PLANNING PLUS
P: (07) 40 393 409
M: 0402 073 082
E: Info@planningplusqld.com.au
A: PO Box 399, Redlynch QLD 4870
W: www.planningplusqld.com.au

Our Ref: 22-04/001204
CRC Ref: MCUC 2022_4732/1
Date: 1 August 2022

Attn: Ms Jenny Elphinstone
Chief Executive Officer
Douglas Shire Council
PO Box 723
MOSSMAN QLD 4873

VIA EMAIL: J.Elphinstone@douglas.qld.gov.au

Dear Jenny,

RE: RESPONSE TO INFORMATION REQUEST IN RELATION TO AN APPLICATION FOR MATERIAL CHANGE OF USE FOR A 'DWELLING HOUSE' OVER LAND AT 14 MURPHY STREET, PORT DOUGLAS

Planning Plus acts on behalf of Patagorang Pty Ltd (the 'applicant') in relation to the above-described matter.

We hereby provide the following information in response to Council's Information Request dated 28 June 2022.

Land Surveys

1. Please provide a land survey for the whole of the site and the adjacent road.

Please see detail survey plan included as **Annexure 1**.

2. Please provide a separate land survey nominating areas of fill on the site and the adjacent road area where work is anticipated.

Please see Earthworks Plans included as **Annexure 2** which illustrate the areas of proposed filling.

Vegetation Survey

3. Please provide a survey of existing vegetation on the land and the adjacent road area from the property boundary to the sealed road pavement. The survey should include all trees with a trunk diameter of 500mm or more as measured from 1000mm above natural ground level. The survey must include the species name, approximate height, trunk girth (as measured at 1000mm above natural ground level), estimated aged, extent of canopy and estimate of root zone area.

Please see Vegetation Survey Report included as **Annexure 3**.

4. Please provide a survey nominating all vegetation, nominated in x above that is to be removed.

Please see Vegetation Survey Report included as **Annexure 3**.

Earthwork Plan

5. Please provide a detailed survey and plan of cut and fill on the land for the proposed dwelling house, associated driveway and associated facilities. The detail is to provide both horizontal, longitudinal and section details.

Please see Earthworks Plans included as **Annexure 2**.

Geotechnical Reporting

6. Please provide a site specific geotechnical assessment of the site pre-development and post development to determine the local and regional stability of the allotment, adjacent properties and existing structures adjacent the site.

At a minimum, supporting information to be provided in the report must include slope stability modelling to demonstrate that the site can be developed as proposed without creating an unacceptable risk internally and externally to the site.

The analysis must also demonstrate stability for any temporary batters/walls and throughout the stages of the construction of the site. That is, if the retaining walls are supported by the future building structural elements, the analysis must confirm stability after site earthworks but prior to the building being completed.

The report must be undertaken by a suitably qualified and experienced geotechnical engineer (RPEQ) and must be in accordance with the AGS Guidelines. The applicant must demonstrate that geotechnical risks during and post development remain in the low or very low risk categories for the site and adjacent properties.

The report is to also provide detail and comment on the impact and requirements to stabilise the development should the land be cut and the development not progress Retaining walls and structures

Please see Geotechnical Report included as **Annexure 4.**

7. Please provide an RPEQ Certified detailed design for each retaining structure which is sited adjacent and parallel to a site boundary. The detailed design must include;

- ***a. details of the specific means of supporting or retaining to be used. This must include a geotechnical design detail supporting each of the proposed treatments at each location;***
- ***b. details of the exact depth of any soil nails or footing protruding into the earth;***
- ***c. accurate cadastral boundary location; and***
- ***d. drainage solutions.***

The geotechnical assessment requested in item 6 above must be relevant to the detailed retaining wall design.

Please note any requirement to soil nailing (or similar such structures) over adjoining land or road must be accompanied by suitable owner's consent and tenure to undertake such work.

Please see Geotechnical Report included as **Annexure 4.** We note that no soil nailing or other structures extend into adjacent properties.

Building construction

8. Please provide details of the proposed method of construction. The planning report indicates that the performance outcome PO64 for Sub precinct 1f – Flagstaff Hill of the Port Douglas / Craiglie Local Plan is achieved, being that pier or post construction design, yet the development plans indicate slab on ground design.

We confirm that the construction type is slab on ground. Despite this, we submit that the proposal meets the overall intent of PO64 in that it will be visually unobtrusive and will blend into the natural environment through the use of appropriate building materials and significant landscaping treatment.

Building Height

9. Concern is raised with the overall height, floor to ceiling heights and setbacks from the side boundaries. Please provide sections through the development at the points 1-7. As per your design plans detailing boundary to boundary (from front of site to back of site) detailing:

a. Existing ground levels

b. Projected 8.5m from existing ground levels; and

c. Proposed height levels (from new ground level, floor and ceiling heights, depth of deep planting for the roof level and overall heights).

Please see full set of Elevations and Sections included as **Annexure 5**. A marked-up version of TP301 is also provided which includes the 8.5m height line projected from existing ground levels. We note that only a relatively small portion of the building exceeds this line and submit that this minor encroachment is vindicated by the significant attention paid to building materials and landscaping which will integrate the built form into the natural surrounds of the site.

Visual Amenity

10. Please provide a visual amenity report on the proposed development. The report is to include the impact of the proposed work within the road. The report is to identify the points where the impact of the development is most prominent as well as the view from the road pavement edge on the southern side of Murphy Street. The visual amenity report must identify the vegetation to be removed at the cut stage. The visual amenity report must consider the views at the time of commencement of use, after five years growth and after 10 years growth of the proposed landscaping. The proposed landscaping is only as per the submitted landscaping plan and the remaining vegetation on the land and road area.

Please see Visual Amenity Report included as **Annexure 6**.

11. Provide a visual amenity of the view of the development from the side property boundaries.

Please see Visual Amenity Report included as **Annexure 6**.

12. Provide a realistic 3D Views of the development that identifies only existing and proposed landscaping details, as submitted in the application and also identifies property boundaries. Consideration is to be given to all vegetation that is to be removed from the road area. The 3D Views should include the anticipated height of species to be planted

at following points in time: at the commencement of the use; after five years of growth; and after ten years of growth. A site plan is to be included that nominates the point from where the 3D view is developed from.

The applicant has not provided this information so we refer Council to the 3D Views provided with the Development Application and the Visual Amenity Report included as **Annexure 6**.

13. The development does not meet the Acceptable outcome for setback of 6m and very limited landscaping is provided to the side boundaries. Please provide details demonstrating how the development will provide privacy to the adjoining properties from window and balcony deck areas.

Please see the Visual Amenity Report included as **Annexure 6**. It is submitted that significant attention has been paid to landscaping of the entire site, including the side boundaries to ensure privacy.

Driveway

14. Please provide a longitudinal survey and sections of the proposed driveway. All cut, fill and any retaining walls must be identified and detailed. Please identify any opportunity for a vehicle passing bay on the driveway internal to the site in the event that two vehicles meet on the slope.

