LANDSCAPE SPECIFICATION

Retention of Site Topsoil

Prior to the commencement of site works the builder is to scrape the site topsoil and preserve it for later use in tree planting bays.

Builders' rubble and any other matter deleterious to plant growth (e.g. large rocks) shall be removed from the site of new planting. Removal of all trees to be by Builder.

Reinstated site topsoil is to be used throughout the site. If an insufficient quantity is available, then imported topsoil with the following characteristics may be used for garden bed areas. Imported topsoil is to be free of weeds, rubble and other materials deleterious to plant growth and is to be of a medium texture (sandy loam) with a pH of 6.0-7.0. It is imperative that site topsoil be used in tree planting bays to help reduce the risk of root girdling and subsequent tree failure. Top soil is to be laid over a prepared sub-base which has had any materials deleterious to plant growth (e.g. rubble and large rocks) removed. This soil is then to be spread to the appropriate depth and cultivated into the existing site soil to a minimum depth of 150mm. Imported top soil is to be lightly and uniformly compacted in 150mm layers to a minimum depth of 100mm on new or repaired naturestrips areas, 300mm on excavated planting beds and 450mm in tree planting areas.

Soil Preparation for new and Refurbished Tree Planting Bays

The following is to be used for all trees within asphalt cut-outs and garden beds within the new asphalt carpark. It is imperative that site topsoil be used in these areas to help reduce the risk of root girdling and subsequent tree failure. Tree Planting Bays are to be prepared in accordance with the following:

- Remove all objects within the bays including, but not limited to existing trees, signage, light posts and timber edging greater than 80mm in depth. Existing timber edges creating semi-raised planters around existing trees are to be removed;
- Remove all material within the tree planting bays to a sufficient depth to encounter natural subgrade. This is to include existing soil, concrete spillage and all materials deleterious to plant growth. Ensure that there are no impediments to tree roots growing beneath the asphalt (that is remove barriers such as timber edges greater than 150mm in depth);
- Breakup natural subgrade and backfill planting hole with site topsoil, cultivating into the existing site soil to a minimum depth of 150mm. Soil should be lightly compacted to prevent settling of trees;
- Install new trees in a planting hole with dished sides and which is at least 2 times the diameter of the rootball, with the top of the rootball being 50mm below the asphalt paving. Wrap 2No. 80mm dia. slotted PVC Ag drains around the rootball for irrigation purposes;
- Install a no-fines gravel mulch to a minimum depth of 50mm, keeping mulch at least 100mm back from the stem of the tree;
- Install timber tree guards to prevent damage, ensuring that concrete footings are not installed within the asphalt cut-outs;

Weed Removal

All weeds shall be thoroughly removed. All vegetative material, including roots and rhizomes of non-woody perennials and woody suckering weeds, is to be removed or appropriately controlled using chemical means. The stumps of non-suckering woody perennials are to be stump ground. All vegetative material shall be appropriately disposed of off site in a manner which will not allow their re-establishment elsewhere. Any chemical controls are to be used in accordance with manufacturer's instructions and standard occupational health and safety procedures.

If any existing planting is to be retained then care must be taken to ensure these are not damaged during weed removal. This also implies that any herbicides used are suitable for use around the vegetation to be retained.

Planting

Planting shall be carried out using accepted horticultural practices with all plants conforming to the species, size and quantities indicated on the Landscape Plan and Plant Schedule. Plants shall be thoroughly soaked through immersion in water prior to planting and if the planting soil is very dry then the planting hole is also to be filled with water and allowed to drain completely. The rootball of semi-advanced trees is to be well irrigated rather than immersed.

All plants shall be appropriately hardened off in the nursery. Use plants with the following characteristics: Large healthy root systems with no evidence of root curl or pot bound restriction or damage, vigorous, well established, free from disease and pests and of good form, consistent with the species or variety, hardened off - not soft or forced. Plants that do not meet these requirements will be rejected

Planting holes for shrubs and groundcovers are to be of minimum size 75mm larger than the planting pot in all directions.

