

A NEW LIFE FOR WARRNAMBOOL'S COMMUNITY GARDEN QUARRY

A submission to the 2022 Premier's Sustainability Awards

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MAIN SUBMISSION

OVERVIEW



Image 1: The abandoned quarry was neglected for 60 years.

Warrnambool Community Garden (WCG) is converting a long abandoned quarry into a new, safe and inclusive green and public space (Sustainable Development Goal (SDG) 11): a beautiful, accessible, natural amphitheatre able to stage public gatherings and events (Images 1 & 2).

Prior to this huge project one third of our site was unusable as public open space. Now the usable area within our site will be increased from approximately 4 acres to almost 6 acres.

The project supports WCG's mission to offer¹:

- A community education and resource centre for organic gardening and sustainable living.
- Garden space for growing and sharing organic food.
- Social and community activities for networking and friendship.



Image 2: The quarry has been reshaped, weeded and replanted with natives on two walls, grass in the amphitheatre and an exposed sandstone wall that displays the ancient geology of this site. Infrastructure has been installed.

¹ [WCG Policies and Guidelines](https://www.wcg3280.org.au/wcg-policies-and-documents) <https://www.wcg3280.org.au/wcg-policies-and-documents>

OBJECTIVES

At WCG we value:

- Inclusiveness,
- Empowerment,
- Ecological, social and economic sustainability,
- Reducing, reusing, recycling, restoring, replenishing.

In alignment with our values (and SDG 11) this project (Image 3) is rehabilitating the abandoned quarry to:

- Provide a public open event space for WCG and the broader Warrnambool community. The amphitheatre area without the gully or quarry sloping walls is about 1600m².
- Create a beautiful area to complement the rest of our extraordinary community garden.
- Allow safe access for everyone, including children and people of all abilities.
- Replace 50 years of weeds with native flora and lawn including native grasses.
- Provide habitat for native life from fungi to birds to small animals.
- Create a sheltered open air events venue in our windy coastal town, including extensive electricity infrastructure.
- Maintain the quarry's usefulness to Wannon Water for stormwater abatement and other processes.
- Include a large-scale educational space highlighting where Warrnambool's water comes from.



Image 3: Overall concept plan after the consultative process in 2016. A link to the full document and some explanatory notes are in Appendix 1

IMPLEMENTATION

WCG started in 2007 when we moved on to a bare paddock that we then spent about 9 years developing into the current WCG.

One-third of our 6 acre WCG site was a quarry that was closed about 60 years ago. It had become a dangerous, inaccessible, weed- and vermin-infested scar on the land that we decided to transform into a green, public space for community use.

Through broad consultation and professional guidance we developed concept plans in 2016-17 (Appendix 1) to develop the quarry into an amphitheater (Stage 1, this submission) and public education space (Stage 2). At that time this was envisaged as a 10-20 year project.

“Pick My Project” grants² in 2018 provided the finances to complete a large amount of the work much faster. Work started mid-2019.

Construction of the amphitheatre was spasmodic in 2019-2020, as permit and permission processes and infrastructure upgrades were worked through. Community members completed native plantings in the sloped quarry walls in 2020 and 2021 between lockdowns (Image 4). Underground infrastructure and final amphitheatre shaping was completed, and in late 2021 lawn started growing in the amphitheatre.

Major challenges included:

- The need to cater for emergency water releases (very rare but possible events) from Wannon Water’s treatment tanks on our western boundary and for stormwater abatement. These added the need to design significant subsurface infrastructure.
- Finding that 3-phase power was required for major concerts, requiring a power upgrade to the whole site.
- Organising the necessary working bees and maintaining morale and momentum during COVID in 2020-2021 - a challenge met by our committed team of volunteers and the on-going operation of WCG’s activities with appropriate covid-safety planning.

Throughout the project we have partnered with and been supported by government, business and dedicated individuals (Appendix 2).



Image 4: A midwinter planting day on the quarry walls.

² Principal funding was \$194,000 from the Victorian Government “Pick My Project” grant, \$10,000 from a federal government grant for native revegetation, and \$3,000 from a Warrnambool City Council “Community Development Fund” grant.

RESULTS



Images 5 & 6: Before and after - viewed from northeast corner looking southwest. The heavy vegetation in the left hand image is almost exclusively weed species, many woody and mostly exotics. The actual quarry floor (not visible under the weeds) is highly broken and mostly impassable. The contrast in the “after” image is stark.

