

RIVER HEIGHTS TOURIST ACCOMMODATION
KIRKWOOD ROAD
TWEED HEADS

STATEMENT OF LANDSCAPE INTENT

ISSUE C

DEBORAH CARLILE AND PAUL MJATELSKI PTY LTD

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INTRODUCTION + SITE

The proposed River Heights Tourist Park development is located in Tweed Heads South approximately 450 metres south of Terranora Creek.

The site is located on a ridge bounded by the unmade Kirkwood Road to the North, the Pacific Highway to the North-East, the suburb of River Heights to the West, Pioneer Country Function Centre to the South-west and South Tweed Heads Industrial area to the South. The South- East portion of the site includes a Wet Sclerophyll Forest and Grassland and an area of SEPP 14 Wetland. It is proposed that the development be confined to the northern section of the property, leaving the Wetland and a buffer zone untouched.



Aerial View - Google Earth



Vegetation Zones – James Warren and Associates



EXISTING VEGETATION

The existing vegetation on the site consists of six communities –

1. Tall Closed Swamp (23.43%)
 - *Melaleuca quinquenervia*
 - Glochidion sumatranum*
 - Acmena* sp
 - Syzygium oleosum*
 - Ficus coronata*
 - Hypolepis muelleri*
 - Blechnum indicum*
 - Cyperus* sp
 - Phragmites australis*
2. Tall open Wet Sclerophyll (7.65%)
with an area of a higher density of
rainforest species (1.3%)
 - *Eucalyptus pilularis*
 - Lophostemon confertus*
 - Acacia disparrima*
 - Daviesia latifolia*
 - Elaeocarpus obovatus*
 - Tristaniopsis laurina*
 - Glochidion sumatranum*
 - Acmena* sp
 - Syzygium oleosum*
 - Endiandra discolor*
 - Litsea* sp
 - Cryptocarya triplinervis*
 - Cryptocarya foetida*
3. Tall closed Wet Sclerophyll (10.2%)
 - *Eucalyptus pilularis*
 - Corymbia intermedia*
 - Lophostemon confertus*
 - Acacia aulacocarpa*
 - Daviesia latifolia*
 - Dodonea viscosa*
4. Mid High mixed regrowth (16.27%)
 - *Acacia fimbriata*
 - Macaranga tanarius*
 - Acacia melanoxylon*
 - Corymbia intermedia*
 - Lophostemon confertus*
 - Casuarina glauca*
5. Low Closed Forest (8.56%)
 - *Melaleuca quinquenervia*
 - Casuarina glauca*
6. Grassland+scattered trees(32.57%)
 - Introduced grasses
 - Cupaniopsis anacardioides*
 - Ficus virens*
 - Eucalyptus* spp

Of these 2, 3, 4, and 6 are found within the proposed development area, the greater portion being grassland..

Concept

The landscape concept is to showcase the plant species endemic to the site, using them in a way which complements the functions of a Tourist Park, creating a landscape which connects with the history of the land and reflects the local vegetation character. It is proposed that the majority of the plant species used in the proposal will be endemic to the site. These will be supplemented with local native species and cultivars of native species.

Design

The functional requirements of the development are woven around this concept.

The landscaping will:

- Complement the architectural design of the building and co-ordinate with the building design elements;
- Provide way finding throughout the park, with different tree species identifying the internal roadways;
- Provide privacy between the units and between the private outdoor open spaces;
- Include spaces of various scales to provide opportunities for both passive and active recreational activities
- Incorporate a resort style swimming pool with entertainment facilities to suit large and small groups

Communal Facilities

Adjacent the vehicular entry to the site a Communal Facilities building with adjoining resort style swimming pool and BBQ Pavilion services new arrivals and provides recreational facilities for holiday makers staying at the Park. To the north of the Building the covered verandah opens on to a large lawn area suitable for large groups to gather or for al-fresco dining. This area also provides spill out space for the BBQ Pavilion adjacent. The northern wall of the BBQ Pavilion extends along the end of the Pool Terrace providing acoustic buffering between the recreational facilities and the Pacific Motorway to the north.

Three pools provide a range of recreational experiences – The Lap Pool with ramped access for active swimming, with adjoining sun terrace; a wading pool 600mm to 900mm deep into which a waterfall circulates through the filtration system; and a children's play pool 300mm to 600mm deep with a seating area adjacent for parental supervision.

Landscaped Terraces

Distributed throughout the site are a number of landscaped terraces providing open recreational areas to the surrounding accommodation. The first of these is directly in front of the entry road incorporating a children's playground with swings, slides and climbing equipment. To the east of this are two further large landscaped terraces overlooking the eastern escarpment. The largest has a picnic shelter and BBQs with picnic table settings for the enjoyment of holiday makers and residents. Walkways meander through the gardens linking with the footpath system throughout the development. These garden terraces are readily accessible from the surrounding units whilst being landscaped in such a way as to discourage direct access from the play equipment to the roadways, with low dense planting along the edges to restrict access whilst allowing oversight.

Street Trees

Brachychiton acerifolius is proposed as the iconic feature planting around the perimeter of the Tourist Park and to the entry road, with street planting of *Cupaniopsis anacardioides*, *Jagera pseudhorus*, *Mallotus philippensis*, *Elaeocarpus obovatus* and *Flindersia australis* to internal roadways and rear yards.

Edges

The batters surrounding the development will be excavated into the medium to strong argillite rock encountered in the Geotechnical testing at the depths required to construct the extension to Kirkwood Road. It is proposed that the toe and top of these batters be planted with rainforest species from Plant Community 2, to comply with the requirements of State and Local legislation in relation to Bushfire prevention. Where possible, it is proposed that rainforest trees, groundcover and shrubs species from Community 2 be planted into soil pockets in the rock batters. Trees would be planted a minimum spacing of 16 metres in accordance with AS 3959 and NSW Rural Fire Service Standards for Asset Protection Zones. The bio retention basins to the east and west sides of the development will be planted with tree, rush and sedge species endemic to the adjacent wetlands.



Materials

Surface finishes will be of high quality. Materials will include tiling, pavers, exposed aggregate, and stone.

Landscape walls, water features and furniture will be in keeping with the architecture of the building creating a contemporary landscape. Planting to the top and toe of the perimeter batters, will soften the edges and provide visual separation between the facilities and the surrounding area.

The plant species will be from a sub-tropical palette incorporating species endemic to the site and the local region. Refer to the following section for the proposed plant palette.

ESD initiatives

The landscaping will incorporate ESD initiatives to recycle water and make use of rainwater:

- The automatic irrigation systems will utilise collected rainwater and pool backwash water, stored in rainwater storage tanks adjacent each mobile home unit and the Communal Facilities building.
- The Swimming Pools will be topped up using collected rainwater.

