WORKS SPECIFICATIONS

1 VEGETATION PROTECTION, RETENTION & TRANSPLANTING

Existing trees and shrubs to be retained are to be protected through the period of the landscape works. • Tree trunks, exposed roots, & shrub branch spread to be protected by temporary barriers and / or wrapping. • No storage of materials or vehicular movement in the inner root zone of trees - 1 to 2 metres from trunk, and shrubs.

• Plants to be retained: - those indicated on the Works Plan & as directed by the Body Corporate Cttee representative. Temporary transplanting of small shrubs is part of the works to enable soil improvement, levels adjustment and for the works and plants layout. If any plants /shrubs are in the way of works construction refer to the nominated Body Corporate representative and /or landscape architect for approval to transplant, and when approved, pot these plants into containers - to be supplied by Contractor. Washed plastic nursery containers are acceptable.

2 SITE PROTECTION

Driveway and Entry Garden: The driveway and entry garden area is required for access. Protection measures are to be installed, including track mats over the turf and pathway to ensure their protection. Access provisions are to be fully removed at completion and all affected areas fully restored. Remove all debris, excess soil and mulch that may build up on the driveway, walls and lawn and garden areas. All grass areas to be fully restored with cultivation and new turf as necessary and as instructed by the Body Corporate rep.

Building, Walls, Fences, Other Structures & Elements: The Contractor is to protect all built items of the property. Any damage is to be fully rectified at the Contractor's expense.

3 REMOVALS & SITE PREPARATIONS

• Remove all weeds and grass in areas of new planting works. Removal of grass is to only remove top grass layer and to retain maximum topsoil for re-use on site.

• Trees to be removed: Melaleuca bracteata. Shrubs to be removed, and shrubs to be transplanted: as directed by the Body Corporate representative.

• Remove all unwanted materials from the site, including grass, concrete edges.

• Cultivate or scarify new planting areas to a minimum depth of 100mm, while following tree and shrub protection measures and not digging in inner tree root zones.

4 GRADING, & DRAINAGE

Grass Area to be Raised The easternmost grassed area is to be raised above the existing grade by nominally 100 - 150 mm in Stage 2 / future works.

Grading: A survey and surface RLs are not available. The grading and finished levels are to be discussed with the Superintendent and /or landscape architect prior to edge levels set-out and topsoil areas set-out and levels, and then approved by the Superintendent prior to completion of these works.

5 PAVING & PLINTHS STONE

5a. Type A - Stone Paved Areas

Type: Limestone *'Jura Beige'* Sizes: 600 x 400 x 30 & 400 x 400 x 30 & 'French Pattern' modular sets x 30mm Supplier: Stonehaus ph 1800 290 990 w: www.stonehaus.com.au/contact/ Sealer: Dry Treat *Stainproof* or as recommended by Drytreat, prior to installation, and to Stonehaus /Dry Treat recommendations.

Base preparation: • Remove soil and establish set downs and cross fall on compacted sub-base. • Continuous moisture barrier on sand bed. Base: compacted, cement stabilised, permeable crushed rock bed. (Base option - Reinforced concrete • 100 mm, reinforced concrete slab SL32 mesh, min. 25 MPa concrete • Cement mortar to adhere pavers.) • Sand / mortar joins: Stone pavers to be butt jointed.

If concrete slab is used: Structural Certification: Paved areas on concrete slabs to be structurally certified by Contractor. Provide Forms 15 and 16 completed and signed for the construction to the Body Corporate.

5b. Type B - Stone Paver 'Steppers' with Gaps*

Paver Type: Limestone *'Jura Beige'* Sizes: 600 x 400 x 30 & 400 x 400 x 30
Supplier: Stonehaus ph 1800 290 990 w: www.stonehaus.com.au/contact/
Sealer: Dry Treat *Stainproof* prior to installation, and to Stonehaus /Dry Treat recommendations. Base for stone paver steppers: Stabilised Base: • Remove soil as needed and establish set downs and cross falls. • 75 - 100mm compacted, cement stabilised, permeable crushed rock bed. • Cement mortar to adhere pavers.

***Gaps**: nom. 150 - 200 mm wide at surface, to be formed deeper than paver prior to cement curing, - stone steppers and gaps are to be adjusted to suit layout area. Set out to be approved by the Landscape architect / Superintendent prior to installation.

• Fill gaps with Mulch - Sand Mix.

5c. Seat Spaces, Mulch Path, Table Area

Preparation: Remove mulch, grass, topsoil to a sound base, graded evenly. The sub-base is to be compacted, and permeable sub-base crushed rock added if required to achieve a stable, free draining base over the whole seat area.

Filter Fabric: Filterwrap (Bidim) Supplier: Geofabrics Australia, or similar to Superintendent's approval.