Please see Earthworks Plans included as **Annexure 2**

This letter and attachments constitute the applicant's full response to the information requested.

We trust this information is sufficient for your purposes; however should you require any further details or clarification, please do not hesitate to contact the undersigned.

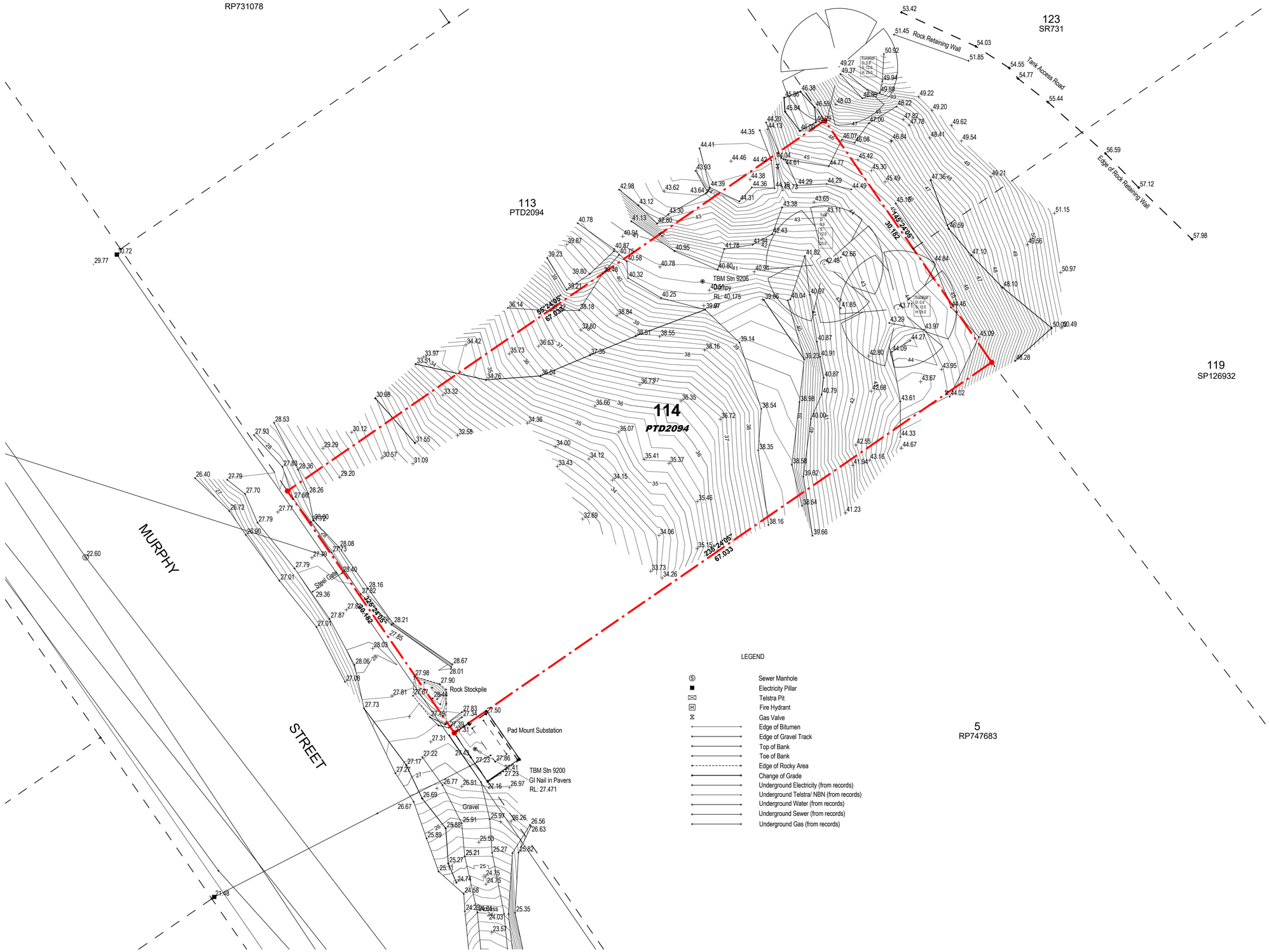
Yours Faithfully

Evan Yelavich
Director / Planner
Planning Plus QLD Pty Ltd

enc.

Annexure 1:	**Detail Survey Plan**
Annexure 2:	**Earthworks Plans**
Annexure 3:	**Vegetation Survey Report**
Annexure 4:	**Geotechnical Report**
Annexure 5:	**Building Elevations & Sections**
Annexure 6:	**Visual Amenity Report**

Annexure 1: Detail Survey Plan



GENERAL NOTES

01. DO NOT SCALE FROM DRAWINGS. USE FIGURED DIMENSIONS ONLY.
02. CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCEMENT OF WORK OR PREPARATION OF SHOP DRAWINGS.
03. ALL OMMISIONS, AMBIGUITIES AND DISCREPENCIES TO BE REPORTED TO THE ARCHITECT IMMEDIATELY.

REVISION

REV	DESCRIPTION	DATE

PROJECT STATUS

DEVELOPMENT APPLICATION

NOT TO BE USED FOR CONSTRUCTION

CLIENT

George Argyrou

PROJECT NO

1789

PROJECT NAME

14 MURPHY ST, PORT DOUGLAS

BayleyWard
Architecture & Interiors
21-23 Chessell Street
Southbank VIC 3006
T: 03 9695 0222
E: info@bayleyward.com