Bushfire Management

The impact of fire will be minimised by the use of strategies as recommended by the New South Wales Rural Fire Service Standards for Asset Protection Zones:

- Asset Protection Zones will be cleared of weeds and non-rainforest species, and revegetated with rainforest species found in Plant Community 2, adjacent to the Outer Asset Protection Zone.
- Tree species for revegetation of the Asset Protection Zones will be selected from Rainforest species with smooth bark and low volatile oil content.
- Trees will be protected from the spread of fire by the removal of low branches to a height of 2m.
- Trees used in the revegetation of the Asset Protection Zones will be planted at a minimum spacing of 23 metres to the Outer Protection Zone and 16 metres to the Inner Protection Zone.
- The maximum tree canopy coverage to the Outer Protection Zone will be 30%, and 15% to the Inner Protection Zone.
- Maintenance paths will be created through the Asset Protection Zones to facilitate access to the batters for removal of weeds and ground fuel materials.
- Gardens within the inner protection zone will be mulched with non-flammable material such as gravel.
- Fencing and Retaining structures will be constructed from non-combustible materials.
- Grassed areas will be maintained at a height of < 100mm.
- Ground fuel loads will be removed at the start of each bushfire season as nominated by the New South Wales Fire Commissioner and as necessary during the fire season by raking and hand removal. Ground fuel loads to be maintained continuously below 2cm depth. This will be carried out by the Tourist Park landscape maintenance staff and/or contractors. Anticipated numbers of landscape maintenance staff to be employed by the Tourist Park to maintain asset protection zones – 4-5.

ASSET PROTECTION ZONE MAINTENANCE PROGRAMME

ACTIVITY	INTERVALS	CONSTRUCTION PERIOD	ESTABLISHMENT PERIOD	POST ESTABLISHMENT PERIOD	PROCEDURE
CLEAR DRAINS	AFTER RAINFALL APPROX 15 PER ANNUM	✓	✓	✓	COLLECT DEBRIS AND DELIVER TO RECYCLING CENTRE OR TIP FACILITY
GROUND FUEL REMOVAL	AT THE START OF THE BUSHFIRE SEASON AND AS NECESSARY DURING THE FIRE SEASON VARYING ACCORDING TO RAINFALL	✓	✓	✓	RAKING AND HAND REMOVAL COLLECT LEAF AND BRANCH LITTER AND DELIVER TO RECYCLING CENTRE OR TIP FACILITY
LITTER COLLECTION	FORTNIGHTLY	✓	✓	✓	COLLECT DEBRIS USING HAND HELD PICK UP DEVICE DELIVER TO RECYCLING CENTRE OR TIP FACILITY
PLANT REPLACEMENT	RESPONSE TIME 10 DAYS		✓	INNER PROTECTION ZONE ALONG ROADWAY	REPLACE DEAD PLANTS WITH SIMILAR SIZE STOCK OF SAME SPECIES
PLANT CARE	RESPONSE TIME 10 DAYS		✓	INNER PROTECTION ZONE ALONG ROADWAY	PRUNE DAMAGED BRANCHES TO AS 4373 TREAT FUNGAL INFECTIONS USING PROPETORY FUNGICIDE
TURF MAINTENANCE	IF REQUIRED RESPONSE TIME 20 DAYS		✓	INNER PROTECTION ZONE ALONG ROADWAY	REPLACE BARE AREAS TOPDRESS SUNKEN AREAS WITH TOPSOIL TO AS4419 CHECK FOR WEED/DISEASE INFESTATION TREAT INFESTATIONS USING PROPETORY INSECTICIDE/FUNGICIDE
MOWING	VARYING ACCORDING TO SEASON	✓	✓	INNER PROTECTION ZONE ALONG ROADWAY	MAINTAIN AT A HEIGHT OF 25-75mm TRIM ALONG EDGES
WATERING	VARYING ACCORDING TO SEASON	✓	✓	INNER PROTECTION ZONE ALONG ROADWAY	WATER EQUIVALENT TO 35mm PER WEEK INCLUDING RAINFALL WEEKS 1-2 DAILY WEEKS 3-4 ALTERNATE DAYS WEEKS 5-8 TWICE WEEKLY WEEKS 9-12 WEEKLY WEEK13 ON FORTNIGHTLY
WEEDING	AS REQUIRED		✓	✓	TREAT INFESTATIONS USING PROPETORY HERBICIDE
SIGNAGEMAIINTENANCE	INSPECT 20 TIMES PER ANNUM IF REQUIRED		✓	✓	REPAIR, CLEAN AND REPAINT TO MATCH ORIGINAL

LANDSCAPE RECREATION OPPORTUNITES

The landscape is designed to be flexible for large and small groups, families and individuals. The variety and number of spaces and facilities will enable the landscape to accommodate a large number of people simultaneously. An estimate of the numbers of guests catered for within each space follows, assessed against the predicted population of the development.

Maximum population

On the basis of 1.5 people for each 1 bedroom apartment and 2.5 people for each 2 bedroom apartment the expected population of the site at maximum capacity would be 642 people.

Type	Quantity	People per Apartment	Total
1 x bed apartments	191	1.5	286.5
2 x bed apartments	164	2.5	410
Total	355		696.5

Total (assumed) population	696
80% occupancy	557
1/3 of these using the facilities at any one time	186

Assumed occupancy

These figures have been based on an assumed occupancy of 80%. Therefore the population on site at any one time would be approximately 557 people. It is further assumed that no more than one third of these people would be using the landscaped areas at any one time, the others being off site in the greater Tweed region or within the units. The number of people against whom the facilities must be assessed is therefore 186.

LANDSCAPE RECREATION PROVISIONS

1. Communal Facilities

BBQ Facilities with covered dining area. Adjoining the BBQ facilities will be open lawned area with tables and chairs for informal dining.

Resort style swimming pool incorporating a Lap Pool with ramped access a Wading Pool and a Play Pool of different depths to accommodate adults and children of varying ages. Adjoining terraces for sunbathing and casual social interaction allowing parental supervision of children.

2. Garden Terraces

Garden Terraces of varying sizes. The central garden will be planted with an advanced Moreton Bay Fig and have a children's playground. The large island garden to the east will have a Picnic Shelter and BBQ Facilities. Other garden terraces will have seating and static exercise equipment forming a circuit around the Tourist Park.

3. Walking Trails

Existing tracks between the SEPP 15 setback and the development will be upgraded - weed removal and grading of the surface where necessary, with interpretive signage placed at locations of interest. eg. Tree and plant species, animal habitats etc.



