

Head Office
25 Metcalf Street
DANDENONG SOUTH VIC 3175

CHADWICK GEOTECHNICS

Ph: +61 3 8796 7900 Fax: +61 3 8796 7944

Customer: South Gippsland Quarries

Customer Address: RMB 7105 NERRENA VIC 3953

Project: Seagrove Estate - Stage 11B

Location: Cowes

HILF DENSITY RATIO REPORT

Report Number: 308107.001 - 4

Report Date: 23/07/16

C.G Order No: 5058

Test Method: AS1289.5.7.1

Customer Order No.: - Page: 1 of

Testing performed and reported at our Dandenong South Laboratory 21712

| Sample No.: | 1608389 | 1608390 | 1608391 | 1608392 | 1608393 | 1608394 | 1608395 | 1608396 | 1608397 | 1608398 |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|
| ID No.: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Lot No.: | - | - | - | - | - | - | - | - | - | - |
| Date Sampled: | 12/07/2016 | 12/07/2016 | 12/07/2016 | 12/07/2016 | 12/07/2016 | 12/07/2016 | 12/07/2016 | 12/07/2016 | 12/07/2016 | 12/07/2016 |
| Time Sampled: | am | am |
| Date Tested: | 13/07/2016 | 13/07/2016 | 13/07/2016 | 13/07/2016 | 13/07/2016 | 13/07/2016 | 13/07/2016 | 14/07/2016 | 13/07/2016 | 13/07/2016 |
| Material Source: | Site Derived | Site Derived |
| Material Description: | Clay | Clay |
| To Be Used As | Fill | Fill |
| | Lot 514 | Lot 513 | Lot 512 | Lot 511 | Lot 510 | Lot 509 | Lot 508 | Lot 520 | Lot 521 | Lot 522 |
| Sample Location : | Centre of Lot | Centre of Lot |
| | FSL | FSL |
| Layer Depth (mm): | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Test Depth (mm): | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 |
| Sampling Procedure: | AS1289.1.2.1.6.4(b) | AS1289.1.2.1.6.4(t |
| Max Size (mm): | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 |
| Oversize Wet (%): | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fld. Wet Density (t/m³) AS 1289.5.8.1: | 2.00 | 2.08 | 2.13 | 2.09 | 2.19 | 2.01 | 2.17 | 2.09 | 2.06 | 1.99 |
| Fld. Moisture Content (%) AS1289.2.1.1: | - | - | - | - | - | - | - | - | - | - |
| PCWD (t/m ³): | 2.11 | 2.15 | 2.23 | 2.20 | 2.20 | 2.04 | 2.06 | 2.15 | 2.05 | 2.05 |
| APCWD (t/m ³) | - | - | - | - | - | - | - | - | - | - |
| O.M.C (%) AS1289.5.7.1: | - | - | - | - | - | - | - | - | • | - |
| Moisture Ratio (%) AS1289.5.4.1: | - | - | - | - | - | - | - | - | - | - |
| Moisture Variation (of omc): | 0.5% (wet) | 1.5% (wet) | 2% (wet) | omc | 0.5% (wet) | omc | omc | omc | omc | omc |
| Adjusted Moisture Variation (of omc): | - | - | - | - | - | - | - | - | - | - |
| Compactive Effort: | Standard | Standard |
| Hilf Density Ratio (%): | 95.0 | 96.5 | 95.5 | 95.0 | 99.5 | 98.5 | 105.5 | 97.0 | 100.5 | 97.0 |
| Min Hilf Density Ratio (%): | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |

Remarks:





Accredited for compliance with ISO/IEC 17025. The results of tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