BAYLEY WARD

DRAWING NAME

SURVEY

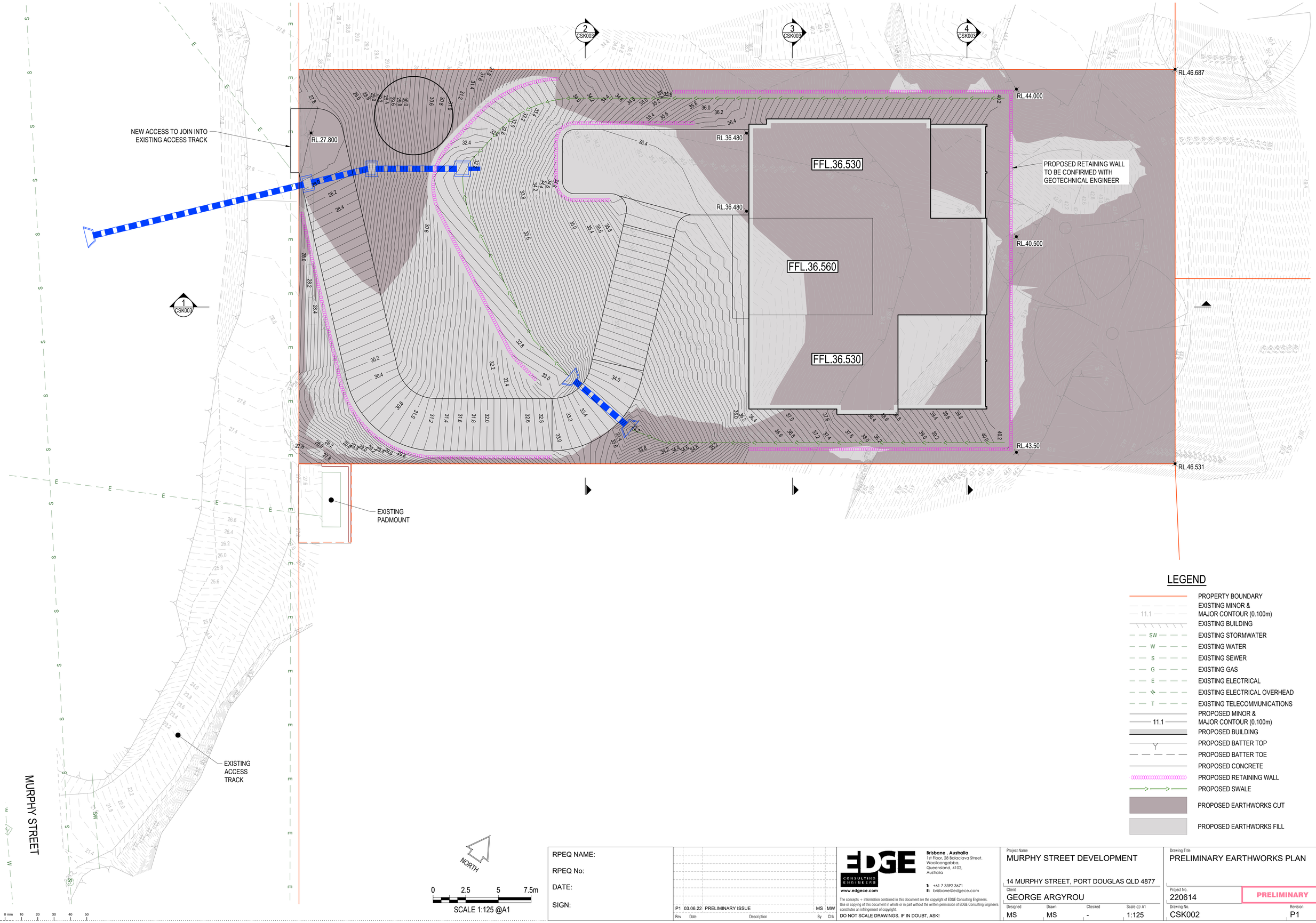
SCALE **1 : 200** @ A1 / 50%@ A3 DRAWN BY **Author** CHECKED BY **Checker**

DRAWING NUMBER

TP013

REVISON

Annexure 2: Earthworks Plans



LEGEND

- PROPERTY BOUNDARY
- EXISTING MINOR & MAJOR CONTOUR (0.100m)
- EXISTING BUILDING
- EXISTING STORMWATER
- EXISTING WATER
- EXISTING SEWER
- EXISTING GAS
- EXISTING ELECTRICAL
- EXISTING ELECTRICAL OVERHEAD
- EXISTING TELECOMMUNICATIONS
- PROPOSED MINOR & MAJOR CONTOUR (0.100m)
- PROPOSED BUILDING
- PROPOSED BATTER TOP
- PROPOSED BATTER TOE
- PROPOSED CONCRETE
- PROPOSED RETAINING WALL
- PROPOSED SWALE
- PROPOSED EARTHWORKS CUT
- PROPOSED EARTHWORKS FILL

RPEQ NAME:

RPEQ No:

DATE:

SIGN:

Rev	Date	Description	By	Chk
P1	03.06.22	PRELIMINARY ISSUE	MS	MW

EDGE CONSULTING ENGINEERS
www.edgece.com
Brisbane . Australia
1st Floor, 28 Balaclava Street,
Woolloongabba,
Queensland, 4102,
Australia
T: +61 7 3392 3671
E: brisbane@edgece.com