RIVER HEIGHTS TOURIST PARK – LANDSCAPE FACILITY PROVISIONS

Facility	Function	Area	Spatial Requirements (m2)	No of people accommodated
Lap pool	lap swimming	115	4	28
Lap pool	general pool based	36.8	4	9
Terraces (West)	recreation social interaction sun lounging			
Lap pool lawn area (east)	casual outdoor social interaction sun lounging events/small functions up to 30 people	32.6	5	6
Lap Pool Terrace (east)	general pool / exercise based recreation Social interaction Sunlounging	49	4	12
Wading Pool	general pool based recreation Organised pool games	48	4	12
Play Pool	social interaction general pool based recreation	57	4	14
WadingPool lawn area	casual outdoor social interaction sun lounging	15	5	3
Lounge terrace	casual outdoor social interaction outdoor dining	295	5	59
BBQ facilities	casual outdoor social interaction outdoor dining	112	5	22
Garden Terraces	casual outdoor social interaction exercise	4425	50	88.5
General access walkways/pathways	casual outdoor social interaction circulation	2451	50	49
Children's Playground	casual outdoor social interactions	65	4	16
Walking trails	casual outdoor social interactions	626	50	12.5
Planted batters	screening/ aesthetics	22,140	0	0
Bio-retention Areas	stormwater treatment environmental interest	3,400	0	0
Wetland Reserve	aesthetics/views	74,595	0	0
Total landscape area		108,462.4		
Total people accommodated in landscaped areas				331

PROPOSED VEGETATION

TREES/PALMS

SPECIES	COMMON NAME	NOTES
ACMENA smithii	Lilly Pilly	endemic to local area
ARCHONTOPHOENIX		
cunninghamiana	Piccabean palm	endemic to site
BRACHYCHITON	Flame Tree	endemic to site
acerifolius		
CUPANIOPSIS anacardioides	Tuckeroo	endemic to site
DIPLOGLOTTS australis	Native Tamarind	endemic to local area
ELAEOCARPUS grandis	Blue Quandong	endemic to local area
ELAEOCARPUS obovatus	Hard Quandong	endemic to site
FICUS macrophylla	Moreton bay Fig	endemic to site
FLINDERSIA australis	Crow's Ash	endemic to site
GLOCHIDION sumatranum	Umbrella Cheese Tree	endemic to site
HARPULLIA pendula	Tulipwood	endemic to local area
JAGERIA pseudhorus	Foambark	endemic to site
MALLOTUS discolor	Kamala	endemic to local area
MALLOTUS philipinensis	Red Kamala	endemic to site
MACARANGA tanarius	Macaranga	endemic to site
STENOCARPUS sinuatus	Firewheel Tree	endemic to local area
SYZYGium australe	Scrub Cherry	endemic to local area
SYZYGium francissii	Water Gum	endemic to local area
SYZYGium hemilampra	Broad Leafed Lilly Pilly	endemic to local area
SYZYGium leuhmannii	Riberry	endemic to local area
SYZYGium moorei	Coolamon	endemic to local area
SYZYGium oleosum	Blue Lilly Pilly	endemic to site
TOONA ciliata	Red Cedar	endemic to local area

SHRUBS/TUFTING PLANTS

ALPINNEA caerulea	Native Ginger	endemic to local area
AUSTROMYRTUS dulcis	Midgim	endemic to local area
DORYANTHES excelsa	Gymea Lily	endemic to local area
CORDYLINE congesta	Palm Lily	endemic to site
CORDYLINE petiolaris	Broad leaved Palm Lily	endemic to local area
CORDYLINE rubra	Red Fruited Palm Lily	endemic to local area
CORDYLINE cv	NIGRA	sterile cultivar of Cordyline terminalis
HIBISCUS splendens	Native Hibiscus	endemic to local area
HOVEA acutifolia	Brush Hovea	endemic to site
HYMENOSPORUM flavum	Native Frangipani	endemic to site
LEPIDOZAMIA peroffskyana	Zamia	endemic to local area
PITTOSPRUM undulatum	Sweet Pittosporum	endemic to site

GROUNDCOVERS

DIANELLA caerulea	Blue Flax Lily	endemic to local area
DIANELLA cv	BREEZE	sterile cultivar of Dianella caerulea
DICHONDRA repens	Kidney Weed	endemic to local area
LOMANDRA longifolia	Mat Rush	endemic to site
PATTERSONIA sericea	Native Iris	endemic to local area
VIOLA hederacea	Native Violet	endemic to local area

FERNS

ASPLENIUM australisicum	Birds Nest Fern	endemic to local area
Cyathea cooperi	Soft Tree Fern	endemic to local area

VINES

Hibbertia scandens	Twining Guinea Flower	endemic to site
Pandorea jasminoides	Scrub Wonga Vine	endemic to local area
Pandorea pandorana	Wonga Wonga Vine	endemic to local area

RUSHES/SEDGES

Juncus sp	Common Rush	endemic to site
Cyperus sp	Sedge	endemic to site



REFERENCES

Constraints Analysis Kirkwood - Road James Warren and Associates - July 2010

Plant Selection Guide, Kirkwood , Rainforest - James Warren and Associates - May 2012

The Royal Botanic Gardens and Domain Trust (26 March 2012). PlantNET - The Plant Information Network System of The Royal Botanic Gardens and Domain Trust, Sydney, Australia. <http://plantnet.rbgsyd.nsw.gov.au>

River Heights Tourist Accommodation – Concept Design Paul Ziukelis Architects

Tourist Accommodation, Kirkwood Road, Tweed Heads South, NSW - Preliminary Bulk Earthworks Plans – Knobel Consulting Pty Ltd Engineers.

Report on Geotechnical Investigation, Kirkwood Road West, Tweed Heads New South Wales March 1995. Golder Associates.

Standards for Asset Protections Zones NSW Rural Fire Service

AS 3959 – 2009 Construction of buildings in bushfire prone areas. Standards Australia Limited.



BIORETENTION BASIN
PLANTED WITH RUSH AND SEDGE
SPECIES ENDEMIC TO THE SITE

WHERE POSSIBLE TREES,
LOW SHRUBS AND GROUNDCOVERS
FROM PLANT COMMUNITY 3 ARE TO
BE PLANTED IN SOIL POCKETS
IN THE ROCK BATTERS
TREES TO BE NO LESS THAN 16m CENTRES

KIRKWOOD ROAD EXTENSION

ROCK BATTER PLANTED AT TOP AND BASE WITH
SPECIES FROM PLANT COMMUNITY 3

GRASSED ROAD VERGE

COMMUNITY FACILITIES

MORETON BAY FIG
AND CHILDREN'S PLAYGROUND TO
CENTRAL GARDEN

ROCK BATTERS TO BE PLANTED
AT TOP AND BASE USING
SPECIES FROM PLANT
COMMUNITY 3

METAL FENCE TO
TOP OF BATTER

ICONIC TREE PLANTING TO
THE PERIMETER OF THE DEVELOPED
AREA USING A TREE SPECIES
ENDEMIC TO THE SITE -
BRACHYCHITON ACERIFOLIUS

GARDEN WITH BBQ FACILITIES

ASSET PROTECTIONS ZONES TO BE
CLEARED OF WEEDS AND NON-RAINFOREST SPECIES
AND REVEGETATED WITH SPECIES FROM PLANT
COMMUNITY 3. INNER PROTECTION ZONE TO
BE PLANTED WITH SMOOTH BARKED RAINFOREST SPECIES
AT MINIMUM 16m CENTRES; OUTER PROTECTIONS ZONE AT
23M CENTRES