APPROVED SIGNATORY

Ag line

Form No.: **CG.315.002**Issue Date: 19/02/2013

Head Office
25 Metcalf Street
DANDENONG SOUTH VIC 3175

CHADWICK GEOTECHNICS

Ph: +61 3 8796 7900 Fax: +61 3 8796 7944

Customer: South Gippsland Quarries

Customer Address: RMB 7105 NERRENA VIC 3953

Project: Seagrove Estate - Stage 11B

Location: Cowes

HILF DENSITY RATIO REPORT

Report Number: 308107.001 - 4

Report Date: 23/07/16

C.G Order No: 5058

Test Method: AS1289.5.7.1

Customer Order No.: - Page: 2 of 2

Testing performed and reported at our Dandenong South Laboratory 21712

| Sample No.: | 1608399 | 1608400 | 1608401 | | | | |
|---|---------------------|---------------------|---------------------|--|---|--|--|
| ID No.: | 11 | 12 | 13 | | | | |
| Lot No.: | - | - | - | | | | |
| Date Sampled: | 12/07/2016 | 12/07/2016 | 12/07/2016 | | | | |
| Time Sampled: | am | am | am | | | | |
| Date Tested: | 13/07/2016 | 14/07/2016 | 14/07/2016 | | | | |
| Material Source: | Site Derived | Site Derived | Site Derived | | | | |
| Material Description: | Clay | Clay | Clay | | | | |
| To Be Used As | Fill | Fill | Fill | | | | |
| | Lot 523 | Lot 524 | Lot 525 | | | | |
| Canada Lagatian . | Centre of Lot | Centre of Lot | Centre of Lot | | | | |
| Sample Location : | FSL | FSL | FSL | | | | |
| | . 52 | . 52 | . 02 | | | | |
| | | | | | | | |
| Layer Depth (mm): | 200 | 200 | 200 | | | | |
| Test Depth (mm): | 175 | 175 | 175 | | | | |
| Sampling Procedure: | AS1289.1.2.1.6.4(b) | AS1289.1.2.1.6.4(b) | AS1289.1.2.1.6.4(b) | | | | |
| Max Size (mm): | 19.0 | 19.0 | 19.0 | | | | |
| Oversize Wet (%): | 0 | 0 | 0 | | | | |
| Fld. Wet Density (t/m³) AS 1289.5.8.1: | 2.07 | 1.99 | 2.09 | | | | |
| Fld. Moisture Content (%) AS1289.2.1.1: | - | - | - | | | | |
| PCWD (t/m ³): | 2.11 | 2.05 | 2.08 | | | | |
| APCWD (t/m ³) | - | - | - | | | | |
| O.M.C (%) AS1289.5.7.1: | - | - | - | | | | |
| Moisture Ratio (%) AS1289.5.4.1: | - | - | - | | | | |
| Moisture Variation (of omc): | omc | 0.5% (wet) | 0.5% (wet) | | | | |
| Adjusted Moisture Variation (of omc): | - | - | - | | | | |
| Compactive Effort: | Standard | Standard | Standard | | | | |
| Hilf Density Ratio (%): | 98.5 | 97.0 | 100.0 | | | | |
| | 95 | 95 | 95 | | 1 | | |

Remarks:





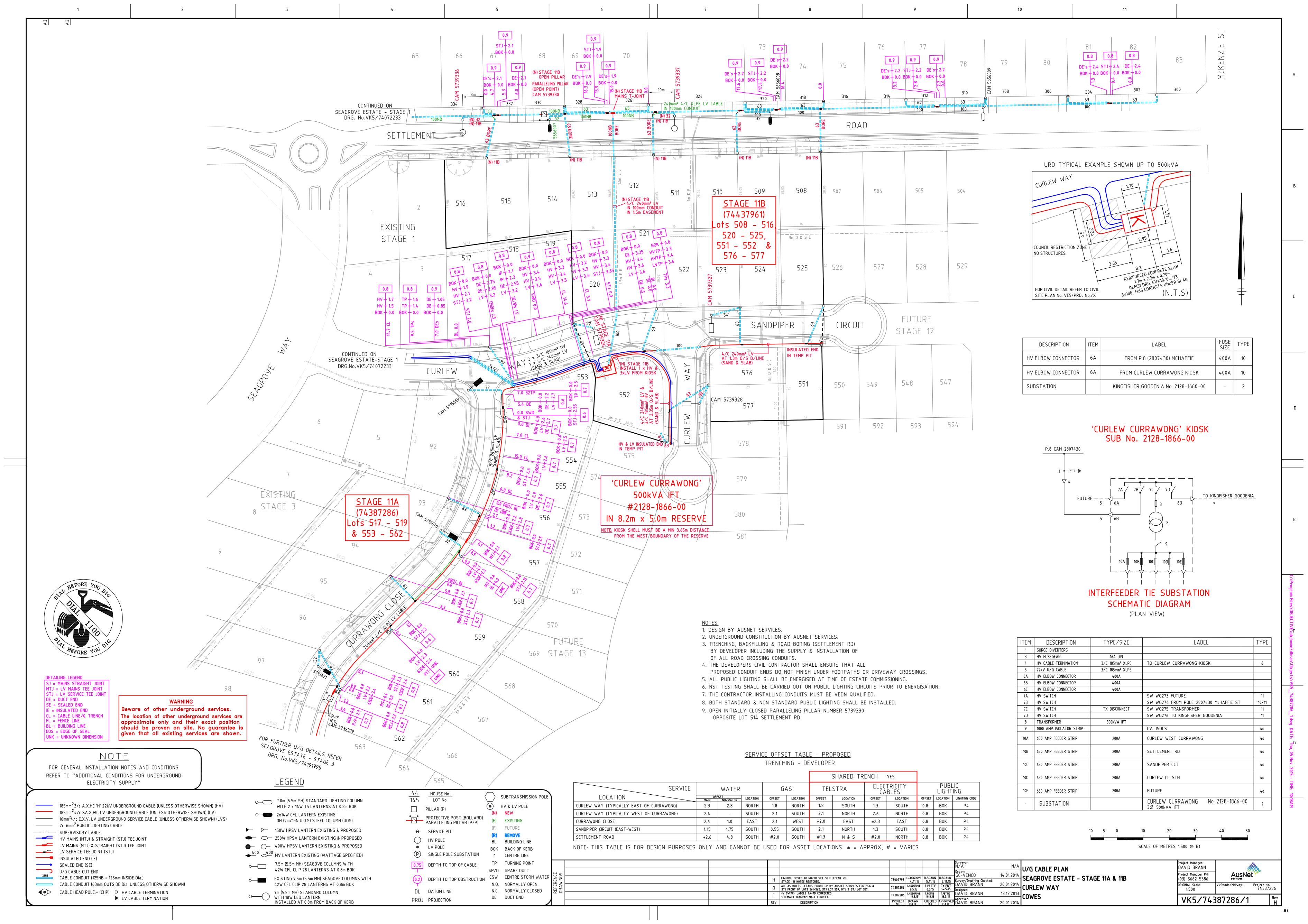
Accredited for compliance with ISO/IEC 17025. The results of tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