Plastic Cells: Product: Cirtex 'SurePave'. Size: 800 x 600 x 40. Supplier: Bunnings, or similar to Superintendent's or Landscape Architect's approval.

Sand / Mulch Mix: Mix in 60 - 30, sand - sieved mulch fines, proportions.
This Mix is to be filled into the plastic cells and an additional 25mm depth on top.

6 PLINTHS

2 No. to be installed. Refer to Plan and Details. • Reinforced concrete core and concrete footing.

Panel Facing: • Metal panels fixed to 4 sides, using SS spacers, and SS, hex /dome top, fixings. Panels to be at 90 degrees to each other and vertical.

Metal Panel supplier: Formboss, or similar to be approved. *formboss.com.au* ph 13 11 37

Metal Type: Redcor, 2.5 mm gauge.

Paver Top: Limestone *'Jura Beige'* Size: 600 x 400 x 30 • Stone paver to be mortared on top of core with nom. 15mm maximum gap between top of metal panels and underside of paver. Top of paver to finish horizontal.

Structural Certification: Plinths to be structurally certified by Contractor and / or his consultant. Provide Forms 15 and 16 for the construction, completed and signed, to the Body Corporate.

7 EDGES

Edges to existing east garden (stage 1), and stage 2, southern half of east garden, as per drawing L02. Metal edges supplier: Formboss, or similar to be approved. *formboss.com.au* ph 13 11 37

Type A Galv. 75mm, 1.6 mm gauge – top of edge finish flush with ground.

Type B Redcor 290 mm, 2 mm gauge - Raised 150 above ground and retaining nom. 100mm soil. Staking and installation as per manufacturer's recommendations.

Concrete Mowing Edge at base of Plinths: 100 x 150 depth, Top finish flush with finished ground level.

8 RAISED TIMBER PLANTERS

Planters • Supply and install 2 No. nom. 600mm Ht. - all tops finished horizontal New ACQ treated, dressed HWD 'sleepers' 50 x 200mm. Arris upper edges.

Posts at corners – New HWD 'sleepers' only, as above – install posts at inside corners of planters. Posts to be set min. 400 into min. 600 deep concrete footings. Top of conc. to be smoothed and to fall away from timber.

Planter Infill: • Install 100mm depth coarse sand. • Cover base and sides in a continuous sheet of geofabric, lapping any joins 100mm. Fix geofabric to sides at nom 75mm below top. • Fill with *Topsoil Mix A*.

Geofabric: Filterwrap geotextile Supplier: Geofabrics Australasia Pty Ltd ph 3279 1588, or similar to approval of Landscape Architect.

9 VINE MESH PANELS

2 No. *Archbar Climber Trellis Mesh* panels. Colour: Black. Standard Panel Size: 2233 x 1220 x 50mm. Supplier: *Archbar Pty Ltd* e: ctm@archbar.com.au

Frame: Posts and top member: Form U shaped frame of MS members welded in same alignment. Hot dip galvanise. Powder coat black. An alternative paint system of '2 pack' paint can be proposed for approval prior to purchase.

Sizes: 50 x 50 posts and top member - metal guage to structural certification

Install frame in concrete footings in locations indicated. Footings: Top to finish 50mm above soil level at post, top sloping away from posts on all sides.

REQUIREMENT Structural Design and Certification: Frames and footings to be structurally designed and certified by the Contractor, and / or a structural engineer. Provide completed and signed Form 15 prior to construction, and completed and signed Form 16 for the construction, to the Body Corporate.

REQUIREMENT Inspection and approval in writing of the trellis frame footing prior to the concrete infill, by the structural certifier, is required.

Metal Edge Panels to be attached to frame: Fix the 3 panels to the frame with minimum 3 fixings per panel. Fixings and spacers to be SS.

Metal Panel supplier: Formboss, or similar to be approved. *formboss.com.au* ph 13 11 37

Type: Redcor 150 mm, 1.6 mm gauge

Use *Archbar* supplied fixings to fix panels to posts / frame. Top of installations horizontal. Frame & Set out to be approved prior to installation by the Body Corporate representative and /or landscape architect.

10 PLANTING AREA PREPARATION & TOPSOIL MOUNDS

Establish levels for the topsoil in all planting areas. Remove all debris, and rocks. Cultivate / loosen base of planting areas.

Garden Bed Topsoil Mix: Supply and install imported topsoil mix over garden areas.

Soil Mound Establish topsoil mix mound in planting area, install in 100 - 150 mm layers and lightly compact the soil mix every layer and ensure minimal sinking / lowering later of the soil. Top of mound to finish nom. 300mm above finished level of surrounding garden bed area topsoil. Soil mound toe is not to extend closer than 100mm from the lawn edges.

