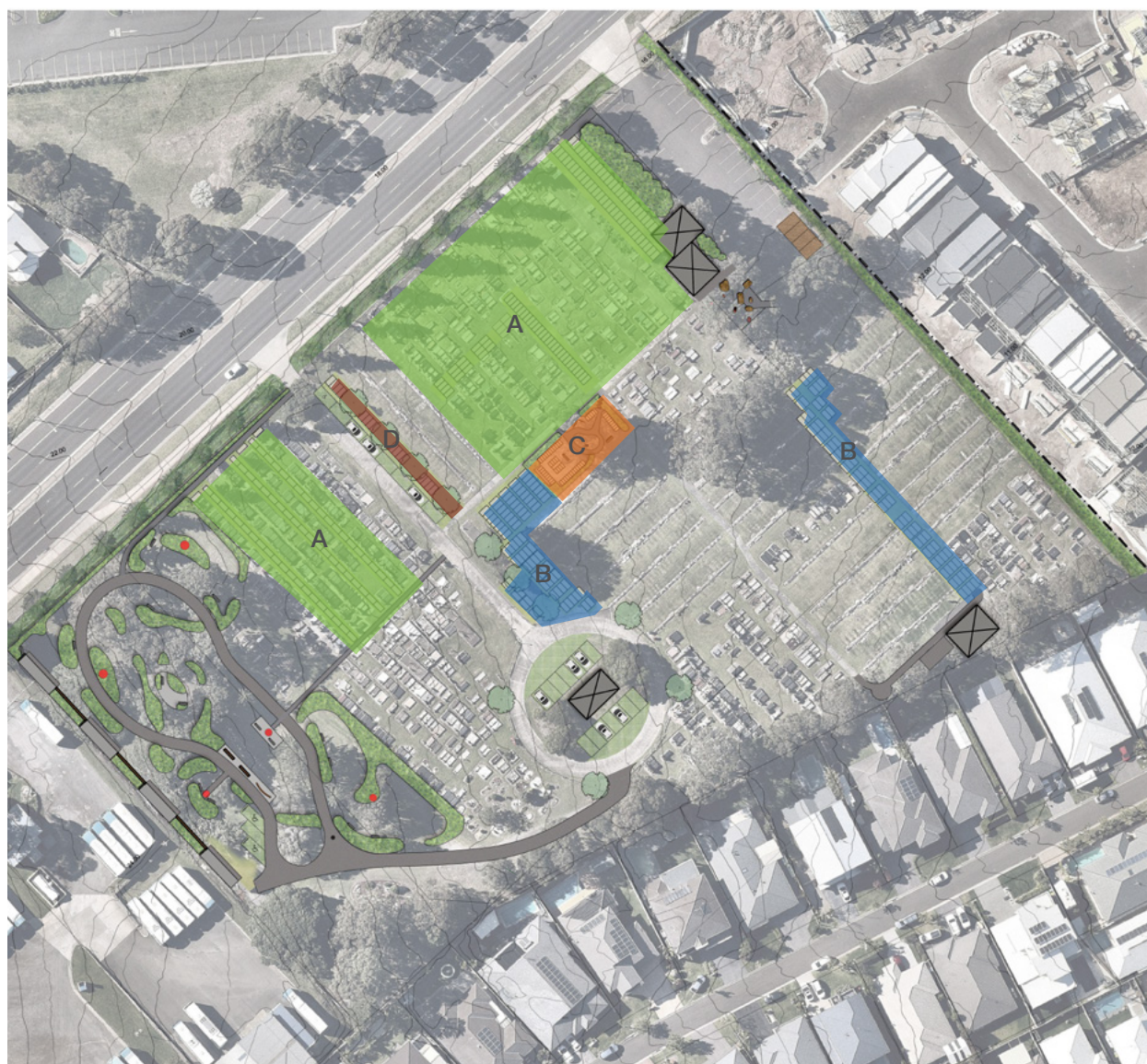
### **Area 13: Frontage**

- Infill garden bed with low screen planting to soften visual impact of cemetery & improve street presentation.

### **Note:**

- Proposed works are subject to further heritage studies and other planning detailed reviews.
- Consider collecting water off structures for storage and use on site for landscaping.





AREAS	PRODUCT TYPE	TOTAL GRAVES
A	Monumental	160
B	Lawn	149
C	Children	51
D	Headstone in wall	16



- Lawn
- Monumental
- Children
- Headstone in wall

Fig 23. Yield



## INTERMENT /YIELD

As previously mentioned, new burial sales have ceased years ago. It is therefore impossible to forecast the demand when interments resume on site.

Based on the assessment carried out by Changing Places in their Strategic Report (Aug 2019), the range of products on offer should be expanded to include:

### Burials

#### Lawn graves

Plaques on flat concrete beam

Granite desk on concrete beam

Headstone on concrete beam

Headstone in wall

#### Monumental graves

Crypts (above ground burials)

#### Cremated remains

Niche walls

Plaques/desks within garden edge

Plaques on garden edging

Plaques on retaining walls

Individual rock in garden bed

Ash scattering

Remembrance Memorial (No ashes – just name)

Memorial trees

Memorial seats

### Assumptions:

- All graves are 1.2 x 2.4m

The concept offers the following potential yield: **376 graves.**

The above calculations are broad estimates only.

The cemetery's life will be further extended by second and third interments. Its life is also expected to be lengthened with its ample capacity for ash interments.