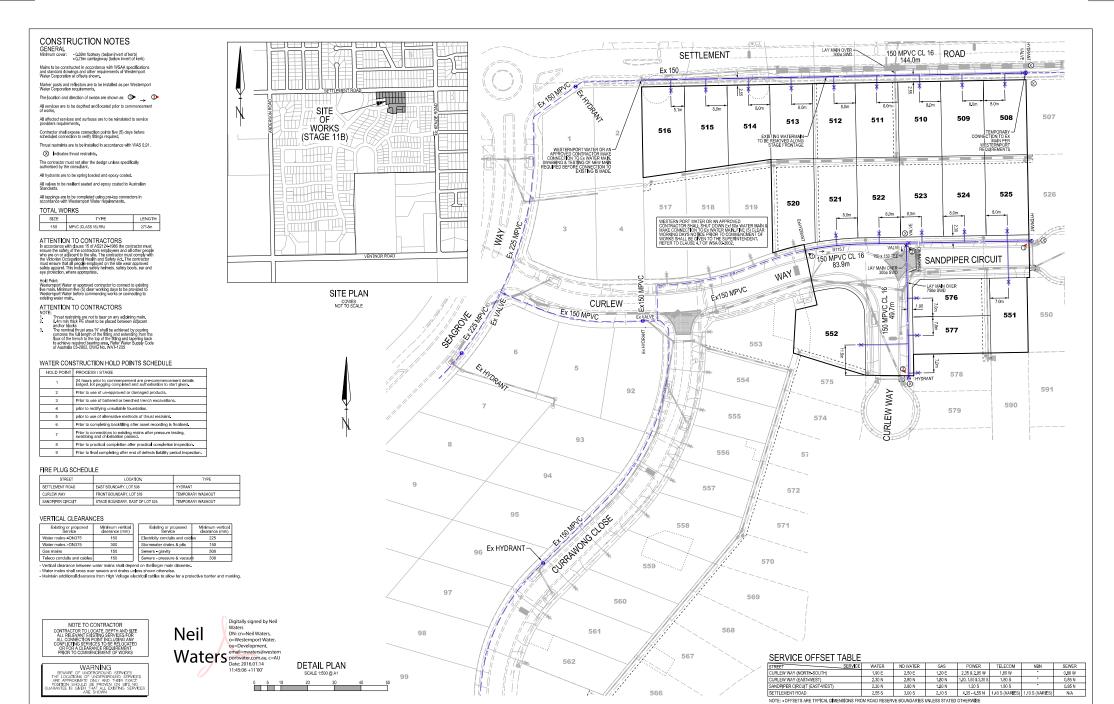
APPROVED SIGNATORY

J. J. -

Form No.: **CG.315.002**Issue Date: 19/02/2013

J Lamont





| Revision | Details | Date | App'd |
|----------|---|----------|-------|
| P1 | Plans submitted to WPW for approval | 24.11.15 | M.C |
| P2 | Resubmitted with amendments to WPW for approval | 9.12.15 | M.C |
| P3 | Resubmitted with amendments to WPW for approval | 22.12.15 | M.C |
| P4 | Resubmitted with amendments to WPW for approval | 7.01.16 | M.C |

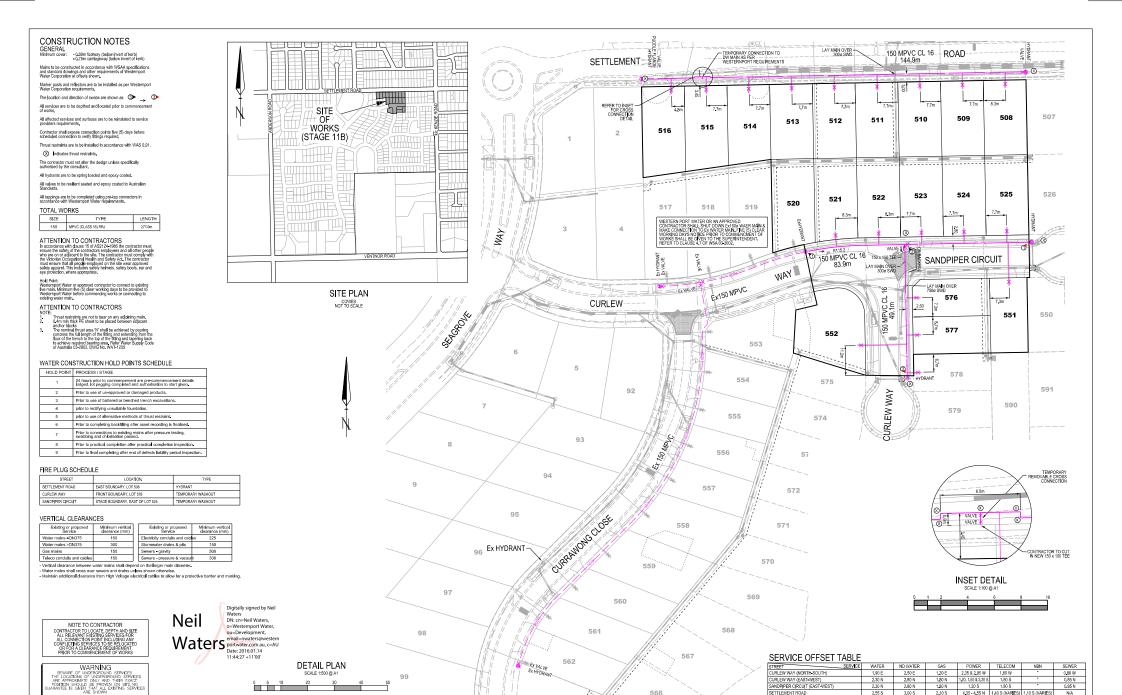




| Drawn | C.KIRKCALDY | |
|----------|-------------|--|
| Designed | M.COYNE | |
| Checked | M.COYNE | |
| Date | 06.11.15 | |
| BW Ref | M4015-11B-W | |