WETLANDS TO REMAIN UNTOUCHED

FUTURE ROAD BY TWEED SHIRE COUNCIL

STREET TREE PLANTING
USING A VARIETY OF
TREES ENDEMIC TO
THE SITE

BIORETENTION BASIN

BATTERS REVEGETATED
TO UPPER SLOPES WITH SPECIES
FROM PLANT COMMUNITY 3
MANAGED IN ACCORDANCE
WITH APPENDIX 5 PLANNING
FOR BUSHFIRE PROTECTION

GARDEN TERRACES WITH
SEATS AND EXERCISE
STATIONS FORMING PART
OF AN EXERCISE CIRCUIT
AROUND THE TOURIST
PARK INCORPORATING
DIFFERENT EQUIPMENT
AT EACH LOCATION

ROCK BATTERS REVEGETATED
TO TOP AND TOE WITH SPECIES
FROM PLANT COMMUNITY 3
CARPARKS EXPOSED AGGREGATE
TO DRIVEWAYS, REINFORCED GRASS
TO CAR BAYS
RETAINING WALLS REINFORCED
MASONRY WHERE A VERTICAL
WALL IS REQUIRED, ROCKWORK
TO OTHER RETAINING STRUCTURES
GENERALLY

FILL BATTER REVEGETATED
WITH SPECIES FROM
PLANT COMMUNITY 3
BIORETENTION BASIN

PATHS TO BE CREATED ALONG BATTER
FOR MANAGEMENT OF VEGETATION TO
ASSET PROTECTION ZONES IN ACCORDANCE WITH
APPENDIX 5 PLANNING FOR BUSHFIRE PROTECTION
EXISTING WALKING TRAILS TO BE UTILIZED WHERE
POSSIBLE AND INTERPRETIVE SIGNAGE LOCATED
AT POINTS OF INTEREST TO ALLOW THESE TO SERVE
A DUAL PURPOSE AS BUSHWALKING PATHS

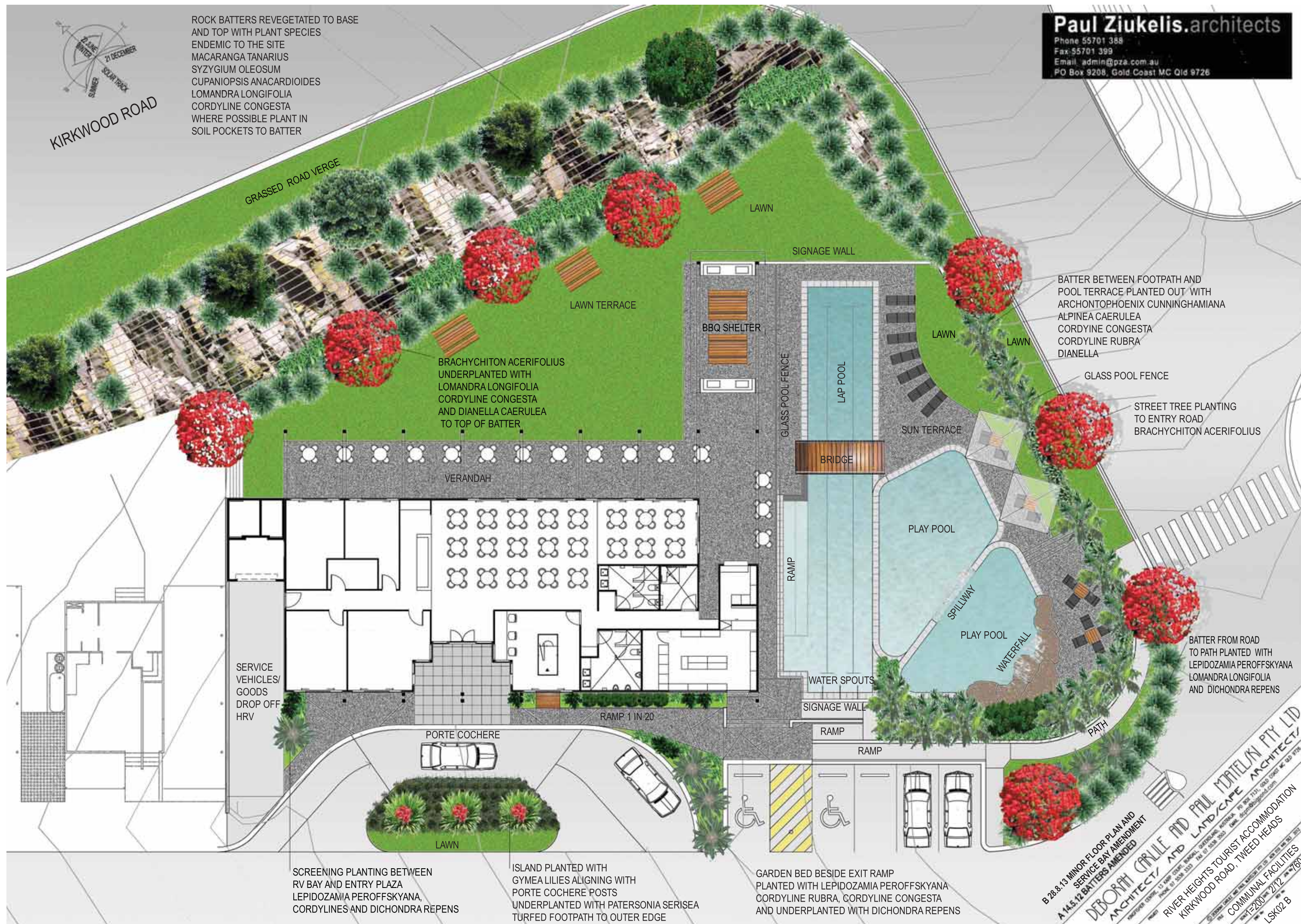
E 28.8.13 BINS ADDED NOTATIONS CORRECTED
 D 17.7.12 LAYOUT AMENDED
 C 28.5 MAINTENANCE PATH ADDED
 TO NORTH EAST UP SLOPE BATTER
 B 9.5.12 BATTERS AMENDED

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 ARCHITECTS / LANDSCAPE ARCHITECTS
 RIVER HEIGHTS TOURIST ACCOMMODATION
 KIRKWOOD ROAD, TWEED HEADS
 LANDSCAPE MASTERPLAN
 1/2-2000 3/12 LSK01 E



ROCK BATTERS REVEGETATED TO BASE
AND TOP WITH PLANT SPECIES
ENDEMIC TO THE SITE
MACARANGA TANARIUS
SYZYGIUM OLEOSUM
CUPANIOPSIS ANACARDIOIDES
LOMANDRA LONGIFOLIA
CORDYLINE CONGESTA
WHERE POSSIBLE PLANT IN
SOIL POCKETS TO BATTER