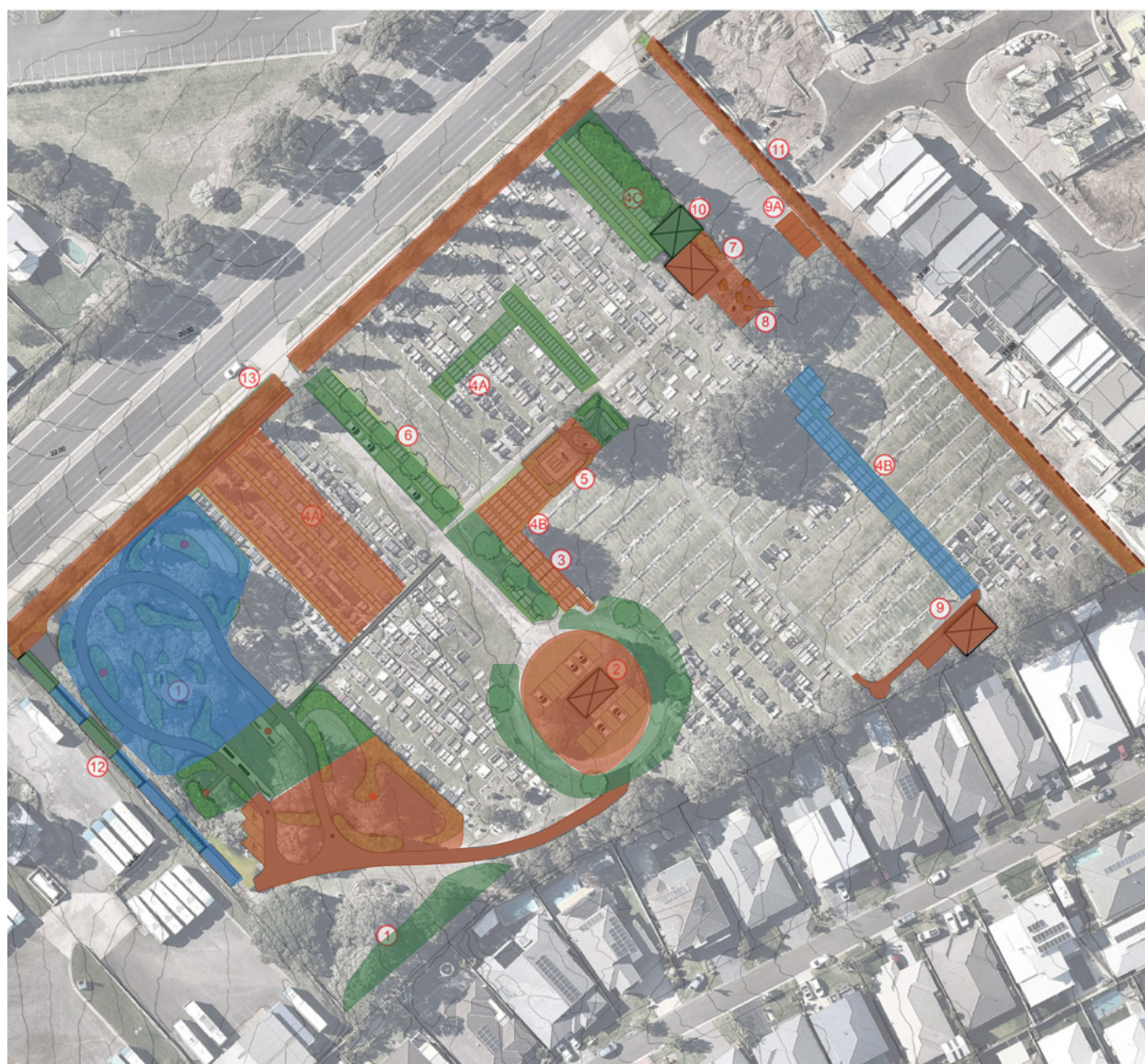
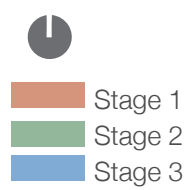


Fig 24. Staging Plan



# IMPLEMENTATION

## CAPITAL WORKS

It is important to recognise that it is not the role of a Masterplan to produce detailed designs for implementation. The Masterplan delivers policies, concepts and priorities for the cemetery. It establishes uses and their locations on site.

The Masterplan is the beginning of a process that entails the following sequence:

1. Adoption of the Masterplan and circulation amongst staff.
2. Determination of scope for first stage and allocation of funds
3. Further investigations if required, eg: Geotechnical, stormwater etc...
4. Detailed design, eg: Road design, concept designs gardens, drainage, services...
5. Preparation of tender documents and cost estimates
6. Tendering
7. Construction on site
8. Post-construction evaluation

## COSTINGS

Refer Appendix #8

## STAGING

The following is a suggested staging plan. It is driven by construction logic rather than interment demand or budget constraints.

As the Capital Works budget for each stage (1-3 below) is unknown, it is expected that some of the listed items may be pushed down the priority list due to budget constraints. This will be determined by SCC and staff.

It should be noted that typically, in a cemetery, only a few graves and memorial options get released with each stage. Each stage corresponds to approximately 5 years' worth of interment demand. This enables a progressing expenditure, minimises the maintenance costs and allows for revenue to collect in order to contribute to the cost of the next phase of development.

### Stage 1 (1-5 years)

- Carry out a detailed Geotechnical Testing over the Area 1.
- Extend vehicular road into Area 1 and disabled parking bays.
- Develop Area 1 (memorial positions, paths, artwork, landscaping and irrigation) to supply cremation positions for the next 5 years.
- Supply and install shelter and associated facilities in roundabout.
- Install reinforced grass and bollards in roundabout.
- Construct infrastructure required for burial releases (Concrete beams or pre-poured footings) (5 years' worth of burial demand for each product type)
- Develop part of the Children's section (Path, play elements and 5 years' worth of graves)(subject to market demand).

- Install new toilets and connect to sewer.
- Develop a memorial (Area 8), subject to further investigation and consultation.
- Establish plantings in Area 11, subject to negotiation with adjacent land owners.
- Investigate stormwater issues emanating from Bus depot.
- Implement recommendations from Signage Strategy and install signs throughout the site.
- Provide 1:14 path ramp and balustrade to Area 1 along frontage fence.
- Remove staff container and install new staff lunchroom and storage in Area 9 & 9A.
- Improve planting along Shellharbour Rd frontage.

### **Stage 2 (5-10 years)**

- Construct infrastructure required for burial releases (Concrete beams or pre-poured footings) for next 5 years.
- Develop part of the Children's section (5 years' worth of grave supply).
- Develop Area 1 (Burials (if geotechnical conditions allow), memorial positions, paths, artwork, landscaping and irrigation) to supply cremation positions for the next 5 years.
- Fill edge of entry driveway, construct 900mm max retaining wall and additional parking on top.(Area 6)
- Plant avenue along entry driveway (Area 6)
- Install display/meeting room (optional) in Area 10.
- Develop part of the Crypt area.(Area 12)

### **Stage 3 (10 years onwards)**

- Construct infrastructure required for burial releases (Concrete beams or pre-poured footings) 5 years' worth of demand at a time.
- Develop Area 1 (Burials (if geotechnical conditions allow), memorial positions, paths, artwork, landscaping and irrigation) to supply cremation positions, 5 years' worth of interments at a time.
- When cemetery is almost full, remove staff lunchroom building and return land to burial purposes.
- Develop remainder of the Crypt area.(Area 12)
- Construct niche retaining walls between the Crypts, as required.