Semi-advanced tree planting holes are to be the same depth as the rootball and 2-3 times its diameter, with the top of the rootball being at grade. Planting holes are not to be excavated using an auger unless the edges of the hole are later broken up using a spade or similar. The use of augers can smooth the side of the hole and lead to root girdling. A 75mm high berm is to be constructed at edge of root-ball to hold water.

All plants are to be thoroughly watered after planting and slow release fertiliser added at the quantities specified by the manufacturer.

Mulching *(Gravel Mulch)*

No fines gravel mulch is to be supplied to all garden beds and is to be light grey or tan in colour. Gravel is to be generally in the particle range of 5-8mm and is to contain no fine materials (no particles under 2mm in diameter). Gravel is to be laid to a depth of 30mm and kept back 100mm from tree trunks to prevent collar rot.

Irrigation *(Garden Beds Only)*

Irrigation is to be supplied to all garden beds in the form of an automatic drip irrigation system. A rain shut off device is to be included in the system. Irrigation lines are to be placed below the mulch layer and the entire system is to meet manufacturer's specifications.

Repair of damaged Naturestrip areas

Lawn areas are to be restored to current grades with any depressions filled with topsoil to specifications above and lightly compacted in 150mm layers. Naturestrip areas are to be re-seeded using an appropriate and matching turf type and the area fenced off to allow the re-establishment of lawn. Re-seeded areas are to be well irrigated and the area supplied with a slow release fertiliser at the quantities recommended by the manufacturer.

Drainage

Agricultural drains are to be installed to garden beds. Pipes shall be 90mm diameter slotted P.V.C. flexible coil laid with one line of perforations at the bottom. Trench floor is to be uniformly graded, with falls directed towards pits and bed pipes on a continuous 75mm layer of screenings. Tees, couplings or adapters suitable for the works required are to be used at the junctions of pipes with pipes to be surrounded with open graded crushed rock to 100mm with opened graded crushed rock to 100mm above pipes. Connect Agricultural drains to storm water.

Plant Establishment Period

There shall be a 13 weeks Plant Establishment Period following the approval of Practical Completion by the responsible authority. During this period the landscape contractor shall make good all defects in his/her scope of works. Maintenance and Establishment means the care and maintenance of the contract area by accepted horticultural practices, as well as rectifying any defects that become apparent in the work under normal use. This shall include, but shall not be limited to watering, fertilising, weeding, pruning, pest and disease control, cultivation, re-staking and replacement of any plants that fail or are damaged with plants of the same species and size.

TREE PROTECTION NOTES

Tree Protection measures shall include the following and be in accordance with Australian Standard AS 4970 -2009 'Protection of Trees on Development Sites'

1. All trees to be retained shall be identified by the builder and Landscape Architect at the commencement of works. The appointed trees shall be fenced off with sturdy fencing constructed to a minimum height of 1.5 m using chain mesh strung between star pickets. The aim is to create an 'exclusion zone' beneath these trees. This fence will deter the entry of heavy equipment, vehicles, workers and/or the public into this Tree Protection Zone. At least two laminated, A3 size signs are to be attached to the tree protection fencing and are to clearly state "TREE PROTECTION ZONE, ENTRY RESTRICTIONS APPLY, DO NOT REMOVE FENCE FOR ANY REASON, CONTACT BUILDER IF ENTRY IS REQUIRED" and is to have the builder's (or appointed site foreman) and consulting arborist's contact details. This fence is to be established prior to any heavy machinery entering the site.

2. The exclusion zone shall be established at or near the perimeter
of the tree branches (i.e., the further away from the trunk the better the protection offered). The exclusion zone is to be established no closer to the trunk than the distance specified as the Tree Protection Zone.

3. Where a root diameter of 20mm or greater is encountered during site works, these shall be cleanly pruned by hand, but never torn
from the ground by machinery.

4. A suitably qualified (Certificate IV or higher) and experienced arborist shall carry out works to the Australian Standard -AS 4373-1996, and shall be used to undertake all root and branch pruning requirements.

Throughout building works they shall also undertake regular inspections of trees and carry out remedial works as required ensuring trees retain good health and vigour. Such works shall include but not be limited to irrigation, feeding, aeration, mulching and 'dead-wooding'.