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BATTER BETWEEN FOOTPATH AND
POOL TERRACE PLANTED OUT WITH
ARCHONTOPHOENIX CUNNINGHAMIANA
ALPINEA CAERULEA
CORDYLINE CONGESTA
CORDYLINE RUBRA
DIANELLA

STREET TREE PLANTING
TO ENTRY ROAD
BRACHYCHITON ACERIFOLIUS

BATTER FROM ROAD
TO PATH PLANTED WITH
LEPIDOZAMIA PEROFFSKYANA
LOMANDRA LONGIFOLIA
AND DICHONDRA REPENS

SCREENING PLANTING BETWEEN
RV BAY AND ENTRY PLAZA
LEPIDOZAMIA PEROFFSKYANA,
CORDYLINES AND DICHONDRA REPENS

ISLAND PLANTED WITH
GYMEA LILIES ALIGNING WITH
PORTE COCHERE POSTS
UNDERPLANTED WITH PATERSONIA SERISEA
TURFED FOOTPATH TO OUTER EDGE

GARDEN BED BESIDE EXIT RAMP
PLANTED WITH LEPIDOZAMIA PEROFFSKYANA
CORDYLINE RUBRA, CORDYLINE CONGESTA
AND UNDERPLANTED WITH DICHONDRA REPENS

B 28.8.13 MINOR FLOOR PLAN AND
SERVICE BAY AMENDMENT
A 14.5.12 BATTERS AMENDMENT
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1/2/2008 2/12 2008
LSK02 B

ROCK BATTERS REVEGETATED TO TOP AND TOE WITH SPECIES FROM PLANT COMMUNITY 3 TREES TO BE SMOOTH BARKED RAINFOREST SPECIES
 BRACHYCHITON ACERIFOLIUS
 CUPANIOPSIS ANACARDIODES
 SYZYGIIUM OLEOSUM
 MACARANGA TANARIUS
 TREES TO BE NO CLOSER THAN 16m CENTRES
 WHERE POSSIBLE PLANTING TO SOIL POCKETS IN THE SLOPE
 LOMANDRA LONGIFOLIA
 CORDYLINE CONGESTA
 ALPINNEA CAERULEA

SCREENING SHRUBS

LAWN

PAVERS STEPPING STONES WITH WASHED RIVER GRAVEL SURROUNDING PROVIDING ACCESS PAST RAINWATER TANK

VINES TO SIDE FENCE WITH GROUNDCOVERS BELOW

RAINWATER TANK

WILDLIFE FRIENDLY SIDE FENCES - POSTS WITH WIRE CABLES

REINFORCED GRASS TO CARPARKING SPACE AND CROSSOVER

SCREENING SHRUBS

SHADE TREE SELECTED FROM SPECIES ENDEMIC TO THE SITE

GROUNDCOVERS TO SIDE BOUNDARY WHERE THERE ARE SCREENING SHRUBS ADJACENT

SCREENING SHRUBS TO BOUNDARY OPPOSITE RAINWATER TANK

VINES PLANTED AT END OF CAR SPACE TRAINED ALONG FENCE STEPPING STONE FROM CAR SPACE TO PATH

FEATURE PLANTING/ SCREENING IN FRONT OF DECK

EXPOSED AGGREGATE ENTRY PATH

BUILDING TYPE A - TYPICAL

1 IN 2 BATTER

SECTION A-A

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 ARCHITECTS AND LANDSCAPE ARCHITECTS
 10/5-12 BATTERS AMENDED
 RIVER HEIGHTS TOURIST ACCOMMODATION
 KIRKWOOD ROAD, TWEED HEADS
 TYPE A
 1:100
 LSK03 A