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LEGEND

- Proposed Path / Road

Proposed Garden Bed

Proposed Crypts

New grave
- Proposed Building

Lawn/Reinforced lawn

Proposed Trees

Refer Enlargements



- AREA ① : WEST END**
- CARRY OUT A DETAILED GEOTECHNICAL TEST OVER THE ENTIRE AREA TO MAP OUT VARIATIONS IN DEPTH AND ASCERTAIN SOIL CONSTRAINTS.
  - THE AREA WILL ONLY BE USED FOR BURIAL IF GEOTECHNICAL CONDITIONS ALLOW.
  - EXTEND VEHICULAR ROAD FOR MAINTENANCE AND DISABLED ACCESS (3M WIDE). PROVIDE TWO DEDICATED DISABLED CARPARKING BAYS FOR PEOPLE WITH LIMITED MOBILITY. PUBLIC VEHICULAR ACCESS BEYOND THIS POINT SHOULD BE RESTRICTED.
  - PROVIDE A 1:14 PATH/RAMP WITH BALUSTRADE AS ADDITIONAL UNIVERSAL ACCESS BETWEEN THE MAIN ENTRANCE AND THE WESTERN CORNER.
  - WITHIN THE MEMORIAL GARDENS MAIN PATHS SHOULD BE 2.5M WIDE TO FACILITATE STAFF VEHICLES AND TREE MAINTENANCE EQUIPMENT ACCESS THROUGHOUT. SECONDARY PATHS SHOULD BE 1.2M MINIMUM.
  - CREATE MEANDERING PATHS LINKING POCKETS OF GARDENS FOR ASH INTERMENTS, IN INFORMAL LANDSCAPE SETTING.
  - USE ARTWORK THROUGHOUT.
  - PROVIDE VARIETY OF CREMATED PLACEMENTS:
    - NICHE WALLS (SIMILAR TO NEW ONES - TAKING ALL OF THE ASHES) (GOOD)
    - RETAINING WALL - TOP OF WALL POSITIONS (BETTER)
    - AROUND EXISTING AND NEW TREES (INDIVIDUAL AND FAMILY)(BETTER)
    - GARDEN BED EDGES (WITH DEFINED PRIVATE SPACE, AND URN RECEPTACLE BELOW GROUND TO MINIMISE DIGGING REQUIREMENTS AND SAVE TIME)(GOOD, BETTER BEST DEPENDING ON DESIGN)
    - PROVIDE IRRIGATION TO ALL GARDEN BEDS TO ENSURE QUALITY LANDSCAPE.

- AREA ② : ROUNDABOUT**
- CONSERVE THE GREEN CIRCULAR SHAPE AS AN IMPORTANT PART OF THE ORIGINAL LAYOUT.
  - PROVIDE 2 ROWS OF PARKING REINFORCED GRASS (GRASS PAVE OR OTHERWISE APPROVED) TOGETHER WITH WHEEL STOPS.
  - PROVIDE 10 X 6M SHELTER IN THE CENTRE TO ACCOMMODATE LARGER FUNCTION AND PROVIDE FOCAL POINT TO ENTRY. (LANDMARK PENINSULA K307 MODEL- TIMBER FINISH)
  - PROTECT THE SHELTER AREA WITH BOLLARDS.
  - RETAIN ALL EXISTING TREES. REPLACE THEM WHEN NEEDED.

- AREA ③ :**
- EXTEND LAWN GRAVES.
  - LEAVE SUITABLE GAPS IN GRAVE ROWS TO ALLOW FOR TREE ROW TO COMPLETE ENTRANCE AVENUE PLANTING.

- AREA ④ : GRAVE INFILL**
- A: INFILL OLD GRASSED ROAD WITH MONUMENTAL GRAVES. EXISTING CONCRETE ROADS PROVIDE SUFFICIENT ACCESS TO MONUMENTAL SECTION
  - B: LAWN GRAVES
  - C: MONUMENTAL GRAVES - LAID OUT DOUBLE SIDED FOR SPACE EFFICIENCIES.

- AREA ⑤ : CHILDREN SECTION**
- CHILDREN GRAVES (51N<sup>2</sup>)
  - PROVIDE PATH MEANDERING THROUGH EXISTING CASUARINAS, WITH RESPITE AREAS AND SCULPTURE ONTO WHICH MESSAGES CAN BE DRAWN (CHALKS) AND PAPER MESSAGES CAN BE ATTACHED TO TREES. PROVIDE IMAGINATIVE AND INFORMAL PLAY ELEMENTS FOR CHILDREN ENTERTAINMENT TO ENABLE PARENTS TO TEND TO THEIR CHILD'S GRAVE AND GRIEVE.
  - CARRY OUT GEOTECHNICAL REVIEW TO AREAS TO MAP OUT CONSTRAINTS.

- AREA ⑥ : ENTRY DRIVEWAY**
- PROVIDE PARALLEL PARKING ALONG ENTRANCE ROAD (ON ONE SIDE ONLY). FILL AREA AND CONSTRUCT RETAINING WALL TO DEAL WITH LEVEL CHANGES.
  - OFFER NEW PRODUCT IN WALL (HEADSTONE IN WALL WITH LAWN GRAVES IN FRONT) (BEST)
  - INTERRUPT GRAVE ROWS TO ALLOW FOR TREE PLANTING TO FOLLOW ROAD ALIGNMENT TO PROVIDE BETTER ENTRY PRESENTATION AND SHADE TO CARS.

- AREA ⑦ : TOILETS**
- NEW TOILET
  - PROVIDE LARGE CONCRETE APRON ALL AROUND.

- AREA ⑧ : MEMORIAL**
- LARGE FLAT/SAWN SEATING STONES LAID FLAT AND RANDOMLY FOR RESPITE AMONGST THE TREES AND WAITING SPACE FOR TOILET.
  - POSSIBLE LOCATION FOR RSL COMMEMORATIVE ROCK.

- AREA ⑨ : STAFF AMENITIES**
- SHORT TERM: REMOVE STAFF CONTAINER FROM EXISTING PROMINENT LOCATION. PROVIDE BETTER STAFF FACILITIES (LUNCHROOM & KITCHENETTE) AND NEW STORAGE FOR EQUIPMENT IN THIS AREA.
  - LONG-TERM: WHEN CEMETERY IS ALMOST FULL, REMOVE AND RETURN TO BURIAL LAND, INCLUDING ACCESS ROAD.

- AREA ⑨A : STORAGE BAYS**
- UPGRADE STORAGE BAYS WITH SCREENING AND GATED ACCESS.

- AREA ⑩ : SITE OFFICE/DISPLAY**
- CONSIDER SMALL MEETING ROOM FOR PRODUCT DISPLAY AND MEETING FAMILIES, OFF MAIN CARPARK.

- AREA ⑪ : FENCING**
- ESTABLISH SCREEN PLANTING. HEIGHT TO BE ESTABLISHED THROUGH CONSULTATION WITH ADJACENT PROPERTY OWNERS.

- AREA ⑫ : CRYPTS**
- POTENTIAL ABOVE-GROUND BURIALS UNITS, MAXIMUM 2 LEVELS HIGH, LINKED BY LOW ONE-SIDED NICHE WALLS/RAISED PLANTERS, BOTH ACTING AS RETAINING WALLS. TO BE IMPLEMENTED PROGRESSIVELY AND BASED ON DEMAND. TREES SHOULD BE RETAINED UNTIL THEY BECOME SENESCENT, AFTER WHICH TIME CONSTRUCTION OF NICHE WALLS MAY OCCUR PROGRESSIVELY.
  - UPGRADE FENCING TO BUS DEPOT, TO MATCH FRONT METAL PICKET FENCING.