5. Should services pass through the root zone of trees to be retained on the site, then they must be located in trenches augured beneath the root zone, i.e. at a minimum depth of 1200mm.

6. During the construction process, all areas beneath the canopies
of the trees to be retained must be covered by a 100mm layer of coarse wood chip or other like material. This layer will help minimise the affects of compaction.If temporary access is required through a root zone area, this must be carried out using sheets of heavy plywood, or like protection, but this must not be considered for long term use.

7. There will be no open trenching in the root zone of trees. This also implies no strip footings. Pier and beam construction would be essential in Tree Protection Zones, with beams laid at ground level and piers to be engineered to be as thin and widely spaced as possible.

8. Any services required to be installed underground will be bored and utility authorities are to make use of a common trench where possible. This is the responsibility of the site foreman.

9. Any vegetation located within Tree Protection Zones is to be removed by hand so that no heavy machinery enters into TPZ. Any trees to be removed that have canopies interlocking with trees to be retained are to be removed by a qualified arborist who will ensure that interlocking branches are removed first and other protection measures are undertaken.

10. No fuel, oil dumps or chemicals shall be allowed in or stored on the Tree Protection Zone. The servicing and refuelling of equipment and vehicles must be carried out away from the root zones.

11. No storage of materials, equipment or temporary buildings will take place over the root zone of any trees.

12. No fixtures of any sort shall be attached to any tree for any reason.

13. If damage of any sort is to occur to any tree or large shrub on site, the appointed arborist must be contacted to take immediate remedial action.

14. Prior to the commencement of building works on site the appointed builder (or site foreman) and staff shall have an hour-long briefing on Tree Protection on-site along with the application of these Tree Protection Requirements.

PLANT SCHEDULE

SYM	BOTANICAL NAME	COMMON NAME	D/E	HEIGHT X WIDTH AT MATURITY	SUPPLY SIZE	SPACING	QTY
TREES							
Ac	*Angophora costata*	Smooth Barked Apple	E	20 x 10m	3m	As Shown	67
Al	*Allocasuarina littoralis*	Black She-Oak	E	20 x 10m	3m	As Shown	6
Jm	*Jacaranda mimosifolia*	Jacaranda	SD	15 X 10m	3m	As Shown	4
PcC	*Pyrus calleryana* 'Chanticleer'	Chanticleer Ornamental Pear	D	11 X 6m	3m	As Shown	34
TL	*Tristaniopsis laurina* 'Luscious'	Luscious Water Gum	E	4m X 1.5m	1.5m	As Shown	8
ZGV	*Zelkova serrata* 'Green Vase'	Japanese Zelkova	D	15 X 10m	3m	As Shown	92
						TOTAL	**211**
SHRUBS							
Ca	*Correa alba*	White Correa	E	0.5 x 0.5m	200mm pot	600mm c.c	TBC
SaP	*Syzygium australe* 'Pinnacle'	Pinncale Lilly Pilly	E	4m X 1.5m	1.5m	1.5m c.c	TBC
						TOTAL	**0**
GROUNDCOVERS & TUFTIES							
As	*Austrostipa stipoides*	Prickly Spear Grass	E	0.6 x 0.6m	140mm pot	500mm c.c	TBC
CDB	*Correa* 'Dusky Bells'	Dusky Bells Correa	E	0.6 x 0.6m	140mm pot	500mm c.c	TBC
DLJ	*Dianella* 'Little Jess'	Little Jess Flax Lily	E	0.4 x 0.6m	140mm pot	500mm c.c	TBC
LT	*Lomandra* 'Tanika'	Tanika Mat-rush	E	0.6 x 0.6m	140mm pot	500mm c.c	TBC
LI	*Lomandra longifolia*	Spiny-headed Mat-rush	E	0.6 x 0.6m	140mm pot	500mm c.c	TBC
						TOTAL	**0**
CLIMBERS							
Tj	*Trachelospermum jasminoides*	Chinese Star Jasmine	E	Climbing	140mm pot	3.0m c.c	20
						TOTAL	**20**

INDICATIVE PLANTING DETAILS

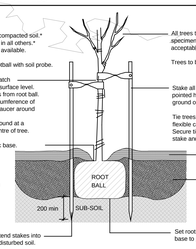
NOTE:
Width of planting hole is:
3 times root ball diameter in highly compacted soil.*
2 times root ball diameter minimum in all others.*
* Where available planting space is available.