The first stage of this complex project has been completed (Images 5 to 7):

- The amphitheatre is completed. Once the grass has filled in we will install bollards to support water and power, and schedule an opening event.
- Through engineering solutions we have ensured essential water management processes by Wannon Water can continue. (Appendix 3)
- The area can now be safely accessed by most people, and plans are being implemented for the final steps in achieving all-abilities access (earthworks are done, paths just need to be created).
- The usable area within our site has been effectively increased by a third (from approximately 4 acres to almost 6 acres).
 - In doing so, we have increased Warrnambool’s usable public open space. This is less than 9%³ of the total city area compared to Melbourne where it is over 15%⁴.
- Our members have reported an increase of bird, lizard and frog diversity with the change in quarry wall vegetation from mostly exotic pest plants to local native species (Appendix 4).

Achievements:

- Our project leaders have negotiated their way through a hugely complex range of organisations and bureaucracy:
 - Our landowner is the State of Victoria via DELWP, our land manager is Warrnambool City Council, and Wannon Water infrastructure on site is important for Warrnambool’s water treatment process. Working together with all affected parties, as well as engineers, planners, business owners, trades people, our members and environmental groups, has been both challenging and rewarding.
 - We knew the project had complexities before we started, but these multiplied as we negotiated the planning processes, engineering reports (especially around water flow) and information that came from ongoing consultation (e.g. the need to upgrade electricity infrastructure for concerts).
- Ongoing, the new space is much easier to maintain as a safe, usable and accessible area. This is possible through:
 - the reshaping of the surface,
 - infrastructure additions,
 - replacing aggressive exotic weeds with natives, and

³ [Warrnambool Open Space Strategy 2014-2023](#)

⁴ [City of Melbourne Open Space Strategy 2012](#)

- the addition of a lawned area.
- Many people have been able to see the progress of the project and give their feedback on it - all have been amazingly positive:
 - Warrnambool City Councillors have made at least two visits to be updated on the progress of works.
 - The public of Warrnambool have been able to see the progress of the project because WCG's midweek market area overlooks the quarry. They have been greatly engaged with the project. As well as compliments, they have been readily engaged in planting vegetation when we have arranged planting days.
- The progress of the quarry has been publicised throughout the project's life. It has been a recurring topic in our social media posts (Facebook and Instagram), our monthly newsletters and public involvement features in the photos on our website's landing page. The quarry project has also had some publicity in our local newspaper. See Appendix 3 for our main communication channels.



Image 7: Looking from the floor of the amphitheatre towards the gully, showing the sloping sides.

LEGACY

The new life we have given our quarry will provide benefits to the Warrnambool community far into the future. The lifespan of the quarry as a public open space, an event space, a haven for local flora and fauna and simply a beautiful place to be, will endure, as our community garden continues to flourish.

The project is being completed in 2 stages, with Stage 1, the amphitheatre and revegetation, almost complete. Stage 2, the shaping of the steep gully and creating an educational space within it, is still to occur.

On top of the original and on-going development of our community garden since 2007, this project has given us lots of experience and confidence in tackling large projects. It has also given us extensive experience in managing a relatively large budget with deliverables over suddenly shortened timeframes with external challenges, such as the pandemic. It has strengthened our community and brought mental and physical health benefits to our members and visitors.

The benefit of modelling such sustainability is evident with the life of this project coinciding with the time WCG has been running its midweek Garden Markets. While we use many types of media and social media to deliver our messaging, nothing beats a person walking on to our site and seeing both what has been completed and what is underway (e.g., the quarry). Having someone see with their own eyes the transformation of a derelict ugly site into a beautiful and sustainable community asset is the most powerful messaging of all.

Quarry rehabilitations have happened before in other places. As we conceived this project we took inspiration from many of these, even though some were much larger. We hope that our project can inspire other groups to start dreaming of what might be possible given time and perseverance.

APPENDICES

Appendix 1 - Quarry Concept Plan

The initial concept plan for the quarry and surrounding areas of our site is available at <https://www.wcg3280.org.au/copy-of-quarry>. This shows the results from the consultative planning process, including some cross sections which give scale to the scale of the project. This work followed an earlier project in 2014-15 looking at the weeds on site and which resulted in the extensive sheoak plantings around much of the quarry rim.

The final development of the quarry itself is largely true to the concept. In the time between concept and project some areas around the outside of the quarry were taken in different directions. Examples of this are:

- The proposed maze area, where there is now a market garden and some rehabilitation of native scrub.
- The proposed sheoak plantings on the west side of the Japanese Garden have been replaced by a dedicated maintenance area for the site. This will be screened from the rest of the site by a strip of mixed sheoak and banksia plantings.