WESTERNPORT WATER SEAGROVE ESTATE STAGE 11B, COWES (POTABLE) WATERMAIN DETAIL PLAN & NOTES

DRG. NO. 4015-11B W



| Revision | Details | Date | App'd |
|----------|---|----------|-------|
| P1 | Plans submitted to WPW for approval | 24.11.15 | M.C |
| P2 | Resubmitted with amendments to WPW for approval | 9.12.15 | M.C |
| P3 | Resubmitted with amendments to WPW for approval | 22.12.15 | M.C |
| P4 | Resubmitted with amendments to WPW for approval | 7.01.16 | M.C |





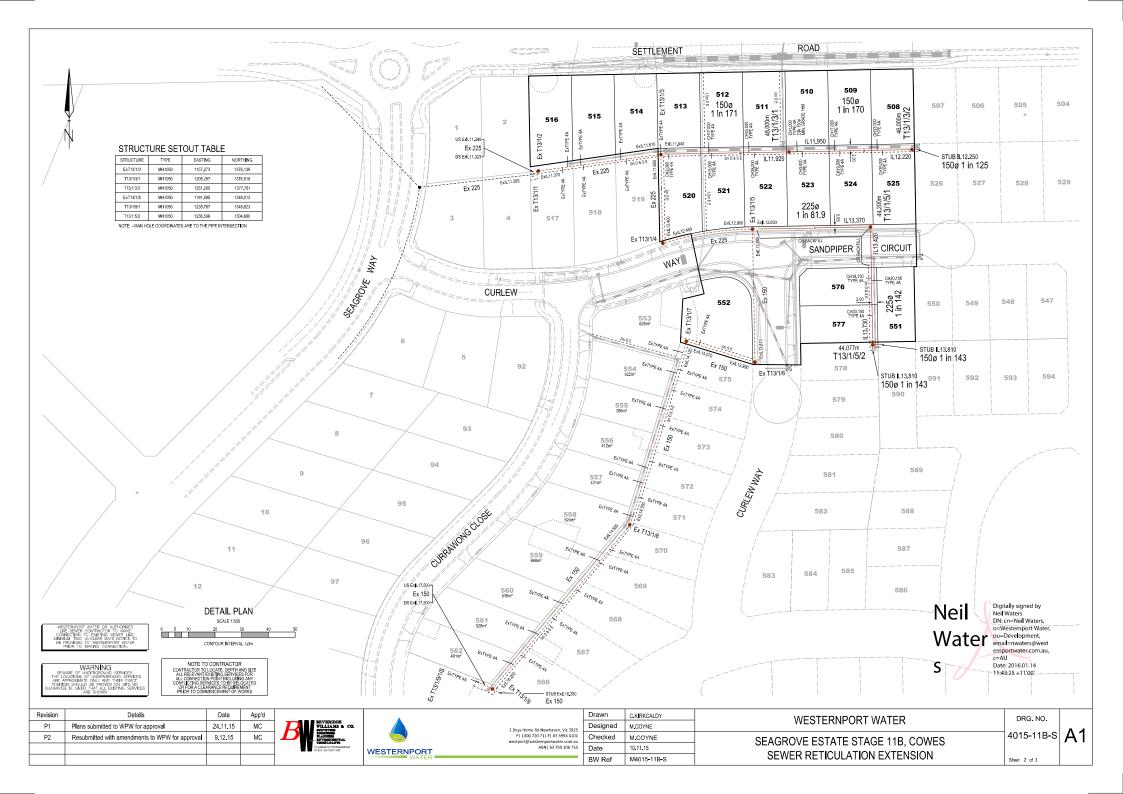
| Rd Newhaven, Vic 3925 20 711 F 03 5956 4101 esternportwater.com.au ABN 63 759 106 755 | Drawn | C.KIRKCALDY | |
|---|----------|--------------|--|
| | Designed | M.COYNE | |
| | Checked | 2.2222 | |
| | Date | 06.11.15 | |
| | BW Ref | M4015-11B-RW | |