STREET TREES SELECTED
FROM SPECIES ENDEMIC
TO THE SITE



SHADE TREES TO GARDEN TERRACE

FEATURE TREE TO REAR YARD

SCREENING SHRUBS BETWEEN
CARPARK AND REAR YARD

GUARD RAIL TO TOP OF
RETAINING WALL

WHEELSTOPS TO CAR SPACES

BOULDER RETAINING WALLS

SCREENING SHRUBS TO
SIDE BOUNDARIES

FEATURE PLANTING
/SCREENING TO FRONT
OF DECK

WILDLIFE FRIENDLY
FENCING

SECTION B-B

SCREENING SHRUBS
AGAINST RAINWATER TANKS

SCREENING SHRUBS

LAWN

SHADE TREE
SELECTED FROM SPECIES
ENDEMIC TO THE LOCAL AREA

PAVERS STEPPING
STONES WITH WASHED
RIVER GRAVEL
SURROUNDING PROVIDING
ACCESS PAST RAINWATER
TANK

VINES TO SIDE FENCE
WITH GROUNDCOVERS
BELOW

WILDLIFE FRIENDLY
SIDE FENCES -
POSTS WITH WIRE
CABLES

GROUNDCOVERS TO
SIDE BOUNDARY WHERE
THERE ARE SCREENING
SHRUBS ADJACENT

SCREENING SHRUBS
AND PALMS
TO BOUNDARY

FEATURE PLANTING/
SCREENING IN FRONT
OF DECK

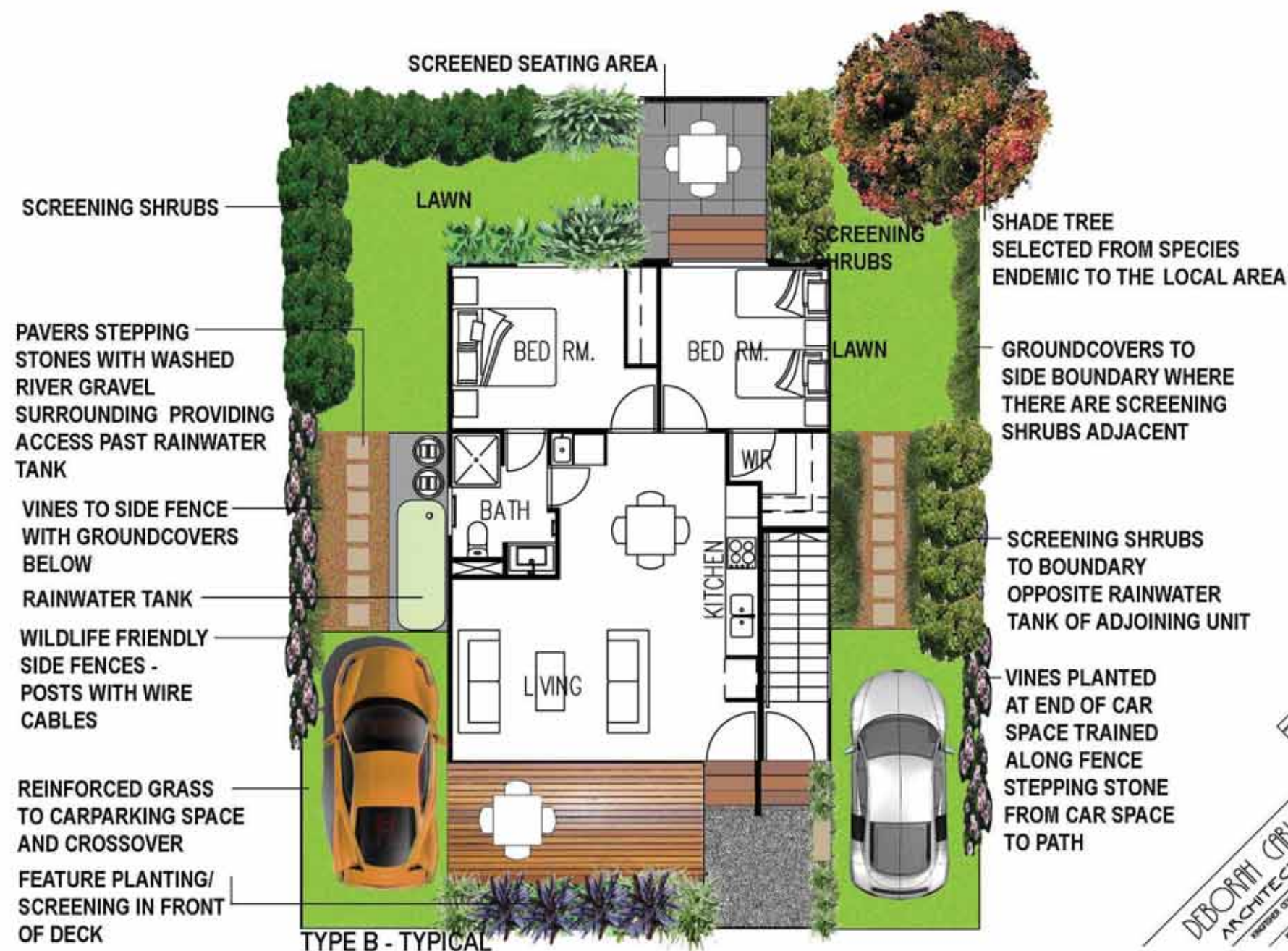
FEATURE SHRUB
BETWEEN ENTRIES

TYPE E THREE STOREY DUPLEX - TYPICAL

B20.8.13 NOTATION AMENDED
A 18.7.12 TYPE B REPLACED WITH TYPE E
DEBORAH CRUISE AND PAUL ZIUKELIS PTY LTD
ARCHITECTS AND LANDSCAPE ARCHITECTS
RIVER HEIGHTS TOURIST ACCOMMODATION
KIRKWOOD ROAD, TWEED HEADS
TYPE B
SCALE 1:1000 3/12
LSK04 B



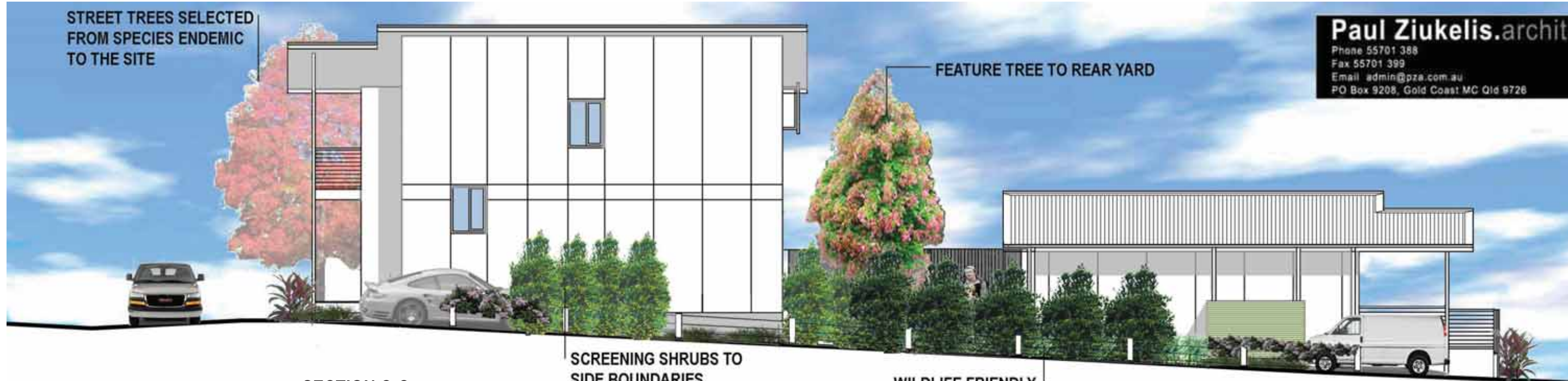
TYPE B - ELEVATION



STREET TREES SELECTED FROM SPECIES ENDEMIC TO THE SITE

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PO Box 9208, Gold Coast MC Qld 9726