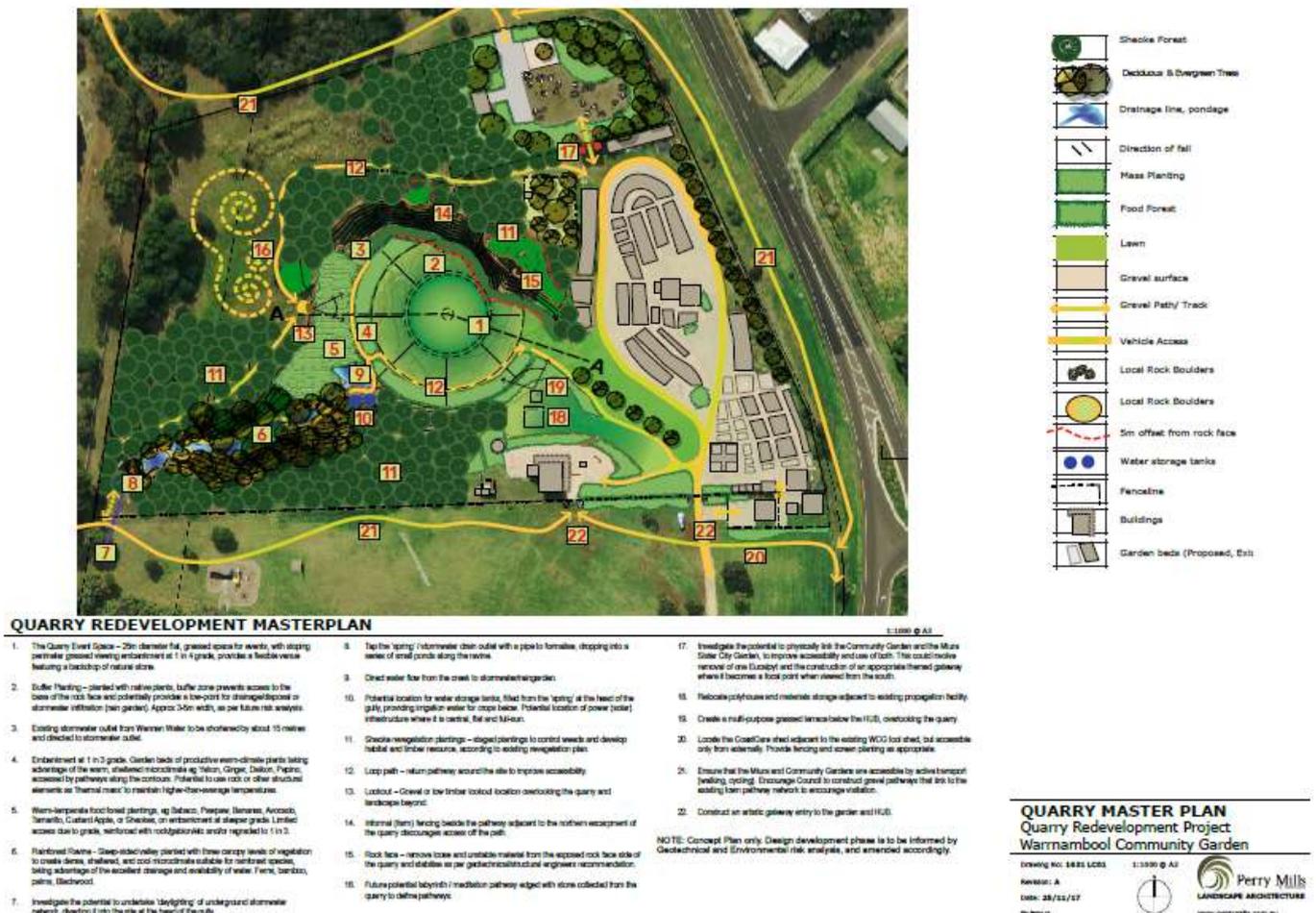
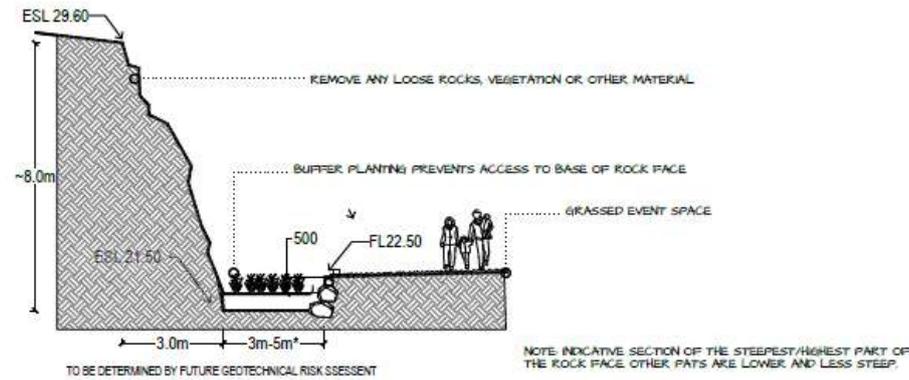
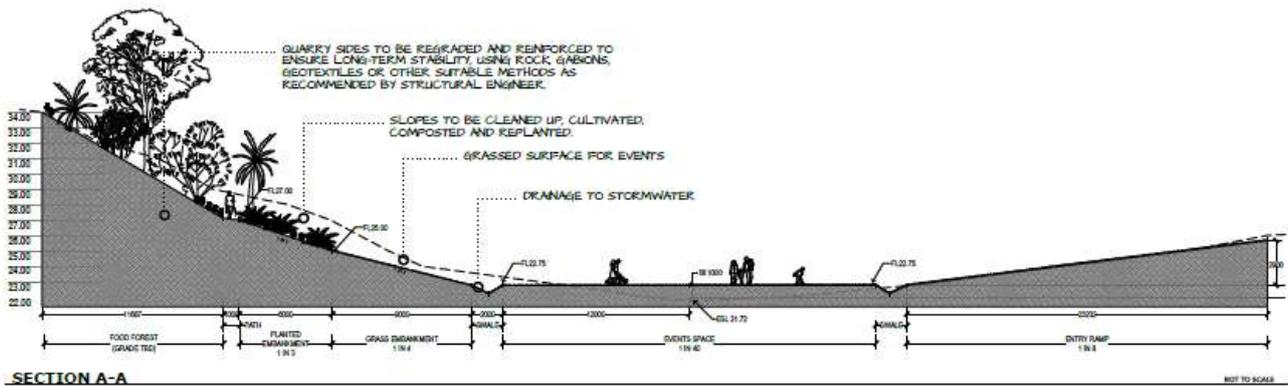