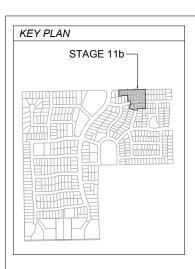
WESTERNPORT WATER

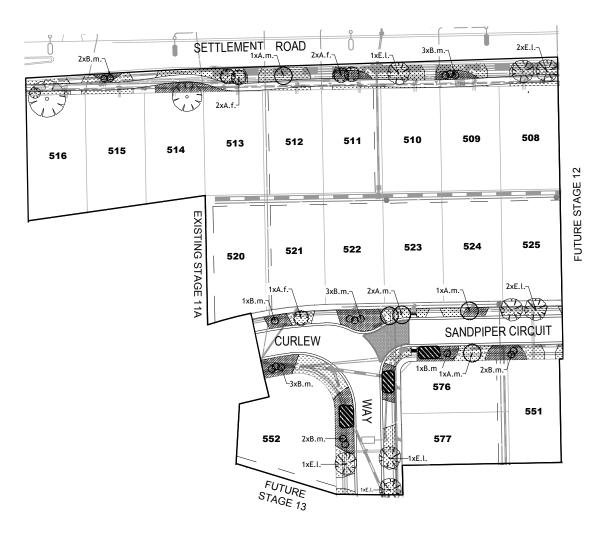
SEAGROVE ESTATE STAGE 11B, COWES
(RECYCLED) WATERMAIN DETAIL PLAN & NOTES

NOTE: - OFFSETS ARE TYPICAL DIMENSIONS FROM ROAD RESERVE BOUNDARIES UNLESS STATED OTHERWISE

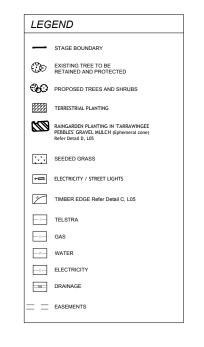
DRG. NO. 4015-11B RW







| PLANT SCHEDULE | | | | | | | | |
|----------------|-------------------------------------|------------------|----------------|-----------------|----------|-----|--|--|
| CODE | BOTANICAL NAME | COMMON NAME | HEIGHT X WIDTH | % MIX & DENSITY | POT SIZE | QTY | | |
| Street Tre | res | | | | | | | |
| A.f. | Agonis flexuosa | Willow Mrytle | 7-9x4-5m | - | 400mm | 5 | | |
| A.m. | Acacia melanoxylon | Blackwood | 12-16x5-7m | - | 45L | 5 | | |
| B.m. | Banksia marginata | Sliver Banksia | 2x2m | - | 400mm | 17 | | |
| E.I. | Eucalyptus leucoxylon 'Eukie Dwarf' | Dwarf Yellow Gum | 9-10x7-9m | - | 400mm | 8 | | |



ESTABLISHMENT & MAINTENANCE NOTES

- The site is to be cleared of all debris and builder's rubble. All weed species shall be eradicated by spot spraying with approved herbicide and hand pulling. Pre-planting weed control must be undertaken no less than six weeks prior to planting.

 Approved site or imported topsoil shall be incorporated into garden
- Approved site or imported topsoil shall be incorporated into garden beds. A Landscape Blend's soil mix or any weed free sandy loam/clay mix with added compost, should be added to a depth of approximately 200mm. Plants species shall be true to type and there should be no alterations or substitution of nominated species or cultivars without the written consent of the Landscape Architect.

 The Landscape Contractor must verify all plant quantities prior to orderine.
- ordering.
 5. All plant stock shall be checked by the Contractor and must be
- All plant stock shall be checked by the Contractor and must be healthy and disease feee.
 Planting must be undertaken in accordance with sound horticultural practices, with holes duy to a minimum 2.5 times the size of the root ball. Holes should be back-filled to top of root ball. Avoid excessive compaction of soil.
 All plants must be thoroughly hand watered immediately after planting

- Slow release fertiliser, suitable for native species (eg. 9 month 'Osmocote') shall be applied at the time of planting in accordance with manufacturer's recommended dose rates and application methods.

 Ferrestrial planting areas to be mulched to a minimum depth of 80mm with a eucamulch blend refer to details. 10. Raingarden areas are to be mulched with 14-20mm size 'Tarrawingee
- Pebbles' gravel and lightly compacted to finished surface level of surrounding elements. 11. Grassed areas to be applied by Hydromulch method to mix as specified
- Grassed areas to be applied by Hydromulch method to mix as specif and achieve first cut if Fertilise prior to Practical Completion.
 90x10mm flexible Redgum or treated Pine timber edge refer to detail C, L05 installed between grass & Terrestrial Planting IRaingarden.
 Regular maintenance must be undertaken to remove weed species. Replace any dead or diseased plants as required. Follow up turf establishment and re-top dress and seed as required.

GENERAL NOTES

- Refer to Landscape specification by Beveridge Williams.

- 1. Refer to Landscape specification by Beveridge Williams.
 2. The Landscape Contractor must refer to civil engineering drawings for set out of roads (and / or carpark areas) and all infrastructure.
 3. This plan is intended for soft landscaping and associated landscape materials and must not be used for any other purposes.
 4. All survey information supplied is assumed to be correct.
 5. The Landscape Contractor must verify all dimensions and areas prior to commencing any work or placing any orders for materials.
 6. The Landscape Contractor must determine the location of all underground services prior to commencing any work on site and shall be liable for any damage to services or conduits.
 7. The Landscape Contractor must immediately report any perceived errors or omissions in the landscape drawings to the Project Manager
- errors or omissions in the landscape drawings to the Project Manager and Client.

 8. Where any conflict occurs between proposed tree locations and
- infrastructure, such as light poles or powerlines, tree(s) must be relocated or removed.
 9. The Landscape Contractor must confirm all plant quantities prior to
- ordering.