11 TOPSOIL MIX

Topsoil Mix - Planting Areas: Premium grade garden topsoil mix. Imported Topsoil Mix to comply with AS4419 Soils for Landscaping and Garden Use. Add to planting areas 100mm depth over area and incorporate into the top of the existing topsoil. Lightly compact Topsoil Mix on installation to ensure minimal settling after completion. Topsoil Mix to generally finish level with planting area edges with a feathering down 25 - 50mm at edges & paving for the mulch.

12 PLANTS & PLANTING

Plants Order & Holding The plants shall be ordered and purchased within 1 week of Contract commencement. The landscape contractor must allow time to obtain all the plants required prior to commencement on site.

Plants from BCC Contractor to arrange for collection of these plants.

Pre-purchase Inspection The Contractor should allow for an inspection of the plants at the production or holding Nursery prior to delivery. The Contractor is to ensure the plants meet the following minimum specification.

Plants All plants shall be well formed, sun hardened nursery stock, well branched and foliated, true to type and of sizes specified. All plants shall be container grown with the root system sturdily established in the container, and in no part root bound. Leaves shall be of normal size, shape, colour and texture with a minimum of physical damage. All plants shall be free from living insect pests and free from any disease. The plants shall be in the container size as set out in the schedule and shall be the minimum standard height required for that species and that size at the time of planting. Plants shall meet the minimum size for the species for the specified container size according to Australian standards and the best nursery practice. Before taking delivery to site, all plants shall be checked by the Landscape Contractor for quality. No plant is to be accepted which is unhealthy or has not been adequately hardened off. The Landscape Contractor shall be responsible for their appropriate storage on site. Plants not meeting the requirements of this specification may be rejected and shall be replaced at no extra cost with plants complying. NOTE: No substitutions of plant species shall be made without the prior approval of the Superintendent in writing.

Labelling Label at least one plant of each species with a durable, readable tag.

Soil Conditioner - for all planting areas Soil Conditioner to be added to each planting space around the plant root ball and blended into the topsoil for all planting areas to supplier's or manufacturer's recommendations. *Product: Sure Start*, or similar.

Moisture Retention Product - for all planting Moisture retention crystals or gel to be added to each planting space around the plant root ball and blended into the topsoil for all planting areas to supplier's or manufacturer's recommendations.

Product: Austrablend *Supersorb* 10 kg / M^3 ph 0400 228 169

Fertilizer: Fertilise each tree and shrub and areas of ground cover with Osmocote -for natives, or similar, to manufacturer's recommendations.

Generally Set out the plants in the positions and numbers shown for approval by the Superintendent before planting. Give three work days' notice to the Superintendent of plant set out time and requirement for approvals. Water plants thoroughly following planting and keep moist at all times during the Contract period.

Large shrub & tree planting Ground to be excavated min 100mm larger, all around, than container & root ball size. Scarify and break up base and sides of hole. Install Topsoil Mix with Soil Moisture Additive* in quantities to manufacturers recommendations.

Watering Thoroughly water the plants before planting, immediately after planting, and as required to maintain growth rates free of stress.

Placing Remove the plant from the container with minimum disturbance to the root ball, ensuring that the root ball is moist and place it in its final position, in the centre of the hole and plumb, and with the topsoil level of the plant root ball level with the finished surface of the surrounding soil.

Timber Staking Stake each plant indicated to be staked so that the stem is not twisted out of its natural alignment. Nail ties to stake approximately 600mm from the top end. Drive in stakes as specified. Position the tree so that the branches do not rub against stakes. During the establishment period or inspections, remove ties if so directed.

Tree Stakes Tree stakes to be sound, straight hardwood stakes pointed at one end 50 x 50 x 1500 long driven 400mm into the ground. 2 No. stakes per tree. Ties to be hessian 25mm wide or other approved soft flexible tie, looped in figure 8 around stake and tree trunk. Wire ties will not be permitted.

Backfilling Backfill with imported topsoil mixture. Lightly tamp and water to eliminate air pockets.

Re-Planting Existing Plants Plant existing plants in locations directed.

13 MULCH

New Planting Areas: 75mm depth, 25mm hoop pine bark flake, or approved alternative. Mulch to comply with AS4454 Compost, Soil Conditioners and Mulches. Mulch depth can reduce at garden edges to 25mm.

Existing Planted Areas & at Tree Root Areas: Add 50mm mulch over the existing garden.

14 TURF

The turf area is to be replaced with new turf.

• Prepare the whole area by removal of all weeds and unwanted turf.

• Grades: Refer to the landscape architect /or Superintendent at the time of set out of the works to establish finish levels and grades for the turf area. Add Topsoil Mix as required to achieve the required grades.