Image 8: Quarry Concept Plans - Overall Site



SECTIONS
 Quarry Redevelopment Project
 Warrnambool Community Garden

Drawing No: 0402 LC02
 Revision: A
 Date: 28/11/17
 No. Sheets: 11

Perry Mills
 LANDSCAPE ARCHITECTURE
 www.perrymills.com.au

Image 9: Quarry Concept Plans - Cross Sections of Amphitheatre



Image 10: Quarry Concept Plans - Details

Appendix 2 - Partners, Associations and Funding Bodies

This has been a complex project so many parties have been involved. People and businesses asterisked ** have been particularly generous with either volunteer time or support well beyond any paid contracts.

- Overall project management:
 - WCG Quarry Steering Committee; Chairperson Geoff Rollinson **
 - Project Coordination: Bruce Campbell Community Development Services**
 - WCG Site Manager, Dave Mitchell **
- Identifying desirable native plantings, sourcing plants, and helping with planting:
 - Warrnambool Coastcare Landcare
 - Basalt to Bay Landcare Network.
 - Australian Native Plants Society, Warrnambool Branch.
 - Heytesbury District Landcare Network
- Planning, permits, support with other organisations:
 - Warrnambool City Council
 - Wannon Water
 - Department of Environment, Land, Water and Planning
- Grants and other sources of finance:
 - The Department of Premier, Victorian State Government (Pick My Project).
 - Warrnambool City Council Community Development Fund.
 - Southwest Community Energy Inc.
- Planning, engineering, earthworks, other infrastructure:
 - Perry Mills Landscape Architecture
 - PM Design Group
 - Live Architecture, Fiona Golding **
 - Bligh Vegetation Management, Tim Bligh **

Appendix 4 - Map and table of initial native plantings in and around quarry walls