 10. Grassed nature strips as specified.

10 20 30

FOR APPROVAL

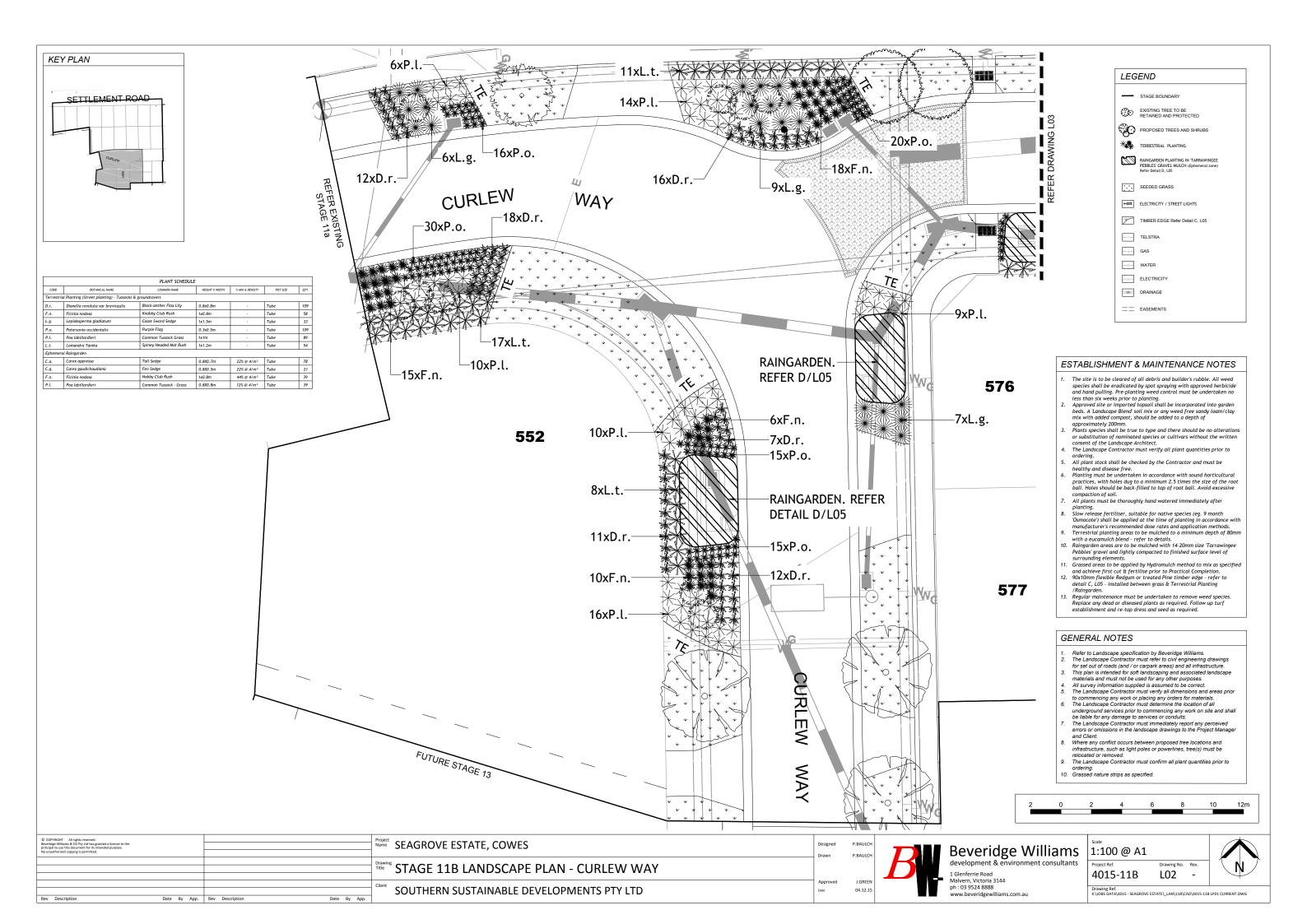
| © COPPRIGHT All rights reserved. Beveridge Williams & CO Phy Ltd has granted a licence to the principal to use this document for its intended purpose. No unauthorized copying is permitted. | | Project Name SEAGROVE ESTATE, COWES | Designed | | | |
|--|------------------------------|--|----------|--|--|--|
| | | Drawing STAGE 11B STREET TREE PLAN | | | | |
| Rev Description Date By App. | Rev Description Date By App. | Cilent SOUTHERN SUSTAINABLE DEVELOPMENTS PTY LTD | Approved | | | |

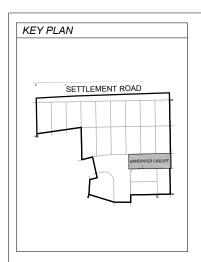


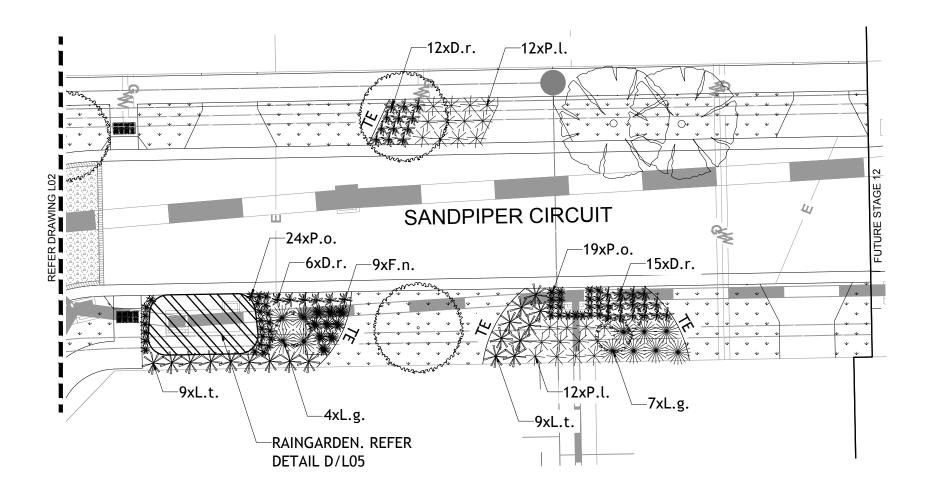


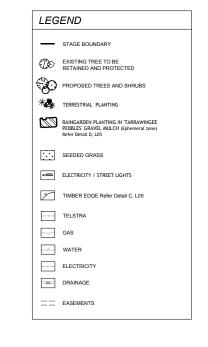
Drawing Ref. K:\UOBS DATA\4015 - SEAGROVE ESTATE_LAN\11B\CAD\4015-11B LP01 CURRENT.DWG