Project Name: MURPHY STREET DEVELOPMENT

14 MURPHY STREET, PORT DOUGLAS QLD 4877

Client: GEORGE ARGYROU

Designed	Drawn	Checked	Scale @ A1
MS	MS	-	1:125

Drawing Title: PRELIMINARY EARTHWORKS PLAN

Project No.: 220614

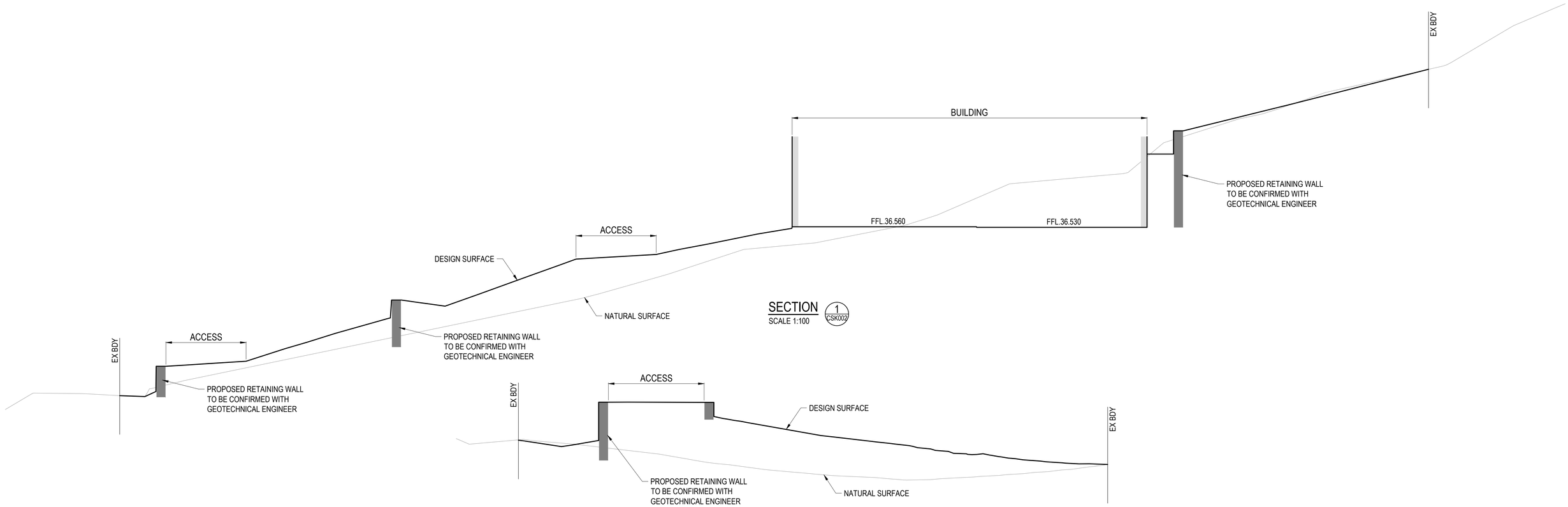
PRELIMINARY

Drawing No.: CSK002

Revision: P1

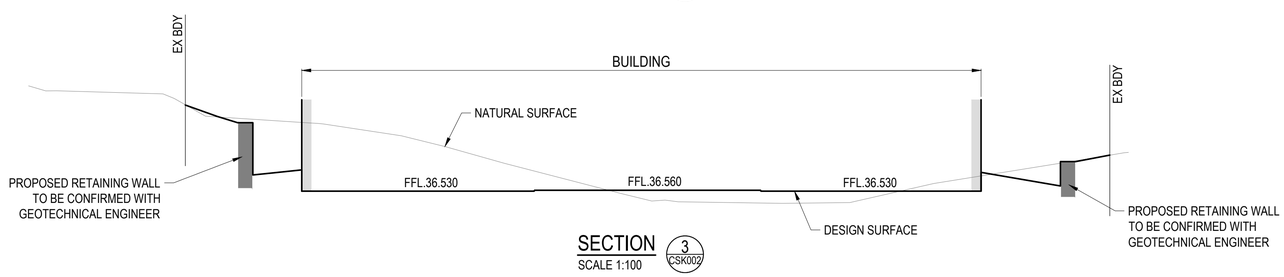
FILENAME

PLOT DATE

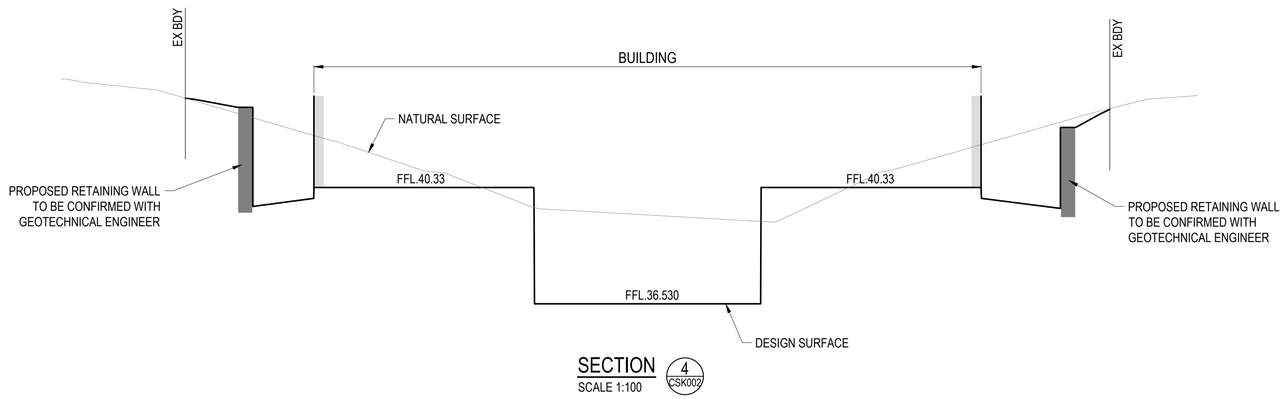


SECTION 1 (CSK002)
SCALE 1:100

SECTION 2 (CSK002)
SCALE 1:100



SECTION 3 (CSK002)
SCALE 1:100



SECTION 4 (CSK002)
SCALE 1:100

FILENAME
PLOT DATE

0 mm 10 20 30 40 50

0 2 4 6m
SCALE 1:100 @A1

RPEQ NAME:

RPEQ No:

DATE:

SIGN:

Rev	Date	Description	By	Chk
P1	03.06.22	PRELIMINARY ISSUE	MS	MW

EDGE CONSULTING ENGINEERS
www.edgece.com
Brisbane . Australia
1st Floor, 28 Balaclava Street,
Woolloongabba,
Queensland, 4102,
Australia
T: +61 7 3392 3671
E: brisbane@edgece.com

Project Name
MURPHY STREET DEVELOPMENT

14 MURPHY STREET, PORT DOUGLAS QLD 4877

Client
GEORGE ARGYROU

Designed	Drawn	Checked	Scale @ A1
MS	MS	-	1:100

Drawing Title
PRELIMINARY EARTHWORKS SECTIONS

Project No.
220614

PRELIMINARY

Drawing No.
CSK003

Revision
P1

Annexure 3: Vegetation Survey Report

Vegetation Survey for 14 Murphy Street

Port Douglas (Lot 114 on PTD2094)

Prepared for Patagorang Holdings Pty Ltd

In relation to Information Request by Douglas Shire Council (ref. MCUC2022_4732/1)

by John Sullivan Bach.App.Sc.Hort.

Hortulus Australia Pty/Ltd

PO Box 798 Port Douglas Q. 4877

30th June 2022.

Figure 1 Alstonia scholaris (Tree 39) Canopy from base of tree.

HORTULUS

LANDSCAPE | DESIGN | CONSTRUCT | MAINTAIN

P 4099 1861 | HORTULUS.COM.AU

Introduction

Hortulus Australia Pty Ltd has been asked to provide a tree survey of existing vegetation on 14 Murphy Street (Lot 114 PTD 2094) Port Douglas and the adjoining Murphy street, road verge to the front of the site. The survey is to include all trees with a trunk diameter of 500mm or more as measured from 1000mm above natural ground level. The survey is to include species name, approximate height, trunk girth, estimated age, extent of canopy, and estimated root zone.

The survey was conducted Thursday 30th June 2022.

The Site

The subject site currently exists largely as a derelict site with climaxed wattle trees to the south and west of the site. The central area is cleared land dominated by weed species, remnants of previous gardening. The land falls approximately 20m over the 67m length of the site, with areas evident of previous access tracks and embankments from earthworks. At the north of the site stands two majestic trees, a Queensland Blue Gum (Tree 40) & a Milky Pine (Tree 39).

Figure 2 Trees 39 & 40 viewed from Lot 113north west boundary note cleared site with weed species.

The Murphy Street road easement on the southwest boundary, is approximately 30m wide with vegetation dominating 20m of this area adjoining the property, there is currently a cleared gravel track to the site, from the bitumen road.

Figure 3 South west corner boundary peg center of photo showing existing gravel access road to boundary.

Vegetation Survey

The site was surveyed on foot with transects along each boundary and locations of each tree measured or approximated in relation to existing survey marks, trees already located and topography. These locations have been noted on the current survey plan, with locations approximate and not shown for construction purposes at this stage.

Species have been identified from foliage, fruit, and trunk characteristics available at the time of survey.

Girth has been measured on each tree.

Height & Canopy has been estimated onsite.

Estimated age of the trees is approximate, and based on the known longevity of each species, their current condition, knowledge of fire regimes and previous tree surveys of the site publicly available.

Root zones of large trees vary greatly, with some having roots up to 2km away from their trunk. In providing an estimate of root zone, we have assumed an estimate of Structural Root Zone is required. This figure varies greatly, not only considering the distance from the trunk but also the percentage of Total Root System proposed to be damaged on any individual specimen. The Structural Root Zone is a mathematical formula determined by the girth of the tree and is only an indication of an area of roots to be protected to provide stability of the tree if excavation is required. The species & post excavation care of a tree/palm also influences its ability to cope with root disturbance on an individual basis.