• Turf shall be machine cut, A1 grade, weed free turf, variety: Aussie Blue* , or similar to approval, - kept moist during transport and on-site operations. Turf shall be free from paspalum, nutgrass, oxalis and other weeds and free from stones over 25mm in diameter. *Turf species to be finalised with Landscape Architect and /or Body Corp. rep prior to purchase.

• Turf fertiliser to be used under turf prior to installation, and after installation during establishment maintenance.

15 IRRIGATION

All existing and new lawn areas are to be watered with an in-ground, automatic irrigation system. System types:

• Lawn areas - East & Front garden areas: auto pop-ups. Note: Pop-up sprays are to be 360 degrees where space allows to spray over the garden bed areas. Sprays are not to spray on the building, timber south fence, front brick wall, or over the footpath.

• Trellis panels: System to allow for addition in these 2 beds of 2 misters /panel.

• Hose tap on post. Supply and install brass hose tap fixture, from water supply using copper piping. Fix hose tap to post. Treated and stained HWD timber post, nom 50 x 200, 900 high, with angled top. Timber to match raised planter beds timber.

• Front garden at building frontage - NIC: System to allow for future addition for full coverage of the lawns and garden of the remainder of the front garden.

The irrigation system design with details of controller, pop-ups and sprays etc, valves and layout of main lines, valves and stations to be submitted for approval in writing from the Body Corporate rep. prior to any purchase and installation. System to comply with BCC & state authorities' requirements.

Controller location: TBC / refer nominated Body Corporate representative. Contractor to arrange electrician to install power point as required / or refer to Superintendent for location of available power point.

16 FURNITURE

Moveable furniture may be available at the site and placement may be required. These items are to be placed – no fixings required. Refer to the Body Corp. representative.

17 POWER & LIGHTS

Power Arrange and install double point GPO - for lights transformer and general use.

Lighting - low voltage landscape lights

Light fixtures: 6 No. Hunza "*Tier Lite*" & 6 No Hunza "*Spike Spot Adjustable*".

Type: LED, Transformers: 2 No exterior /w'proof, location TBA. NOTE: Nominated Body Corporate representative's electrician to provide and install external GPO for transformer. Finish: Copper. Supplier: Hunza - www.hunza.co.nz

18 LANDSCAPE WORKS ESTABLISHMENT - MAINTENANCE PERIOD

Establishment / Maintenance Period: 1 month from date of Practical Completion (PC)

INSPECTIONS Inspections of the site and the works of the Establishment Period may be carried out at any time by the Superintendent / Body Corporate rep.

REPLACEMENTS Replacement of diseased or damaged plants, dead or dying plants or dead, dying or infected lawn areas shall be undertaken within one week of these items occurring, or within one week of instruction by the Superintendent / Body Corporate rep.

GENERAL

- Undertake adequate watering of all the planting areas to sustain continuous healthy plant growth.
- Pest removal or eradication and treatment of infected plants to restore healthy plants.
- Remove all debris from the site, and maintain the site in a clean and tidy condition.
- Uphold the work against any defects or damage during the Establishment Period and undertake the items specified below:

PLANTING AREAS

- Make good any variations to depths and surface levels of topsoil mix and mulch.

SITE & MOWING EDGES MAINTENANCE

Uphold the work against any defects or damage during the Establishment Period and undertake the items specified below:

- Repair and replacement of any failing sections, or damaged mowing edges.

Edges: Undertake repairs and maintenance to all edges as required. Edges which have moved in either vertical or horizontal alignment or have tilted off the vertical to be re-installed to rectify the movement. Works to be completed prior to completion of the Establishment Period.

Paved Areas: Undertake all repairs and maintenance to all pavements and stepper pavers as required. Paver stones which have moved above or below the specified and earlier approved installation are to be re-laid. Works to be completed prior to completion of the Establishment Period.

Plinths & Vine Trellis Structures: Undertake all repairs and maintenance to these structures as required. Structures which have moved above, below or tilted from the specified and earlier approved installation are to be re-built. Works to be completed prior to completion of the Establishment Period.

19 LANDSCAPE WORKS DEFECTS LIABILITY PERIOD

Defects Liability Period: 12 months from PC. During the Defects Liability Period attend upon any structural and /or operational failure or like inadequacy, as directed by the Superintendent, and make good to their satisfaction.

amendments

issue	amendment	date
A	Issue for Tender	10.06.20
B	Changes: mulch	17.06.20
C	Stage 2 Works	29.04.21
D	Structures & paving changes	03.08.21

associated sheets

- L02 East Garden Layout Plan
- L03 Details
- L04 Planting Plan

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client	project	drawing title
Bowen Place Body Corporate	Front Garden Rejuvenation	East Garden **Works Specifications**

job number	date	scale	drawing number	sheet	issue
21 03 04	Nov 2019	n / a	L 01	1 of 4	D