Regularly check soil moisture of rootball with soil probe.

Ensure trees are placed so as to match crown of root ball with surrounding surface level. Carefully prune off any girdling roots from root ball. Form soil ring berm beyond the circumference of the root ball to provide a watering saucer around the immediate crown of tree.
Spread specified mulch to tree surround at a minimum of 1.0m diameter from centre of tree.

Keep topsoil/mulch away from trunk base.

NOTE:
For slopes greater than 1:8 and if root ball is raised above grade form raised ring of soil & mulch to direct water into root ball.



All trees to be healthy well grown specimens free of pests and diseases with acceptable root:shoot ratios

Trees to be watered prior to planting.

Stake all trees with 2 No. 50x50x1800mm, chisel pointed hardwood stakes driven min. 600mm into ground outside root ball.

Tie trees immediately after planting with flexible canvas or rubber ties in a figure8. Secure ties to stakes by wrapping around stake and nailing with galvanised nails.

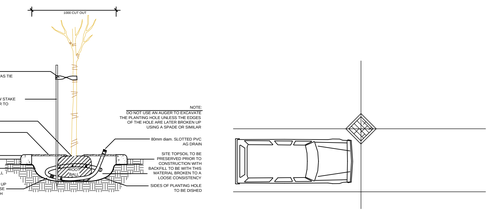
75mm depth of organic mulch or as specified

Backfill hole with existing site soil broken up to a friable texture. Pack around root ball to stabilise and allow rest of backfill to settle naturally, or tamp lightly.

Set root ball on undisturbed soil or re-firm base to prevent settling.

Extend stakes into undisturbed soil.

D1 / TP1 INDICATIVE TREE PLANTING DETAIL
Scale 1:20



D1 / TP2 TREE PROTECTION DETAIL
NOTE: TO LATER DETAIL (Not to scale)

LEGEND

- Existing River Red Gums to be retained and protected.
- Tree Protection Zone.
- Existing Trees to be removed.
- Proposed Secondary trees (Refer to plant schedule)
- Proposed Feature trees (Refer to plant schedule)
- Proposed ground-covers & tufties (Refer to plant schedule)
- Seeded Lawn (As specified)
- Tree cut-out Gravel
- Raised Planter (To Architect's Detail) * 500mm depth for groundcovers & climbers *1000mm depth for Trees

NOTES:

- Refer to ***Tree Response*** Arboricultural Report dated February 2013 for all information on trees to be retained & removed.
- Refer to architect's drawings for paving detail.
- Refer to architect's drawings for furniture.

JOHN PATRICK PTY LTD
324 Victoria Street,
Richmond, VIC 3121
T +61 3 9429 4855
F +61 3 9429 8211
admin@johnpatrick.com.au
www.johnpatrick.com.au

CLIENT
Lascorp Development Group

PROJECT
Bellarine Gateway Plaza

Bellarine Hwy Leopold

DRAWING
Proposed Landscape Plan

REVISION		DATE	BY
A	Town Planning Submission	14.08.2012	KD
B	Changes made in response to Council RFI	16.04.2013	KD
C	Landscape amended in accordance with new carpark layout	02.09.2013	KD
D	Landscape amended in accordance with new carpark layout	03.10.2013	KD
E	Landscape amended in accordance with new carpark layout	16.10.2013	KD

SCALE	1:500 @ A0
DATE	October 2013
DRAWN	KD
CHECKED	JP
JOB NO	12-185
DWG NO	L-TP01-(E)
CAD FILE	

COPYRIGHT
This drawing must not be copied in whole or in part without the written consent of JOHN PATRICK Pty Ltd.

PLEASE NOTE
The contractor must verify all dimensions on site before commencing any work or preparing any shop drawings.

Do not scale off drawings.