Removal status has been determined on individual specimens being in a proposed construction zone (house, driveway or excavation/retaining) or being part of a climax community. The Wattle Trees (Acacia sp.) on the site, generally belong to a community of plants that are short lived (20 years) & regenerated by fire. Fire hasn't been present on the western side of Flagstaff Hill for over 40 years. Most of the Wattles are in senescence showing evidence of reduced canopies, rot, and collapse, rendering them dangerous to build around. Additional evidence of regenerating native species clearly indicates a shift to closed rainforest species with juvenile Solitaire Palms (*Ptycosperma elegans*), Flame Trees (*Brachychiton acerifolius*), Native Olive (*Chionanthus ramiflorus*), Umbrella

Tree (*Schefflera actinophylla*), Lime berry (*Micromelum minutum*) amongst others, occurring below the existing canopy.

Weed species

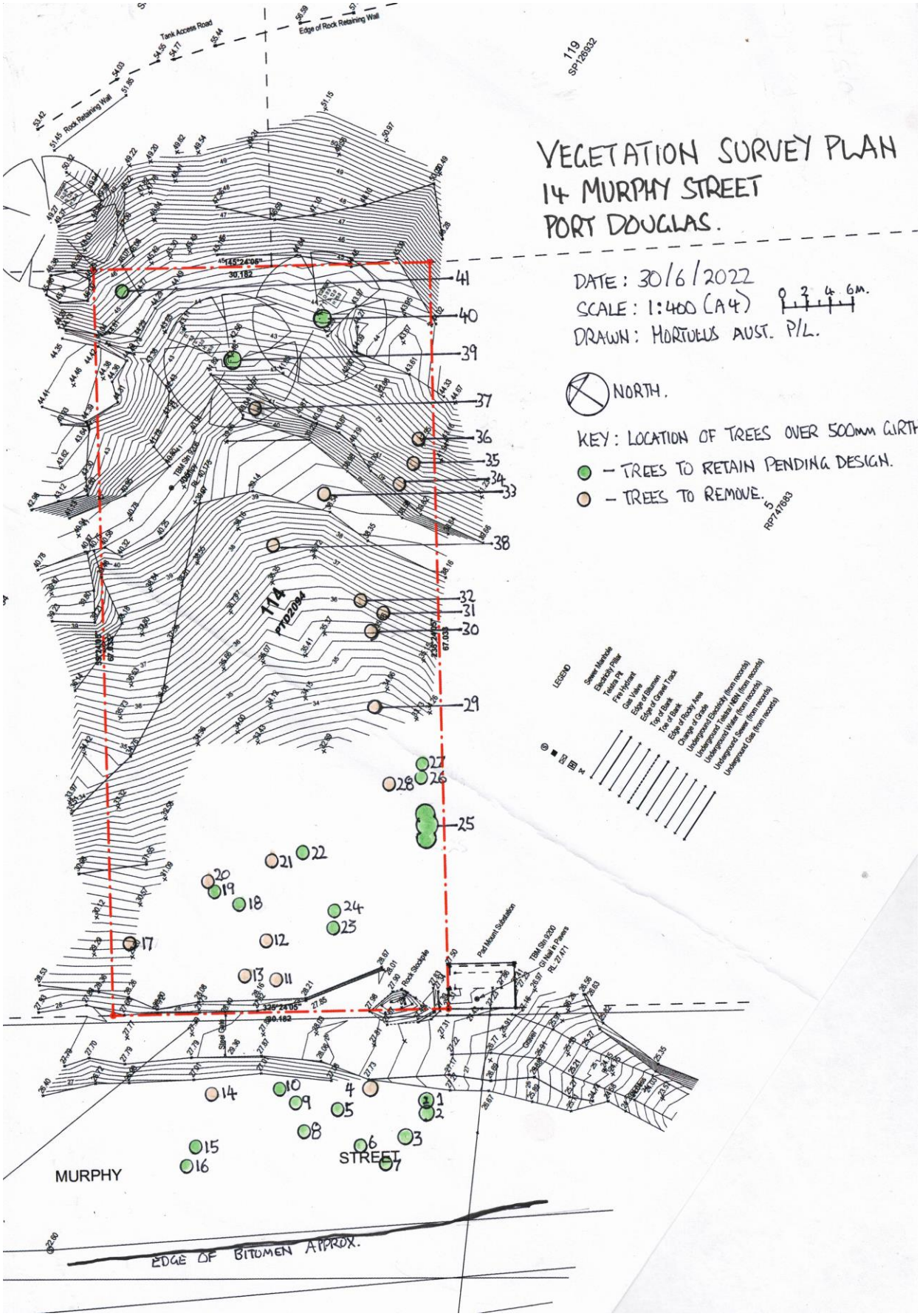
The site is dominated by shrubby weeds with most native tree species to the southwest boundaries of the site. A large percentage of the vine growth over trees is a deciduous Yam species (Dioscorea sp.) that maybe a cultivated form, based on other tropical food plants present on site. Many of the species present seem to be largely garden escapees, which should be managed through the construction process. The development of a predominantly native garden as per proposed landscape plan by Hortulus (14 March 2022), in accordance with requirements for the Special Area Flagstaff Hill Zoning, should produce better visual & habitat outcomes.

The Murphy Street road easement has predominantly native species however the access driveway has an infestation of Tree Lucerne (*Leucaena leucocephala*) and Singapore Daisy (*Sphagneticola trilobata*) with the latter being presents across the entire site. Notable weed species are listed below.

BOTANICAL NAME	**COMMON NAME**
Allamanda cathartica	Climbing Allamanda
Elaeis guineensis	African oil Palm
Heliconia stricta	Bird of Paradise
Leucaena leucocephala	Tree Lucerne
Manihot esculenta	Cassava
Megathyrsus maximus	Guinea Grass
Musa acuminata var.	Sugar Banana
Ravenala madagascariensis	Travellers palm
Sphagneticola trilobata	Singapore Daisy
Stachytarpheta cayennensis	Blue Snake weed

Figure 4 view from Tree 20 looking up hill to Trees 39 & 40 at the top of the site. Note general weed growth.

Vegetation Survey Plan



Tree Numbers refer to the accompanying Tree Survey Plan (Above).