Ν









ESTABLISHMENT & MAINTENANCE NOTES

- 1. The site is to be cleared of all debris and builder's rubble. All weed species shall be eradicated by spot spraying with approved herbicide and hand pulling. Pre-planting weed control must be undertaken no less than six weeks prior to planting.

 2. Approved site or imported topsoil shall be incorporated into garden beds. A Landscape Blend' soil mix or any weed free sandy loam/clay mix with added compost, should be added to a depth of approximately 200mm.

 3. Plants species shall be true to type and there should be no alterations or substitution of nominated species or cultivars without the written.
- or substitution of nominated species or cultivars without the written consent of the Landscape Architect.

 4. The Landscape Contractor must verify all plant quantities prior to credible.

- The Landscape Contractor must verify all plant quantities prior to ordering.
 All plant stock shall be checked by the Contractor and must be healthy and disease free.
 Planting must be undertaken in accordance with sound horticultural practices, with holes dug to a minimum 2.5 times the size of the root ball. Holes should be back-filled to top of root ball. Avoid excessive compaction of sail compaction of soil.

 7. All plants must be thoroughly hand watered immediately after
- planting.
 8. Slow release fertiliser, suitable for native species (eg. 9 month
- 'Osmocote') shall be applied at the time of planting in accordance with manufacturer's recommended dose rates and application methods.
- manufacturer's recommended dose rates and application methods.

 9. Terrestrial planting areas to be mulched to a minimum depth of 80mm with a eucamulch blend refer to details.

 10. Raingarden areas are to be mulched with 14-20mm size Tarrawingee Pebbles' gravel and lightly compacted to finished surface level of surrounding elements.

 11. Grassed areas to be applied by Hydromulch method to mix as specified and achieve first cut if e fertilise prior to Practical Completion.

 12. 90x10mm flexible Redgum or treated Pine timber edge refer to detail C, LO5 installed between grass & Terrestrial Planting IRaingarden.

- Raingarden.

 Raingarden.

 Regular maintenance must be undertaken to remove weed species.

 Replace any dead or diseased plants as required. Follow up turf

 establishment and re-top dress and seed as required.

GENERAL NOTES

- 1. Refer to Landscape specification by Beveridge Williams.
 2. The Landscape Contractor must refer to civil engineering drawings for set out of roads (and / or carpark areas) and all infrastructure.
 3. This plan is intended for soft landscaping and associated landscape materials and must not be used for any other purposes.
 4. All survey information supplied is assumed to be correct.
 5. The Landscape Contractor must verify all dimensions and areas prior to commencing any work or placing any orders for materials.
 6. The Landscape Contractor must determine the location of all underground services prior to commencing any work on site and shall.
- underground services prior to commencing any work on site and shall be liable for any damage to services or conduits. The Landscape Contractor must immediately report any perceived errors or omissions in the landscape drawings to the Project Manager
- and cuent.
 Where any conflict occurs between proposed tree locations and infrastructure, such as light poles or powerlines, tree(s) must be relocated or removed.

 The Landscape Contractor must confirm all plant quantities prior to

ordering.