- AREA ⑬ : FRONTAGE**
- INFILL GARDEN BED WITH LOW SCREEN PLANTING TO SOFTEN VISUAL IMPACT OF CEMETERY & IMPROVE STREET PRESENTATION.

- NOTE:**
- PROPOSED WORKS ARE SUBJECT TO FURTHER HERITAGE STUDIES AND OTHER PLANNING DETAILED REVIEWS.
  - CONSIDER COLLECTING WATER OFF STRUCTURES FOR STORAGE AND USE ON SITE FOR LANDSCAPING.

DRAWN BY: XYW  
SHEET NO: 01/07



ISSUE	DESCRIPTION	DATE	REVISION
APPR.	CLIENT	04/02/20	
C. CONS	CLIENT	21/02/20	A
APPR.	COUNCIL	13/08/20	B

CLIENT:  
**SHELLHARBOUR  
CEMETERY**

**TITLE: MASTERPLAN**  
**DRAWING NO: SK01B**  
DATE: 04.02.2020  
PROJECT NO:1904

PROJECT NAME:  
**SHELLHARBOUR  
CEMETERY, NSW**

A: 49 May St  
Kew VIC 3101  
E: flo@fjla.com.au  
M: 0419 983 641

**Florence Jaquet**  
*Landscape Architect  
Cemetery Specialist*





#### LEGEND

- Proposed Garden Bed
- TREES ALREADY MEMORIALISED
- SCULPTURE
- SEATING

DRAWN BY: XYW  
SHEET NO: 02/07



SCALE:  
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CEMETERY**

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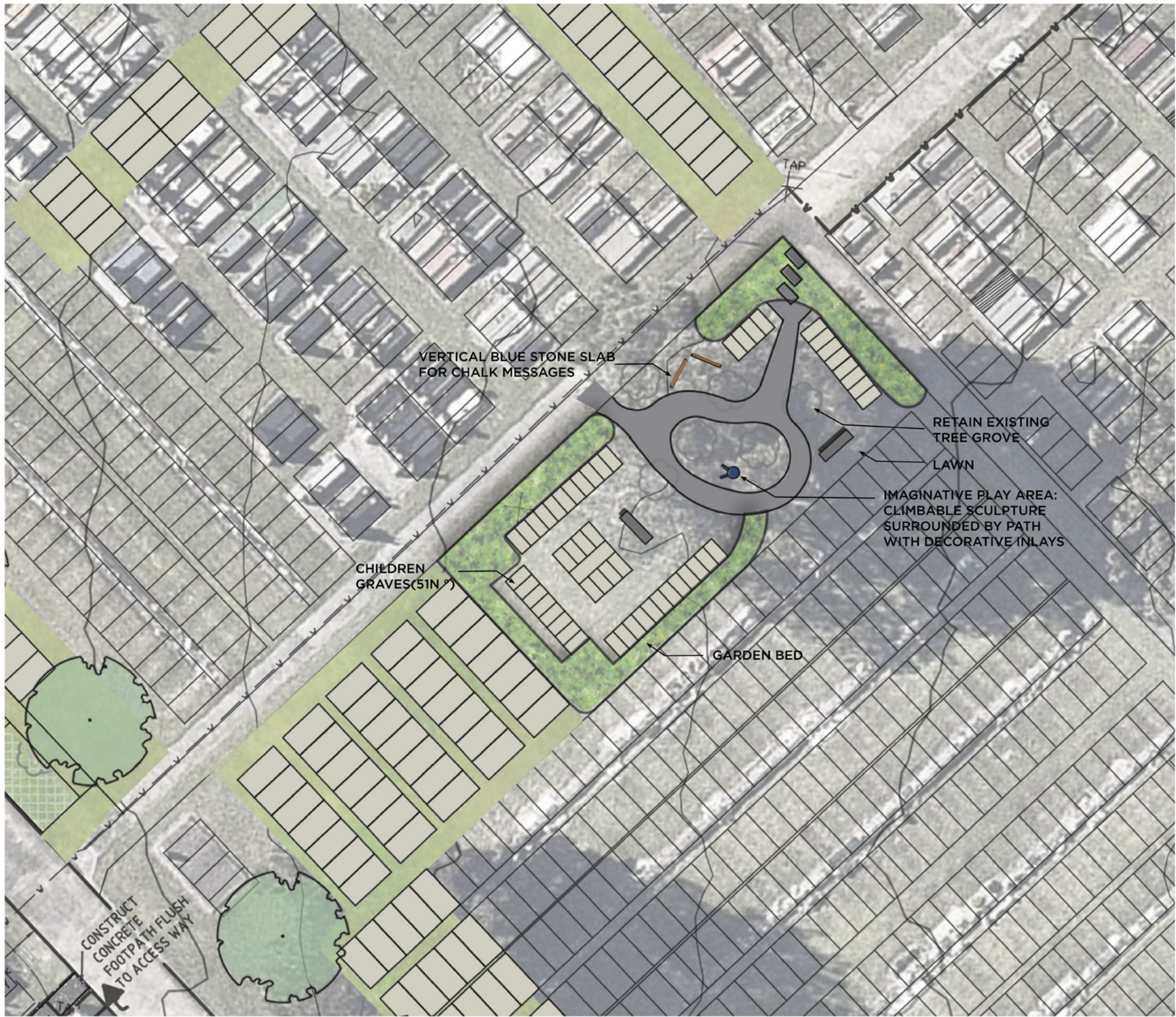
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PROJECT NO: 1904

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**SHELLHARBOUR  
CEMETERY, NSW**