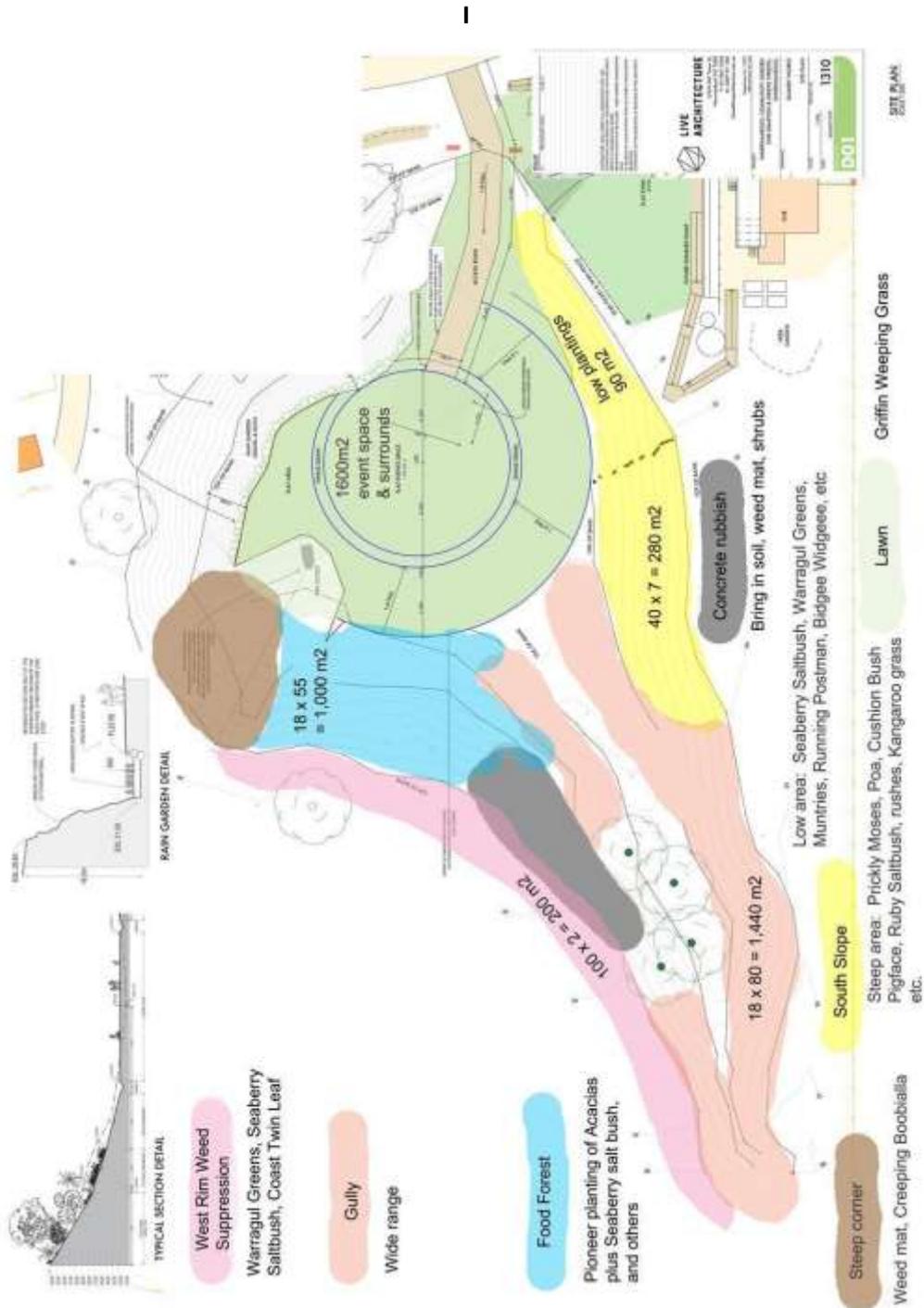


Image 11: Initial planting plans for quarry and surrounding area.

TABLE 1: Initial planning of native plantings for the quarry walls.