SECTION C-C

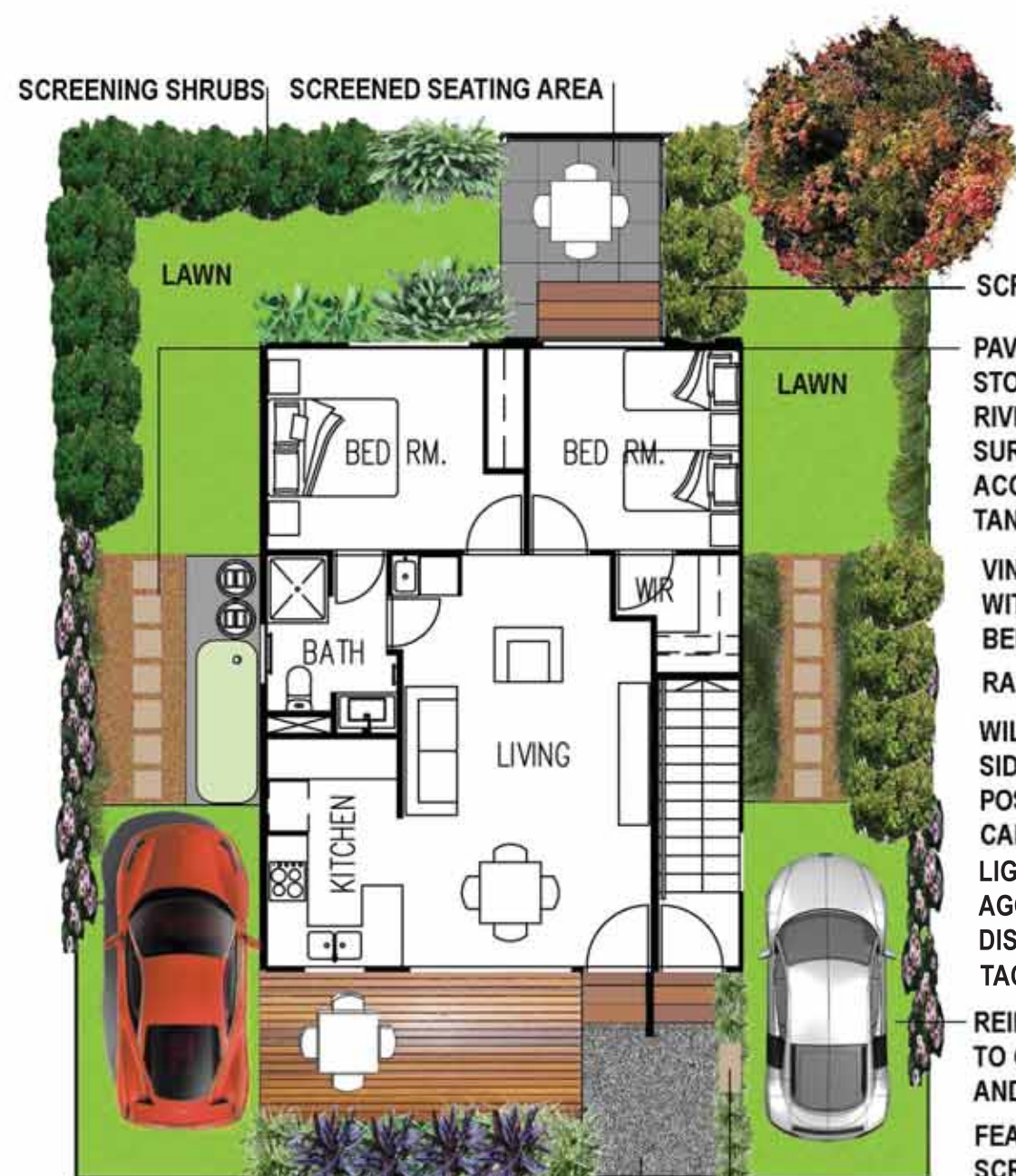
SCREENING SHRUBS TO SIDE BOUNDARIES

WILDLIFE FRIENDLY FENCING

FEATURE PLANTING /SCREENING TO FRONT OF DECK

SCREENED PAVED SEATING AREA ACCESSIBLE FROM UNIT

SCREENING SHRUBS SCREENED SEATING AREA



TYPE C -TYPICAL

EXPOSED AGGREGATE ENTRY PATH

GROUNDCOVERS AND STEPPING STONE

SCREENING SHRUBS

PAVERS STEPPING STONES WITH WASHED RIVER GRAVEL SURROUNDING PROVIDING ACCESS PAST RAINWATER TANK

VINES TO SIDE FENCE WITH GROUNDCOVERS BELOW

RAINWATER TANK

WILDLIFE FRIENDLY SIDE FENCES - POSTS WITH WIRE CABLES

LIGHTLY EXPOSED AGGREGATE TO DISABLED CAR SPACE TACTILES

REINFORCED GRASS TO CARPARKING SPACE AND CROSSOVER

FEATURE PLANTING / SCREENING IN FRONT OF DECK



TYPE D - TYPICAL

CORDYLINES UNDERPLANTED WITH DICHONDRA REPENS

SHADE TREE SELECTED FROM SPECIES ENDEMIC TO THE LOCAL AREA

SCREENING SHRUBS TO BOUNDARY

ALPINNEA CAERULEA SCREENING DECK

RAMP 1 IN 14 TO AS 1428.2

DEBORAH GRAY AND PAUL MATELON PTY LTD
ARCHITECTS/ LANDSCAPE ARCHITECTS
RIVER HEIGHTS TOURIST ACCOMMODATION
KIRKWOOD ROAD, TWEED HEADS
TYPE C AND D
SCALE 1:100
LSK06A

ROCK BATTER REVEGETATED
 TO TOP AND TOE WITH
 SPECIES FROM PLANT
 COMMUNITY 3
 POCKETS IN ROCK
 PLANTED WITH
 LOMANDRA LONGIFOLIA
 CORDYLINE CONGESTA
 ALPINNEA CAERULEA

1 IN 2 BATTER

FEATURE TREES
 TO EDGE OF DEVELOPMENT

SCREENED SEATING AREA
 REAR SCREEN DELETED TO
 LOTS ADJOINING BATTERS

SCREENING SHRUBS TO
 REAR BOUNDARY WHERE
 ABUTTING ANOTHER LOT

SCREENING SHRUBS

LAWN

LAWN

SCREENING
 SHRUBS

SHADE TREE OR FEATURE TREE
 SELECTED FROM SPECIES
 ENDEMIC TO THE SITE

PAVERS STEPPING
 STONES WITH WASHED
 RIVER GRAVEL
 SURROUNDING PROVIDING
 ACCESS PAST RAINWATER
 TANK

VINES TO SIDE FENCE
 WITH GROUNDCOVERS
 BELOW

RAINWATER TANK

WILDLIFE FRIENDLY
 SIDE FENCES -
 POSTS WITH WIRE
 CABLES

REINFORCED GRASS
 TO CARPARKING SPACE
 AND CROSSOVER

BATH

BED RM.

KITCHEN

LIVING

LIGHTLY EXPOSED
 AGGREGATE TO RV PARKING
 AREA AND CROSSOVER

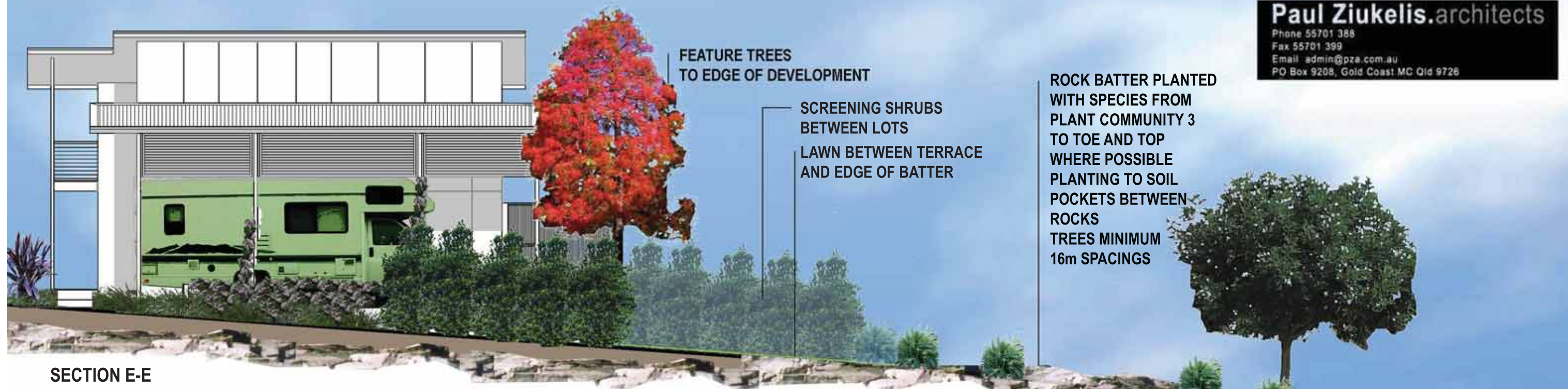
STEPPING STONE
 FROM RV PARKING SPACE
 TO PATH