A: 49 May St  
Kew VIC 3101  
E: flo@fjla.com.au  
M: 0419 983 641

**Florence Jaquet**  
*Landscape Architect  
Cemetery Specialist*





LEGEND

- VERTICAL BLUESTONE SLAB
- SEATING



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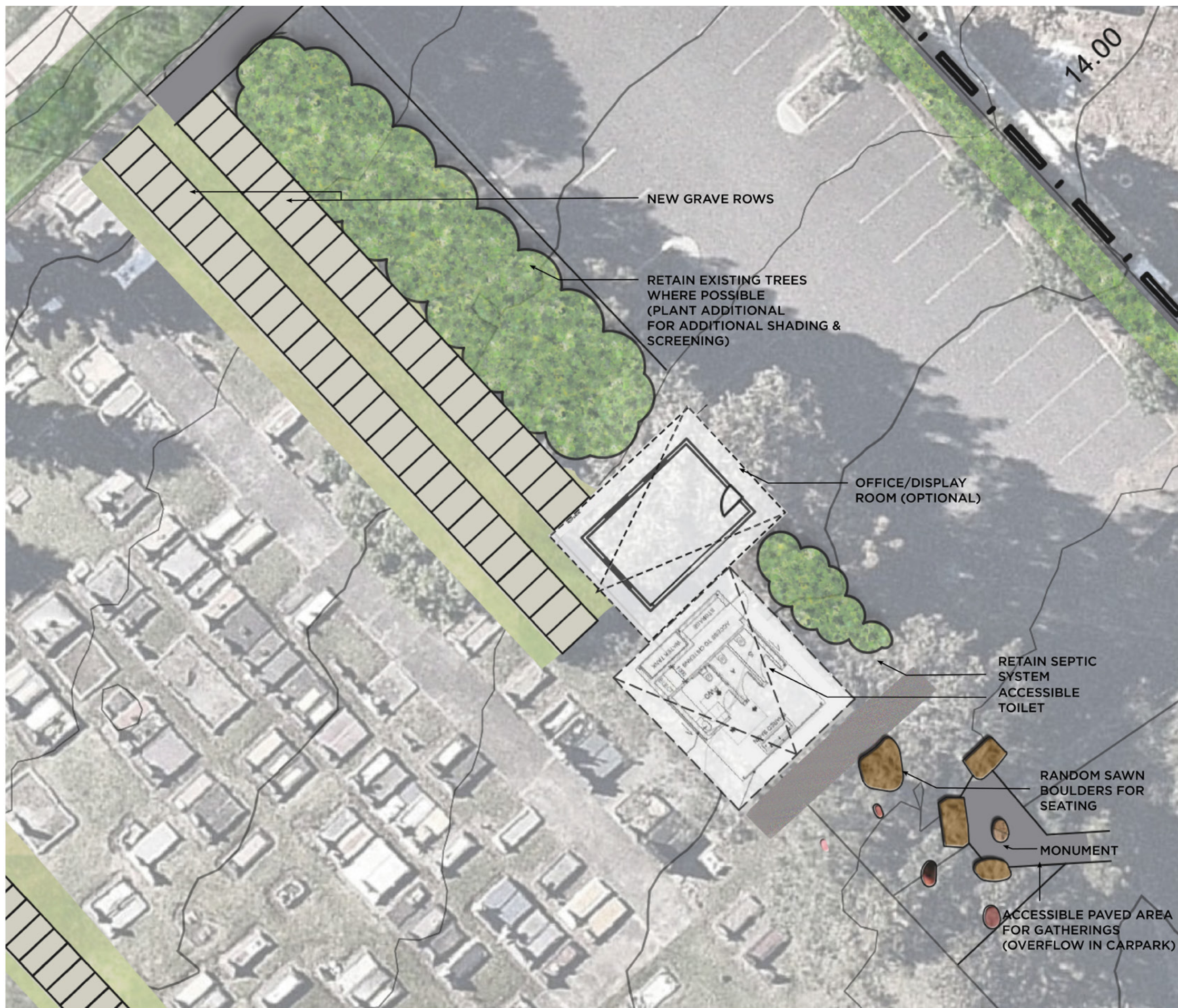
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**SHELLHARBOUR  
CEMETERY, NSW**

A: 49 May St  
Kew VIC 3101  
E: flo@fjla.com.au  
M: 0419 983 641

**Florence Jaquet**  
*Landscape Architect  
Cemetery Specialist*





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CEMETERY**

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PROJECT NO: 1904

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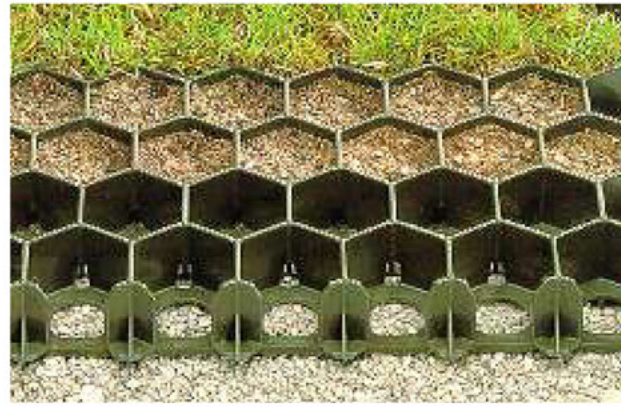
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Kew VIC 3101  
E: flo@fjla.com.au  
M: 0419 983 641

**Florence Jaquet**  
*Landscape Architect  
Cemetery Specialist*





PATHS- COLOURED CONCRETE



REINFORCED GRASS



SEATING ROCKS



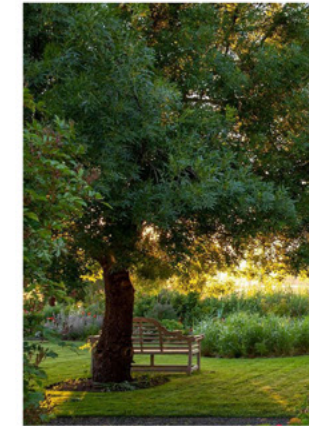
SCULPTURE (INDICATIVE ONLY)



SCULPTURE (INDICATIVE ONLY)



CLIMABLE SCULPTURE FOR CHILDREN  
(INDICATIVE ONLY)



LANDSCAPE SETTING  
MEMORIAL GARDENS



CRYPTS



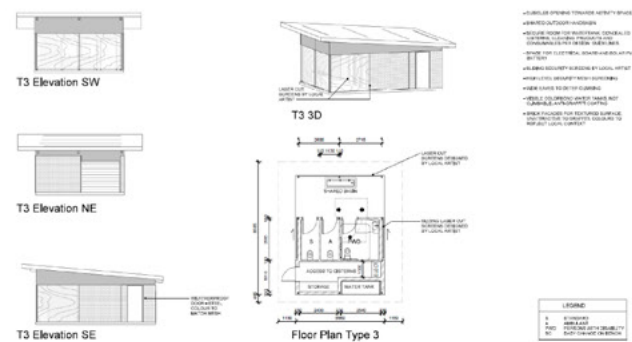
NICHE WALL (AS EXISTING)



MEMORIAL GARDENS



LANDSCAPE SETTING  
MEMORIAL GARDENS



TOILETS



SHELTER



RETAINING WALL WITH HEADSTONE



NATURAL BURIALS (INDICATIVE)