TREE 1. *Euroschinus falcata* Pink Poplar
Height; 10m Girth; 860mm Age; 20 Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 2.9m Removal Status; Remain

TREE 2. *Euroschinus falcata* Pink Poplar
Height; 10m Girth; 760mm Age; 20 Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 2.8m Removal Status; Remain

TREE 3. *Euroschinus falcata* Pink Poplar
Height; 11m Girth; 875mm Age; 25 Canopy Diameter; 7m
Structural Root Zone (radius from trunk); 2.9m Removal Status; Remain

TREE 4. *Euroschinus falcata* Pink Poplar
Height; 11m Girth; 850mm Age; 25 Canopy Diameter; 7m
Structural Root Zone (radius from trunk); 2.9m Removal Status; Remove for entry road

TREE 5. *Chionanthus ramiflorus* Native Olive
Height; 6m Girth; 560mm Age; 15 Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 2.5m Removal Status; Remain

TREE 6. *Acacia crassicarpa* Lancewood
Height; 7m Girth; 670mm Age; 30 Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 2.7m Removal Status; Remain

TREE 7. *Acacia crassicarpa* Lancewood
Height; 8m Girth; 780mm Age; 30 Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 2.8m Removal Status; Remain

TREE 8. *Euroschinus falcata* Pink Poplar
Height; 9m Girth; 1090mm Age; 30 Canopy Diameter; 8m
Structural Root Zone (radius from trunk); 3.3m Removal Status; Remain

TREE 9. *Buchanania arborescens* Satinwood
Height; 11m Girth; 820mm Age; 40 Canopy Diameter; 6m
Structural Root Zone (radius from trunk); 2.9m Removal Status; Remain

TREE 10. *Terminalia sericocarpa* Damson
Height; 14m Girth; 910mm Age; 20 Canopy Diameter; 8m
Structural Root Zone (radius from trunk); 3m Removal Status; Remain

TREE 11. *Acacia crassicarpa* Lancewood
Height; 10m Girth; 1140mm Age; 40+ Canopy Diameter; 6m
Structural Root Zone (radius from trunk); 3.4m Removal Status; Remove due to age

TREE 12. *Acacia crassicarpa* Lancewood
Height; 4m Girth; 1200mm Age; 40+ Canopy Diameter; 0m
Structural Root Zone (radius from trunk); 0m Removal Status; Remove Dead

TREE 13. *Acacia crassicarpa* Lancewood
Height; 6m Girth; 750mm Age; 30+ Canopy Diameter; 4m
Structural Root Zone (radius from trunk); 2.9m Removal Status; Remove due to age

TREE 14. *Mangifera indica* Mango Tree
Height; 9m Girth; 600mm Age; 20 Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 2.7m Removal Status; Remove not native

TREE 15. *Buchanania arborescens* Satinwood
Height; 11m Girth; 740mm Age; 30+ Canopy Diameter; 6m
Structural Root Zone (radius from trunk); 2.9m Removal Status; Remain

TREE 16. *Euroschinus falcata* Pink Poplar
Height; 10m Girth; 1460mm Age; 40+ Canopy Diameter; m
Structural Root Zone (radius from trunk); 3.9m Removal Status; Remain

TREE 17. *Acacia crassicarpa* Lancewood
Height; 11m Girth; 1175mm Age;40+ Canopy Diameter; 6m
Structural Root Zone (radius from trunk); 3.5m Removal Status; Remove due to age

TREE 18. *Terminalia muelleri* Mueller's Damson
Height; 7m Girth; 600mm Age; 15 Canopy Diameter; 4m
Structural Root Zone (radius from trunk); 2.5m Removal Status; Retain pending drive design

TREE 19. *Chionanthus ramiflorus* Native Olive
Height; 7m Girth; 540mm Age; 10 Canopy Diameter; 6m
Structural Root Zone (radius from trunk); 2.5m Removal Status; Retain pending drive design

TREE 20. *Acacia crassicarpa* Lancewood
Height; 6m Girth; 600mm Age;30+ Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 2.7m Removal Status; Remove due to age

TREE 21. *Acacia crassicarpa* Lancewood
Height; 6m Girth; 690mm Age;30+ Canopy Diameter; 4m covered in vine
Structural Root Zone (radius from trunk); 2.9m Removal Status; Remove due to age

TREE 22. *Terminalia muelleri* Mueller's Damson
Height; 7m Girth; 700mm Age;15 Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 3m Removal Status; Retain pending drive design

TREE 23. *Chionanthus ramiflorus* Native Olive
Height; 7m Girth; 790mm Age; 10 Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 3m Removal Status; Retain pending drive design

TREE 24. *Chionanthus ramiflorus* Native Olive
Height; 6m Girth; 580mm Age; 10 Canopy Diameter; 4m
Structural Root Zone (radius from trunk); 2.6m Removal Status; Retain pending drive design

TREE 25. *Ficus sp.*(possibly *ficus rubignosa*) Fig Tree This tree has 4 trunks
Height; 14m Girth; 4000mm Age;25+ Canopy Diameter; 12m
Structural Root Zone (radius from trunk); 4m (due to vigour) Removal Status; Retain

TREE 26. *Euroschinus falcata* Pink Poplar
Height; 13m Girth; 1300mm Age; 30+ Canopy Diameter; 8m
Structural Root Zone (radius from trunk); 3.5m Removal Status; Retain

TREE 27. *Euroschinus falcata* Pink Poplar
Height; 12m Girth; 880mm Age;20+ Canopy Diameter; 6m
Structural Root Zone (radius from trunk); 3m Removal Status; Retain

TREE 28. DEAD TREE
Height; 4m Girth; 700mm Age; NA Canopy Diameter; 0m
Structural Root Zone (radius from trunk); NA Removal Status; Remove dangerous

TREE 29. *Acacia crassicarpa* Lancewood
Height; 7m Girth; 720mm Age; 30+ Canopy Diameter; 4m
Structural Root Zone (radius from trunk); 2.9m Removal Status; Remove due to age

TREE 30. DEAD TREE *Acacia crassicarpa* Lancewood
Height; 6m Girth; 760mm Age; NA Canopy Diameter; 0m
Structural Root Zone (radius from trunk); NA Removal Status; Remove dangerous

TREE 31. *Acacia crassicarpa* Lancewood
Height; 7m Girth; 800mm Age; 30+ Canopy Diameter; 4m smothered in vine
Structural Root Zone (radius from trunk); 3.1m Removal Status; Remove due to age

TREE 32. *Acacia crassicarpa* Lancewood
Height; 8m Girth; 720mm Age; 30+ Canopy Diameter; 4m
Structural Root Zone (radius from trunk); 2.9m Removal Status; Remove due to age

TREE 33. *Acacia crassicarpa* Lancewood
Height; 7m Girth; 550mm Age; 25+ Canopy Diameter; 4m
Structural Root Zone (radius from trunk); 2.6m Removal Status; Remove due to age

TREE 34. *Acacia crassicarpa* Lancewood
Height; 8m Girth; 720mm Age; 30+ Canopy Diameter; 4m
Structural Root Zone (radius from trunk); 2.9m Removal Status; Remove due to age

TREE 35. *Acacia crassicarpa* Lancewood
Height; 8m Girth; 700mm Age; 30+ Canopy Diameter; 4m
Structural Root Zone (radius from trunk); 2.8m Removal Status; Remove due to age

TREE 36. *Acacia crassicarpa* Lancewood
Height; 8m Girth; 980mm Age; 30+ Canopy Diameter; 4m
Structural Root Zone (radius from trunk); 3.1m Removal Status; Remove due to age

TREE 37. *Polyscias elegans* Celerywood
Height; 6m Girth; 580mm Age; 10+ Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 2.7m Removal Status; Remove construct zone

TREE 38. *Polyscias elegans* Celerywood
Height; 8m Girth; 1200mm Age; 15+ Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 3.5m Removal Status; Remove construct zone

TREE 39. *Alstonia scholaris* Milky Pine
Height; 20m Girth; 2800mm Age;40+ Canopy Diameter; 10m
Structural Root Zone (radius from trunk); 5m Removal Status; Retain

TREE 40. *Eucalyptus tetericornis* Queensland Blue Gum
Height; 18m Girth; 2400mm Age; 40+ Canopy Diameter; 8m
Structural Root Zone (radius from trunk); 4.8m Removal Status; Retain

TREE 41. *Choinanthus ramiflorus* Native Olive
Height; 8m Girth; 750mm Age; 10 Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 2.9m Removal Status; Retain

CONSULTANT COMMENTS

There are three significant trees on this site. Tree 25. Ficus sp., Tree 39. Milky Pine and Tree 40. the Queensland Blue Gum. They are all trees of good health, vigour and are young trees in relation to their species know longevity. Trees 39 & 40 have always intended to be retained, with the proposed building designed suitably. Tree 25 will require the driveway to be slightly adjusted in the Building Design process but can be easily retained as it sits close to the boundary and figs are known to cope well with root disturbance. This tree will become a major feature on the way up the driveway to the house.