Species	Common Name	Supplier	South Low	South Steep	Gully	West	F Forest	Steep Cnr	Extra	TOTAL
Acacia melanoxylon	Blackwood	HDLN			6					6
Acacia verticillata	Prickly Moses	HDLN		20	20		80			120
Acacia myrtofolia	Myrtle Wattle	HDLN					80			80
Acacia strictata	Hop Wattle	HDLN					80			80
Acacia mucronata	Narrow Leaf Wattle	HDLN					80			80
Allocasuarina verticillata	Coast Drooping Sheoak	HDLN			6					6
Leptospermum continentale	Prickly Tea-tree	HDLN			40					40
Poa laberilla	Silver Tussock	HDLN		120	80					200
Rhagodia candolleana	Seaberry Saltbush	Stocky	20		40	80	80			220
Ficinia nodosa	Knobby Club-rush	Stocky			40					40
Tetragona tetragonioides	Warragul Greens	Stocky	20		20	80				120
Tetragonia implexicoma	Bower Spinach	Stocky			40					40
Kunzea pomifera	Muntries	Stocky	20							20
Leucophyta brownii	Cushion Bush	Stocky	5	80	20					105
Carpobrutus rossii	Pigface	Stocky	10	80	30					120
Leucopogon parviflorus	Coast Beard Heath	Stocky?		20	10					30
Enchylaena tomentosa	Ruby Saltbush	Stocky		40						40
Correa reflexa		Stocky	5	15	5					25
Myoporum insulare	Boobialla	Stocky			20					20
	White Elederberry	Stocky?			40					40
	Beaked Hakea	Stocky			6		20			26
	Variable Prickly Grevillea	stocky			2		20			22
Correa alba (low / prostrate forms)			10	20	10					40
Zygophyllum billardierei	Coast Twin Leaf			20		20				40
Banksia marginata	Silver Banksia			20	6				14	40
Epacris impressa	Common Heath		10	10	10	10				40
Adriana quadripartita	Coast Bitter Bush			10	10	10			10	40
Bursaria spinosa	Sweet Bursaria				10				30	40
Astroloma humifusum	Cranberry Heath		10	10	10				10	40
Kennedia prostrata	Running Postman		20		60					80
Juncus procerus	Tall Rush			40	40					80
Lepidosperma longitudinale	Pithy Sword-sedge			40	40					80
Baumea rubiginosa s.l.	Soft Twig-rush			40	40					80
Lomandra filiformis	Wattle Mat-rush			40	40					80

Lomandra longifolia	Spiny-head Matt-rush			40	40					80
Dianella tasmanica	Tasman Flax-lily				40					40
Microlaena stipoides var. stipoides	Weeping Grass			40	40					80
Acaena novae-zealandiae	Bidgee Widgee		20	100	40					160
Hymenantha dentata	Tree Violet				10					10
Senecio glomeratus	Annual Fireweed				40					40
Wahlenbergia gymnoclada	Naked Bluebell				40					40
Gonocarpus tetragynus	Common Raspwort				40					40
Hypericum gramineum	Small St John's Wort				40					40
Lagenophora stipitata	Common Bottle-daisy				40					40
Comesperma volubile	Love Creeper				40					40
Deyeuxia quadriseta	Reed Bent-grass			80	40					120
Clematis microphylla	Local Small leaf Clematis				40					40
Hardenbergia violacea					40					40
Rhagodia spinescens	Saltbush (grey leaf)		20							20
Dianella revoluta	Black Anther Flax Lily			40	40					80
Dianella callicarpa	Pale Flax Lily			40	40					80
Gahnia radula	Thatch Saw-sedge			40	40					80
Banksia praemorsa	Cut leaf Banksia				6					6
Eucalyptus leucoxylm 'rosea'	Red Flowered Yellow Gum				1					1
Myoporum parvifolium	Creeping Boobialla		20					300		320
Adenanthos sericea	Albany Woolly-bush				4					4
Pittosporum angustifolia	Gumby Gumby				4					4
	Lemon Myrtle				10					10
	Aniseed Myrtle				10					10
	Coast Daisy Bush				10					10
	Tree Everlasting				6					6
	Mitchell's Wattle				10		20			30
	Yellow hakea				6		20			26
	Furze Hakea				6		20			26
	Austral Mulberry				6					6
	Grevillea Juniperina						20			20
TOTAL SEEDLINGS		3709	190	1005	1430	200	520	300	64	3709
		Supplier	South Low	South Steep	Gully	West	F Forest	Steep Cnr	Extra	
Weed Mat = 3400 m2 = 90 rolls (1.83 x 25m)		m2	100	400	1400	200	1000	300		
(Could add 11 rolls for Maam onto order)										

Appendix 5 - WCG Communication and Promotion Channels

WCG is a large and active organisation. We use a number of communication channels to connect with both our broad range of members and the general public.

- Facebook - <https://www.facebook.com/warrnamboolcommunitygarden>
- Instagram - <https://www.instagram.com/warrnambool.community.garden>
- Web page - <https://www.wcg3280.org.au/>
- Monthly Newsletters - <https://www.wcg3280.org.au/newsletters-current>