DRAWN BY: XYW  
SHEET NO: 05/07



SCALE:  
VARY@A1

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PROJECT NO: 1904

PROJECT NAME:  
**SHELLHARBOUR  
CEMETERY, NSW**

A: 49 May St  
Kew VIC 3101  
E: flo@fjla.com.au  
M: 0419 983 641

**Florence Jaquet**  
*Landscape Architect  
Cemetery Specialist*



## PLANT SCHEDULE

### Indicative Species

KEY	BOTANICAL NAME	COMMON NAME	MATURE HT
<b>SMALLER AVENUE TREES</b>			
BA	Brachychiton acerifolius	Illawarra Flame	8M
HYF	Hymenosporum flavum	Native Frangipani	6-8M
LIN	Lagerstroemia indica 'Natchez'	White Crepe Myrtle	6M
MLG	Magnolia 'Little Gem'	Magnolia Little Gem	6M
<b>SPECIMEN TREES FOR SHADE</b>			
AS	Acmena smithii	Lilly Pilly	8M
EA	Elaeodendron australe	Red Fruit Olive Plum	6-8M
ES	Eucalyptus sideroxylon Rosea	Pink Flowered Ironbark	15M
JM	Jacaranda mimosifolia	Jacaranda	10M
LIN	Lagerstroemia indica 'Natchez'	White Crepe Myrtle	6M
TL	Tristanopsis laurina	Water Gum	6-8M
<b>SCREEN SHRUBS</b>			
AS	Acmena smithii	Lilly Pilly	3-4M
CE	Callistemon citrinus	Crimson "Endeavour"	2M
BM	Backhousia myrtifolia	Grey Myrtle	2-3M
DV	Dodonaea viscosa	Hop Bush	2-3M
HS	Hakea salicifolia	Willow Hakea	3-4M
MV	Melaleuca hypericifolia	Red Flowered Paperbark	2M
SC	Syzygium 'Cascade'	Cascade Brush Cherry	2-3M
<b>SHRUBS AND FEATURE PLANTS</b>			
BV	Babingtonia 'Howies Midget'	Dwarf Heath Myrtle	0.7M
CA	Correa alba	White Correa	1M
CAW	Callistemon Anzac white	'Anzac White'	1M
CAW	Callistemon 'Great Balls of Fire'	'Great Balls of Fire'	2M
DE	Doryanthes excelsa	Gymea Lilly	1.5M
GF	Gardenia augusta 'Florida'	Fragrant Gardenia	0.7M
GHG	Grevillea Ned Kelly	Ned Kelly	1M
GO	Goodenia ovata	Hop Goodenia	1M
IA	Indigofera australis	Australian Indigo	1M
WF	Westringia fruticosa "Smokey"	Coastal Rosemary	1M

KEY	BOTANICAL NAME	COMMON NAME	MATURE HT
<b>GRASSES &amp; GROUNDCOVERS</b>			
CM	Convolvulus mauritanica		0.5M
GBR	Grevillea Bronze Rambler	Bronze Rambler	0.2M
GMT	Grevillea Mount Tamboritha	Mount Tamboritha	0.5M
IC	Imperata cylindrica 'Rubra'	Japanese Blood Grass	0.7M
LL	Lomandra longifolia	Native Matt rush	1.0M
LI	Liriope 'Isabella'	Isebella	0.4M
TJ	Trachelospermum jasminoides	Star Jasmine	0.3M
VH	Viola hederacea	Native Violet	0.1M



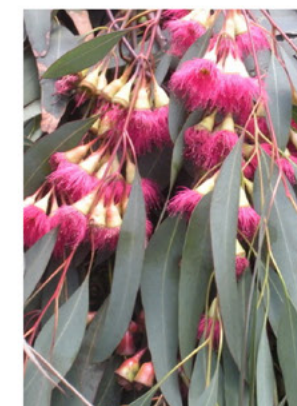
Brachychiton acerifolius



Acmena smithii



Hymenosporum flavum



Eucalyptus sideroxylon  
Rosea



Jacaranda mimosifolia



Lagerstroemia indica 'Natchez'

DRAWN BY: XYW  
SHEET NO: 06/07



SCALE:  
VARY@A1

ISSUE	DESCRIPTION	DATE	REVISION
APPR.	CLIENT	04/02/20	
C. CONS	CLIENT	21/02/20	A
APPR.	OFFICE ADDRESS	13/08/20	B

CLIENT:  
**SHELLHARBOUR  
CEMETERY**

TITLE: INDICATIVE  
PLANT LIST  
DRAWING NO: SK06B  
DATE: 04.02.2020  
PROJECT NO: 1904

PROJECT NAME:  
**SHELLHARBOUR  
CEMETERY, NSW**

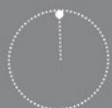
A: 49 May St  
Kew VIC 3101  
E: flo@fjla.com.au  
M: 0419 983 641

**Florence Jaquet**  
Landscape Architect  
Cemetery Specialist





DRAWN BY: XYW  
SHEET NO: 07/07



SCALE:  
VARY@A1

ISSUE	DESCRIPTION	DATE	REVISION
APPR.	CLIENT	04/02/20	
C. CONS	CLIENT	21/02/20	A
APPR.	OFFICE ADDRESS & TITLE	13/08/20	B

CLIENT:  
**SHELLHARBOUR  
CEMETERY**

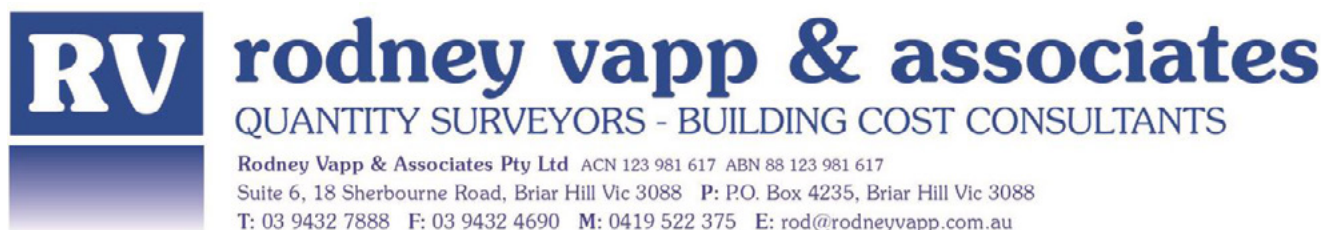
TITLE: INDICATIVE PERSPECTIVE  
MEMORIAL GARDENS  
**DRAWING NO: SK07B**  
DATE: 04.02.2020  
PROJECT NO:1904

PROJECT NAME:  
**SHELLHARBOUR  
CEMETERY, NSW**

A: 49 May St  
Kew VIC 3101  
E: flo@fjla.com.au  
M: 0419 983 641

**Florence Jaquet**  
*Landscape Architect  
Cemetery Specialist*





1<sup>st</sup> September, 2020

OUR REF: 7514-219105 Est\_Rev2

Ms. Florence Jaquet  
 Florence Jaquet Landscape Architects  
 8 Rowell Avenue  
 CAMBERWELL VIC 3124

Dear Florence

**RE: PROPOSED LANDSCAPE - SHELLHARBOUR CEMETERY NSW**

Our indicative estimated total construction cost (Phase1) for the above project based on current rates is **\$2,089,000 excluding GST**.

The above indicative estimated total construction cost (Phase1) is also based on an architectural masterplan design documentation received January 2020 , updated masterplan documentation received August 2020, various notes and discussions with your office/architect and historical data.