All Wattle Trees (Acacia sp.) are advised to be removed and replaced with native trees of better longevity, and better screening capabilities to provide neighbours privacy.

Many of the remainder of the trees are in suitable positions to remain with only a few requiring removals pending the location of the driveway when detail design occurs. The trees that remain will form part of the existing screening and ecosystem of Flagstaff Hill and will be enhanced through added native planting.

THE AUTHOR

John Sullivan Bach.App.Sc.Hort. has been specialising in tropical landscape in northern Australia since 1992 acting as a consultant in vegetation management in both natural and urban environments. He has designed & constructed many landscapes with several featuring in books & publications both in Australia & overseas. Sullivan has been a Director at the Mossman Botanic Gardens for 8 years.

Annexure 4: Geotechnical Report

GEO | design

21 July 2022

Our Ref: 22058AA-D-L01-v1
Your Ref: TBA

George Argyrou
Hickory Constructions Group Pty Ltd
3/21 Constitution Hill Road
SORRENTO VIC 3943

Transmission via email: *g.argyrou@hickory.com.au*

RETAINING WALL DESIGN AND CERTIFICATION
14 MURPHY STREET (LOT 114 on PTD2094)
PORT DOUGLAS QLD 4877

Dear George,

GEO Design has carried out further geotechnical works as part of the proposed new residence at the above property. The additional works included further development of a number of retaining wall designs to provide temporary and permanent stabilisation for a number of proposed new cut and fill batters and surrounding slopes above as part of the proposed development.

The following documents pertaining to the proposed development at this site were referenced as part of the additional geotechnical works:

1. GEO Design report 22010AA-D-R01 dated 14 April 2022.
2. Edge Consulting Engineers Job number: 220614, Drawings CSK001 and CSK002.
3. Preliminary architectural drawings provided by George Argyrou.

The design drawings attached (C01 to C03) were developed using the geotechnical data and interpretations outlined in GEO Design's report 22010AA-D-R01 dated 14 April 2022.

In summary, three main retention structures are proposed. In accordance with the attached drawings C01 to C03, the proposed retention structures include the following:

- Section 1- Soil nail and shotcrete wall located at the rear of the proposed residence.
- Section 2 – Shotcrete wall with steel fixing pins along the sides (eastern and western boundaries) of the proposed residence.
- Section 3 – Reinforced Soil Structure retaining wall known as a Geosynthetically Confined Soil (GCS) wall in fill areas. The GCS wall will include geofabric bags on the facing to provide a "living wall". Section 3 to be formed in cut or fill areas where only one retaining wall face is required.

- Section 4 - GCS wall with a "living wall" facing constructed in areas of proposed driveway areas requiring two retaining wall faces.

The locations of the proposed retention structures are shown on the Edge Consulting Engineers drawings outlined above.

Based on our design, proposed construction methodology including an appropriate Safety in Design analyses, and further to the comments provided in our report 22010AA-D-R01 we can offer the following comments:

1. The proposed retention systems are considered geotechnically feasible and would provide sufficient support to the proposed batters and surrounding slopes as part of the proposed development.

2. The designs allow that all retention works required as part of the development are contained wholly within the subject property. No soil nails or other elements will extend into adjacent properties.

3. The proposed retention works do not represent a complex engineering solution and adopt common design and construction techniques for these types of projects which are similar to other projects constructed in Port Douglas.

4. The design allows the use of conventional equipment which are considered appropriate for this site.

5. The retention systems have been developed for this site in accordance with accepted guidelines and specifications based on the slope, grade and adjacent site conditions, together with the intent of the proposed development design.

6. The works would allow support to batters as excavation proceeds, meaning adequate short-term stability for the batters, together with providing the necessary long term support for the final profiles.

7. Following construction of the retention systems in accordance with our finalised design, the risk of instability, in accordance with the AGS 2007 guidelines, will be Low.

8. The retention system would not increase the landslide risk to adjacent properties from a temporary or permanent point of view.

9. It is proposed the works would be carried out under the direction and supervision of GEO to confirm design and construction adequacy.

To maintain stability of the proposed batters and slopes above during construction works, the proposed retention systems include the following measures:

1. For Section 1, excavation for soil nail and shotcrete batters will be carried out in maximum 1 m high excavation lifts with soil nails installed prior to excavation of subsequent lifts. Excavation of subsequent lower lifts would be carried following a minimum of 3 days after grouting of soil nails on the upper lift.

2. A temporary batter angle of 70° would be adopted for Section 2 area. Fixing pins would be installed as excavation proceeds with shotcrete placed immediately following completion of excavation works. A temporary batter formed at 70° will be stable in the short term to allow completion of the Section 2 retaining works.

3. Temporary stabilisation works will not be required for Sections 3 and 4. However, if required, all temporary batters for retaining walls will be limited to 70° and a maximum height of 3.5 m.

As part of the retaining walls, subsurface and surface drainage would be provided to limit pore water pressures behind the retaining structures and concentrated surface water flows that might lead to erosion and scouring.

We consider that the proposed retention works outlined in Sections 1 to 4 provide a feasible solution to provide support to the existing and proposed slopes in the subject allotment without extending into or negatively impacting the adjacent allotment and structures.

Construction drawings and specifications will be provided following development approval and finalisation of architectural and civil drawings. An appropriate Form 15 for the design of the proposed soil nail and shotcrete soil nails is attached. Certification of other retaining walls, if proposed, and other structural elements will be provided by Edge Consulting Engineers under separate cover.