10. Grassed nature strips as specified.

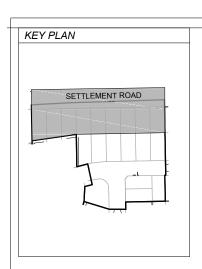


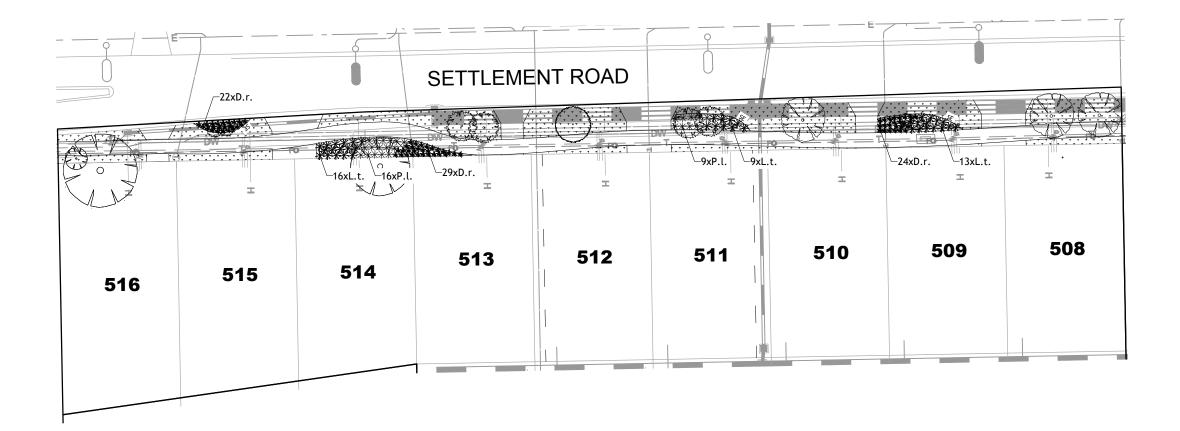
FOR APPROVAL

| © COPYRIGHT All rights reserved. Reveridge William & CO Pty Ltd has granted a licence to the principal to use this document for its intended purpose. No unauthorized copying is permitted. | | Project SEAGROVE ESTATE, COWES | Designed | P.BAULCH P.BAULCH |
|---|-----------------------------|--|------------------|----------------------|
| | | Drawing STAGE 11B LANDSCAPE PLAN - SANDPIPER CIRCUIT | | |
| Pay Description Data By | Ann Pau Description Date Pu | Client SOUTHERN SUSTAINABLE DEVELOPMENTS PTY LTD | Approved Date | J.GREEN 04.12.15 |









ESTABLISHMENT & MAINTENANCE NOTES

LEGEND

STAGE BOUNDARY EXISTING TREE TO BE RETAINED AND PROTECTED

SEEDED GRASS ● ELECTRICITY / STREET LIGHTS SPADE DUG EDGE _T_ TELSTRA GAS -w- WATER ELECTRICITY DRAINAGE == EASEMENTS

PROPOSED TREES AND SHRUBS ** TERRESTRIAL PLANTING

RAINGARDEN PLANTING IN TARRAWINGEE
PEBBLES' GRAVEL MULCH (Ephemeral zone)
Refer Detail D, L05

- 1. The site is to be cleared of all debris and builder's rubble. All weed species shall be eradicated by spot spraying with approved herbicide and hand pulling. Pre-planting weed control must be undertaken no less than six weeks prior to planting.

 2. Approved site or imported topsoil shall be incorporated into garden beds. A Landscape Blend' soil mix or any weed free sandy loam/clay mix with added compost, should be added to a depth of approximately 200mm.

 3. Plants series shall be true to tune and there should be no alterations.
- Plants species shall be true to type and there should be no alterations or substitution of nominated species or cultivars without the written consent of the Landscape Architect.

 The Landscape Contractor must verify all plant quantities prior to orderina.

- All plant stock shall be checked by the Contractor and must be healthy and disease free.

 Planting must be undertaken in accordance with sound horticultural practices, with holes dug to a minimum 2.5 times the size of the root ball. Holes should be back filled to top of root ball. Avoid excessive
- compaction of soil.

 All plants must be thoroughly hand watered immediately after planting. Slow release fertiliser, suitable for native species (eg. 9 month
- 8. Slow release fertiliser, suitable for native species (eg. 9 month Osmocote') shall be applied at the time of planting in accordance with manufacturer's recommended dose rates and application methods.

 9. Terrestrial planting areas to be mulched to a minimum depth of 80mm with a eucamulch blend refer to details.

 10. Raingarden areas are to be mulched with 14-20mm size Tarrawingee Pebbles' gravel and lightly compacted to finished surface level of surrounding elements.

 11. Grassed areas to be applied by Hydromulch method to mix as specified and achieve first cut & fertilise prior to Practical Completion.

 12. 90x10mm flexible Redgum or treated Pine timber edge refer to detail (, LD5 installed between grass & Terrestrial Planting IRaingarden.

 13. Regular maintenance must be undertaken to remove weed species. Replace any dead or diseased plants as required. Follow up turf establishment and re-top dress and seed as required.

GENERAL NOTES

- Refer to Landscape specification by Beveridge Williams.
 The Landscape Contractor must refer to civil engineering drawings for set out of roads (and / or carpark areas) and all infrastructure. This plan is intended for soft landscaping and associated landscape materials and must not be used for any other purposes. All survey information supplied is assumed to be correct. The Landscape Contractor must verify all dimensions and areas prior to compression and under the roadscape.

- The Landscape Contractor must verify all dimensions and areas prior to commencing any work or placing any orders for materials.
 The Landscape Contractor must determine the location of all underground services prior to commencing any work on site and shall be liable for any damage to services or conduits.
 The Landscape Contractor must immediately report any perceived errors or omissions in the landscape drawings to the Project Manager and Client.
 Where any conflict occurs between proposed tree locations and infrastructure, such as light poles or powerlines, tree(s) must be relocated or removed.
 The Landscape Contractor must confirm all plant quantities prior to ordering.
- ordering.

 10. Grassed nature strips as specified.

| 5 | 0 | 5 | 10 | 15 | 20 | 25 | 30m |
|---|---|---|----|----|----|----|-----|
| | | | | | | | |

FOR APPROVAL

| © COPYRIGHT All rights reserved. Reverdings Williams & CO Py Ltd has granted a licence to the principal to use this document for its intended purpose. No unauthorized copying is permitted. | | | Project SEAGROVE ESTATE |
|--|------------------------------|------------------------------|-------------------------|
| | | | Drawing STAGE 11B LAN |
| | Rev Description Date By App. | Rev Description Date By App. | SOUTHERN SUSTA |

| Project Name | SEAGROVE ESTATE, COWES | Designed | P.BAULCH | |
|------------------|--|----------------|---------------------|--|
| Drawing Title | STAGE 11B LANDSCAPE PLAN - SETTLEMENT ROAD | | | |
| Client | SOUTHERN SUSTAINABLE DEVELOPMENTS PTY LTD | Approved Date | J.GREEN 04.12.15 | |
| | | | | |