The indicative estimate comprises:

Shellharbour Cemetery	\$	1,989,000
<b>INDICATIVE ESTIMATED TENDER SUM (Excluding GST)</b>	<b>\$</b>	<b>1,989,000</b>
Contract Contingency (nominal 5%)	\$	100,000
<b>INDICATIVE ESTIMATED CONSTRUCTION COST (Excluding GST)</b>	<b>\$</b>	<b>2,089,000</b>

Note: Please see attached detailed breakdown for further information.

The above indicative estimated total construction cost (Phase1) does not include for:

1. GST and associated costs
2. Escalation to tenders past January, 2020
3. Consultant Fees (nominal 10%)
4. Overcome adverse soil condition/soft spots/ rock excavation/removal of contaminated soil & replacement
5. Authority and permit charges if required

RE: Shellharbour Cemetery Landscape

6. Upgrading service mains supplying the site (Assumed existing septic system retained and reused in Shellharbour cemetery)
7. Working outside standard working hour

**NOTES:**

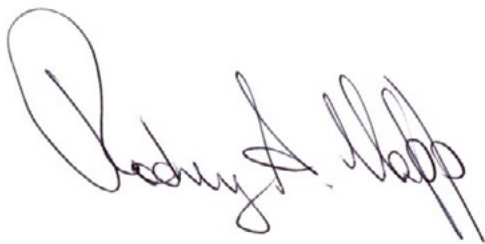
1. It is important to note that the above indicative estimated total construction costs (Phase1) should only be considered as a guide for funding purposes until a full detailed investigation has been made of the site, structure, services, etc by all Consultants and a subsequent detailed design of the project is made available for costing.
2. We have all entered uncharted waters when it comes to the ongoing effects of the Covid-19 virus pandemic and the building industry is not exempt from this. We are currently allowing costs and escalation projections in our estimate that we would have expected should the virus not occurred. When some tangible trends emerge and we can ascertain the effects of the virus on building costs we will issue our interpretation of those effects. Current tender results are appearing to be competitive however we are not sure whether or not this will remain stable

We look forward to providing all further information to ensure the success of the project.

Yours sincerely

We look forward to providing all assistance as required to ensure the success of the project.

Yours sincerely

A handwritten signature in dark ink, appearing to read 'Rodney A. Vapp Faiqs', written in a cursive style.

**RODNEY A VAPP FAIQS**

Director

Project: 219105  
 Building: Shellharbour Cemetery

Details: CPA -Summary

Co de	Description	Total
1	Area 1 West end	622,000
2	Area 2 Roundabout	123,000
3	Area 3 Grave site adjacent to roundabout	25,000
4	Area 4 Grave infill	90,000
5	Area 5 Children Section	58,000
6	Area 6 Entry Drive way	121,000
7	Area 7 Toilets	170,000
8	Area 8 RSL Memorial	27,000
9	Area 9 Staff Office	127,000
10	Area 9A Storage bays	16,000
10	Area 10 Site office /Display	165,000
11	Area 11 Fencing	129,000
12	Area 12 Crypts	233,000
15	Area 13 Frontage	23,000
14	Signage	60,000
YY	Design Contingency - 5%	included
	INDICATIVE ESTIMATED TENDER SUM (EXCL. GST)	1,989,000
	Construction Contingencies - 5%	100,000
	INDICATIVE ESTIMATED CONSTRUCTION COST (EXCL. GST)	2,089,000

*Exclusions: Please refer attached letter " 7514-219105Est\_R2" for exclusions/assumptions*

Project: 219105  
 Building: Shellharbour Cemetery

Details: CPA -Detailed

Code	Description	Quantity	Unit	Rate	Total
Area 1 West end					
1	Pedestrian path including balustrade west end	181	m2	296.36	53,532
2	Pedestrian paths west end	529	m2	131.13	69,370
3	Access road and disabled car-park west end	472	m2	171.13	80,723
4	Garden beds west end including steel edging and planting	1,010	m2	116	116,819
5	Grassing / hydro-seeding to area	3,952	m2	12.00	47,424
6	Irrigation to area west end	6,023	m2	5.00	30,114
7	Island niche walls including concrete base	2	no	22,500.00	45,000
8	Crypts Norwalk or equal (double)	4	no	Area 13	Area 13
9	Relocate steel container including new infrastructure	2	no	10,000.00	20,000
10	Retaining walls west end 1.2m high including footing	30	m	Area 13	Area 13
11	Set up base for container at area 9 connect services etc	47	m2	500.00	23,525
12	Soil to raised garden beds west end	71	m3	Area 13	Area 13
13	Stone facing to walls west end	44	m2	Area 13	Area 13
14	West end cut and fill site - area measurement	6,023	m2	12.00	72,274
15	Design Contingency	5.0	%		27,939
16	Preliminaries	6.0	%		35,279
	Area 1 West end				622,000
Area 2 Roundabout					
17	Bollards	12	no	150.00	1,800
18	Bollards - west end	6	no	150.00	900
19	Grass-pave or equal car-parking	355	m2	99.00	35,118
20	Wheel stops	14	no	150.00	2,100
21	Irrigation to roundabout	704	m2	12.00	8,449
22	Roundabout - strip topsoil	704	m2	6.00	4,224
23	Shelter - 10 x 6m	1	Item	47,000	47,000
24	Concrete paving under shelter, 11.2 x 7.2m	81	m2	125.00	10,080
25	Design Contingency	5.0	%		5,484
26	Preliminaries	6.0	%		7,845
	Area 2 Roundabout				123,000



Project: 219105  
 Building: Shellharbour Cemetery

Details: CPA -Detailed

Code	Description	Quantity	Unit	Rate	Total
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#### Area 3 Grave site adjacent to roundabout

27	Advanced trees	4	no	250.00	1,000
28	Beams to lawn graves, 500mm wide	34	m	320.00	10,976
29	Paths between graves	80	m2	120.00	9,654
30	Design Contingency	5.0	%		1,082
31	Preliminaries	6.0	%		2,289
	Area 3 Grave site adjacent to roundabout				25,000

#### Area 4 Grave infill

32	Beams to lawn graves	137	m	320.00	43,712
33	Garden bed	210	m2	92	19,331
34	Irrigation to new garden beds/lawn/grassing	490	m2	10.00	4,898
35	New lawn area	276	m2	12.00	3,317
36	Paths between graves	74	m2	120.00	8,826
37	Design Contingency	5.0	%		4,004
38	Preliminaries	6.0	%		5,911
	Area 4 Grave infill				90,000

#### Area 5 Children Section

39	Blue-stone vertical slice including base	1	no	2,500.00	2,500
40	Garden beds	73	m2	153	11,196
41	Granite blocks for seating and RSL	4	no	350.00	1,400
42	Irrigation to children's area	285	m2	15.00	4,272
43	Pathways	39	m2	120.00	4,634
44	Seating	4	no	2,000.00	8,000
45	Allow for sculpture, imaginative and informal play equipment for children- P.C. sum	1	Item	20,000.00	20,000
46	Design Contingency	5.0	%		2,600
47	Preliminaries	6.0	%		3,397