EXPOSED AGGREGATE
 ENTRY PATH

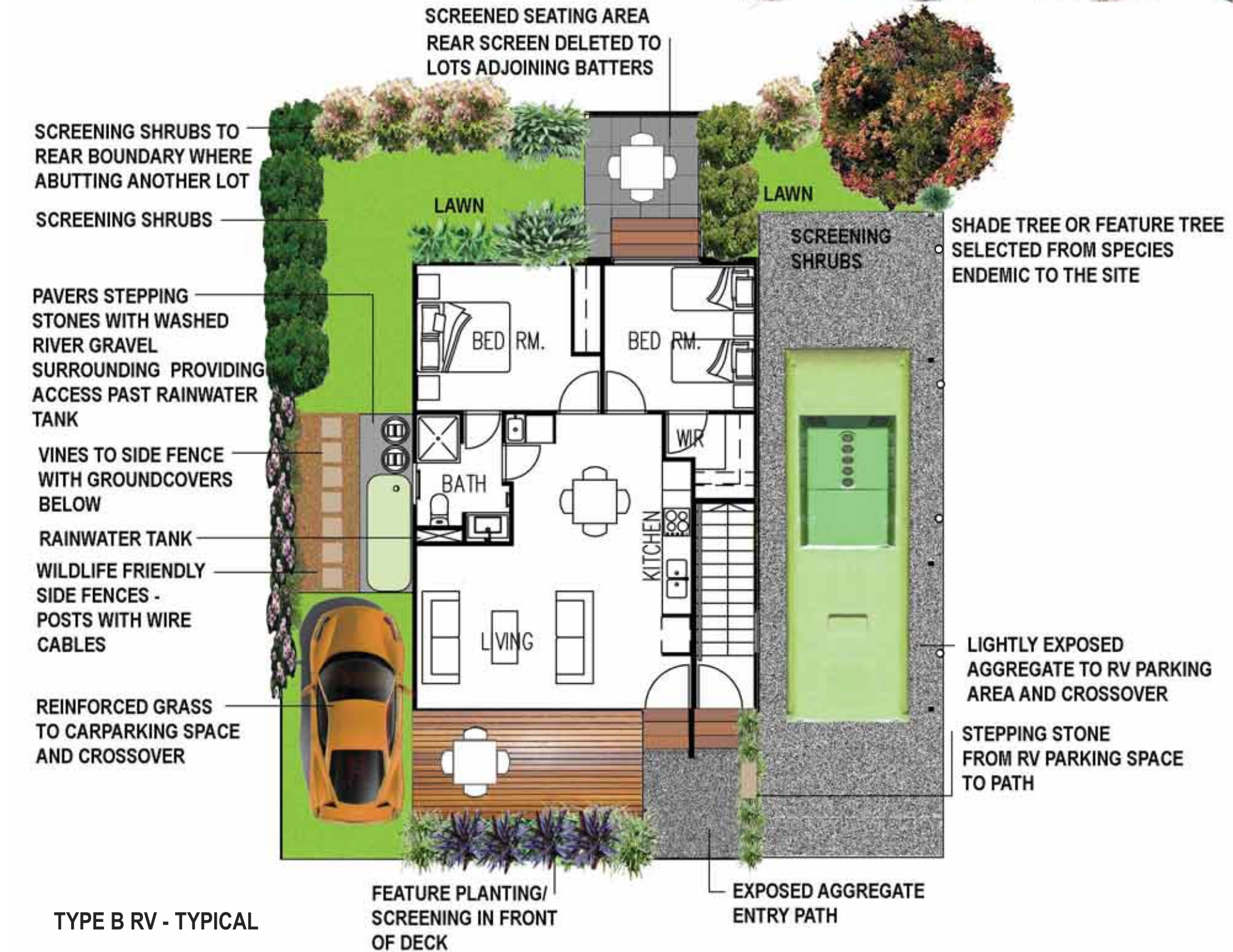
FEATURE PLANTING/
 SCREENING IN FRONT
 OF DECK

TYPE ARV - TYPICAL

SECTION D-D



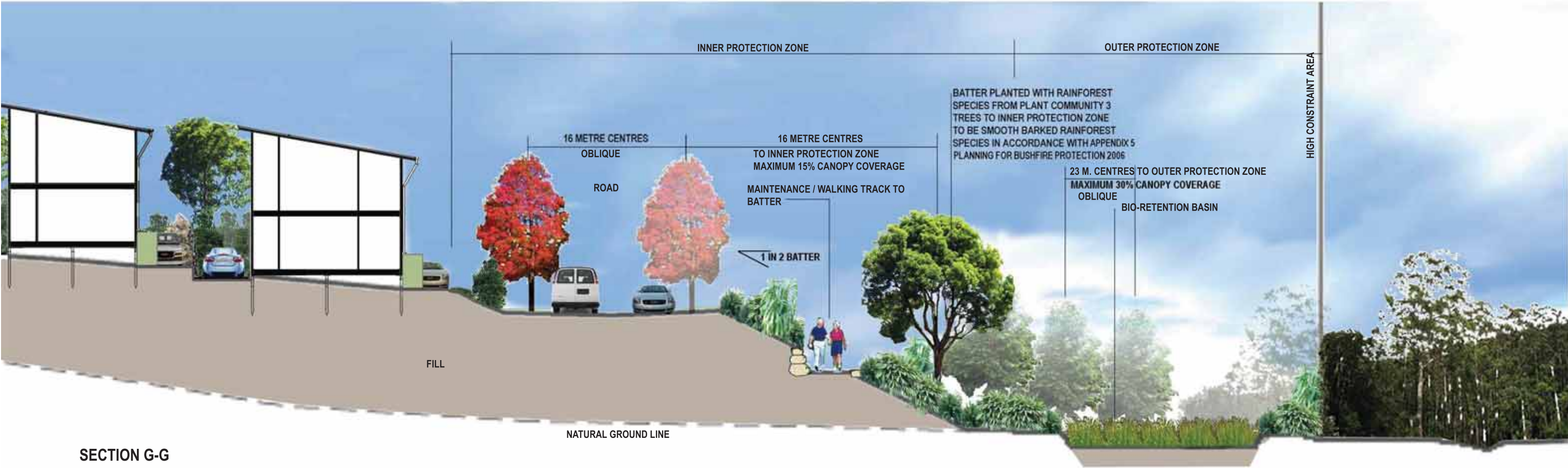
SECTION E-E



TYPE B RV - TYPICAL



STREET ELEVATIONS - F
 TYPES D, B, A AND C



SECTION G-G