Project: 219105  
 Building: Shellharbour Cemetery

Details: CPA -Detailed

Code	Description	Quantity	Unit	Rate	Total
Area 5 Children Section					(Continued)
	Area 5 Children Section				58,000
Area 6 Entry Drive way					
48	Advanced trees	4	no	250.00	1,000
49	Balustrade to top of retaining wall	42	m	280.00	11,712
50	Beam to Graves	25	m	320.00	7,843
51	Car parking in widening entry road	123	m2	146	18,006
52	Irrigation to lawn	116	m2	20.00	2,326
53	New lawn/ Hydro-seeding	116	m2	12.00	1,396
54	Retaining wall 1.2m high including footing	51	m2	667.00	33,837
55	Stone facing to retaining wall	63	m2	450.00	28,175
56	Strip topsoil and fill to average 600	144	m2	30.00	4,329
57	Design Contingency	5.0	%		5,431
58	Preliminaries	6.0	%		6,945
	Area 6 Entry Drive way				121,000
Area 7 Toilets					
59	Garden bed	42	m2	127	5,362
60	Irrigation to garden bed	40	m2	25.00	1,000
61	Demolish existing toilet blocks	1	Item	5,000.00	5,000
62	Supply and install pre-fab. restrooms/toilet -02 x accessible compliant WC +01 x Ambulant WC+ 01 Standard WC ( Land markPRO K9306 model or similar)	1	No	106,000	106,000
63	Paving to toilet block area	57	m2	120.00	6,895
64	Prepare for new toilet block and paving	175	m2	15.00	2,621
65	Spoil removal, site clean	1	item	2,260.00	2,260
66	Water tank with connection	1	item	5,000.00	5,000
67	External hydraulic ( assumed connections to existing septic system)	1	item	5,000.00	5,000
68	Storm-water	1	Item	3,500.00	3,500
69	Light and power connection	1	Item	5,000.00	5,000
70	Building permit fees/soil report	1	Item	5,000.00	5,000
71	Design Contingency	5.0	%		7,632

Project: 219105  
 Building: Shellharbour Cemetery

Details: CPA -Detailed

Code	Description	Quantity	Unit	Rate	Total
Area 7 Toilets					(Continued)
72	Preliminaries	6.0	%		9,730
	Area 7 Toilets				170,000
Area 8 RSL Memorial					
73	Beam to graves	12	m	320.00	3,933
74	Boulders carved for seats	6	no	1,700.00	10,200
75	Irrigation to existing garden/lawn	108	m2	20.00	2,153
76	Memorial stone for RSL	2	no	2,500.00	5,000
77	New paving	19	m2	120.00	2,286
78	Design Contingency	5.0	%		1,179
79	Preliminaries	6.0	%		2,249
	Area 8 RSL Memorial				27,000
Area 9 Staff Office					
80	Access road extension and remove and clear ground long term	89	m2	161	14,319
81	New staff facilities, 6m x 3.5m (as per quote from SPOTON)	1	Item	36,000	36,000
82	Allow joinery/fitings & fixtures , handicapped access ramp, air conditioning and an external verandah to portable/staff office	1	Item	28,100	28,100
83	Deleted- Supply and install pre-fab. restrooms/toilet -01 x accessible compliant WC +01 x Ambulant WC+ 01 Standard WC including water tank and all services connections ( Land markPRO K9505 model or similar)	1	No	-	N/A
84	Allowance for external services connection(storm-water/hydraulic/electricity) to Staff office	1	Item	15,000	15,000
85	Remove container from site, disconnect services	1	no	10,000.00	10,000
86	Remove staff facilities building and bin storage and clear site	1	no	10,000.00	10,000
87	Design Contingency	5.0	%		5,671
88	Preliminaries	6.0	%		7,910
	Area 9 Staff Office				127,000
Area 9A Storage bays					
89	Soil storage bins	4	no	2,500	10,000
90	Allow fencing/screening around storage bays	1	Item	4,000.00	4,000

Project: 219105  
 Building: Shellharbour Cemetery

Details: CPA -Detailed

Code	Description	Quantity	Unit	Rate	Total
Area 9A Storage bays					(Continued)
91	Design Contingency	5.0	%		700
92	Preliminaries	6.0	%		1,300
	Area 9A Storage bays				16,000
Area 10 Site office /Display					
93	New staff facilities and Client interview space including all service connections - provisional sum	56	m2	2,500.00	141,125
94	Paving outside facility	53	m2	120.00	6,397
95	Design Contingency	5.0	%		7,376
96	Preliminaries	6.0	%		10,102
	Area 10 Site office /Display				165,000
Area 11 Fencing					
97	Irrigation to new garden bed and screen planting	350	m2	20.00	6,995
98	New garden bed and screen planting	350	m2	122	42,708
99	Remove existing fence and replace with metal picket fence	165	m	400.00	66,132
100	Design Contingency	5.0	%		5,792
101	Preliminaries	6.0	%		7,373
	Area 11 Fencing				129,000
Area 12 Crypts					
102	Crypts Norwalk or equal (above ground, two level) including base- P.C. sum	4	no	30,000.00	120,000
103	Retaining walls west end 1.2m high including footing	30	m	583.00	17,210
104	Soil to raised garden beds west end	71	m3	100.00	7,084
105	Stone facing to walls west end	44	m2	450.00	19,926
106	Allowance for cut and remove trees /prepare site / make good existing	1	Item	5,000.00	5,000
107	Allowance for new metal picket fencing along boundary/ bus depo, 2400h	100	m	400.00	40,000
108	Design Contingency	5.0	%		10,461
109	Preliminaries	6.0	%		13,319
	Area 12 Crypts				233,000



Project: 219105  
 Building: Shellharbour Cemetery

Details: CPA -Detailed

Code	Description	Quantity	Unit	Rate	Total
Area 13 Frontage					
110	Irrigation to new garden bed and screen planting	107	m2	25.00	2,685
111	New garden bed and screen planting	107	m2	161	17,328
112	Design Contingency	5.0	%		1,001
113	Preliminaries	6.0	%		1,986
	Area 13 Frontage				23,000
Signage					
114	Large sign- Main entry1	1	no	20,000.00	20,000
115	Large sign- secondary/tertiary	1	no	10,000.00	10,000
116	Way finding	2	no	4,500.00	9,000
117	Small sign- parking,staff,etc	30	no	700.00	21,000
	Signage				60,000

***Florence Jaquet***  
*Landscape architect*

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*49 May St, Kew VIC 3101*  
*M: 0419 983 641*  
*E: [flo@fjla.com.au](mailto:flo@fjla.com.au)*  
*[www.fjla.com.au](http://www.fjla.com.au)*