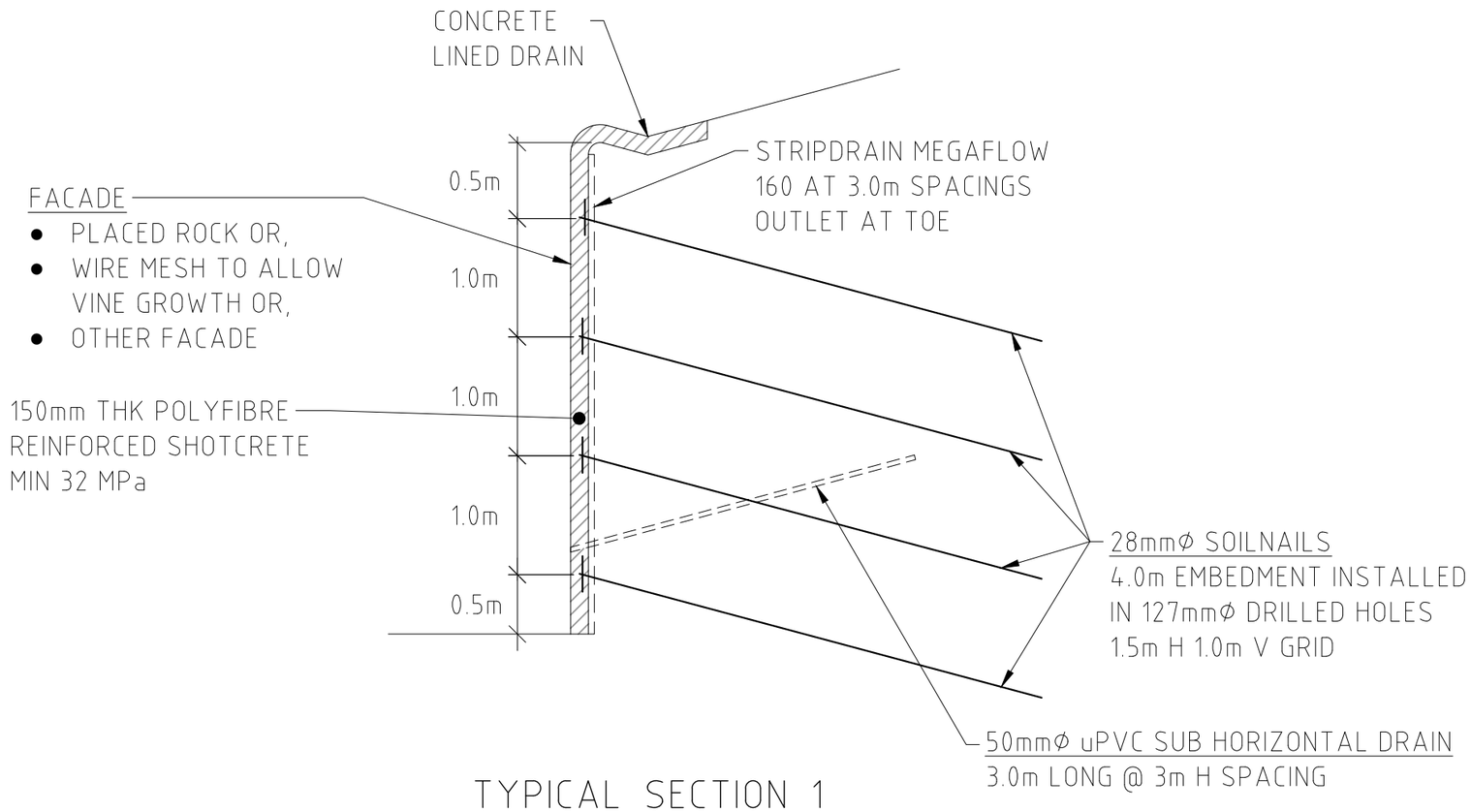
We would be pleased to answer any questions that you may have regarding this matter.

Yours sincerely,

Stephen Ford
Director/Principal Engineering Geologist
BSc (Geo) BSc (Geo) Hons MEngSc (Geotechnical)
RPEQ 25762

Attachments

1. Retaining Wall Drawings
2. Form 15



TYPICAL SECTION 1
REAR RETAINING WALL
N.T.S.

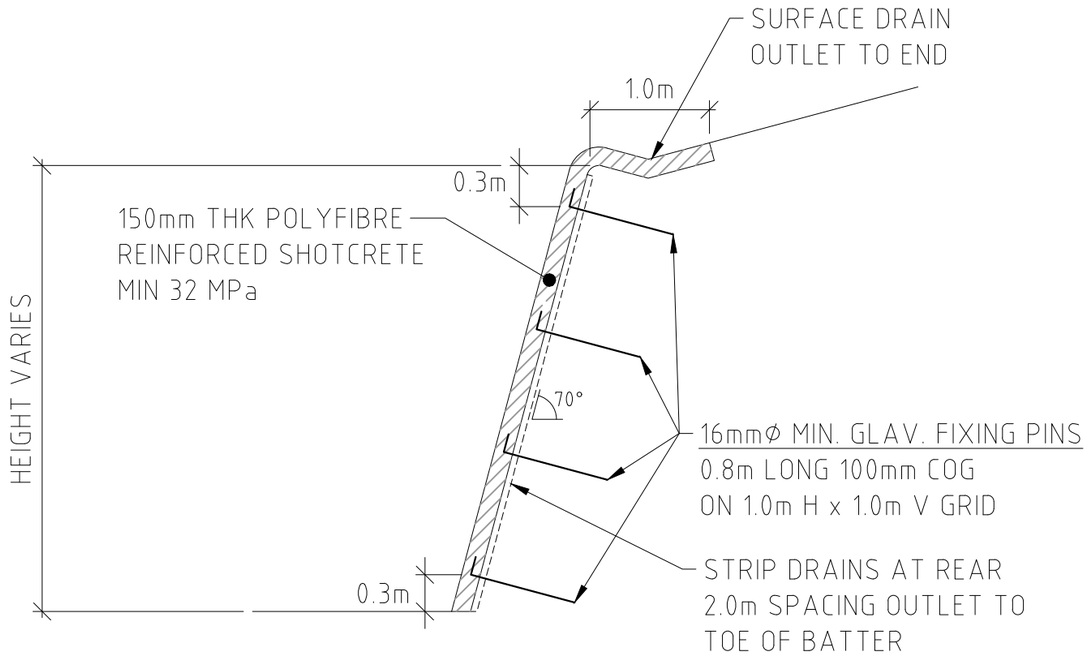
ISSUED FOR
PRELIMINARY
NOT FOR CONSTRUCTION

REV	DESCRIPTION	APP'D	DATE
P1	PRELIMINARY ISSUE		14/07/22

R.P.E.Q. NAME:	Steve Ford
R.P.E.Q. No.:	25762
SIGNATURE:	
DATE:	

GEO

CLIENT		PROJECT	PROPOSED RETAINING WALL 14 MURPHY STREET, PORT DOUGLAS
DRAWN KCDD	DATE 14/07/22	TITLE	TYPICAL SECTIONS SHEET 1
CHECKED EWK	DATE 14/07/22		
SCALE		PROJECT No 22010AA-D	DRAWING No C01 REV A A3



TYPICAL SECTION 2
SIDE RETAINING WALL
N.T.S.

ISSUED FOR
PRELIMINARY
NOT FOR CONSTRUCTION

REV	DESCRIPTION	APP'D	DATE
P1	PRELIMINARY ISSUE		14/07/22

R.P.E.Q. NAME: Steve Ford
R.P.E.Q. No.: 25762
SIGNATURE:
DATE:

GEO

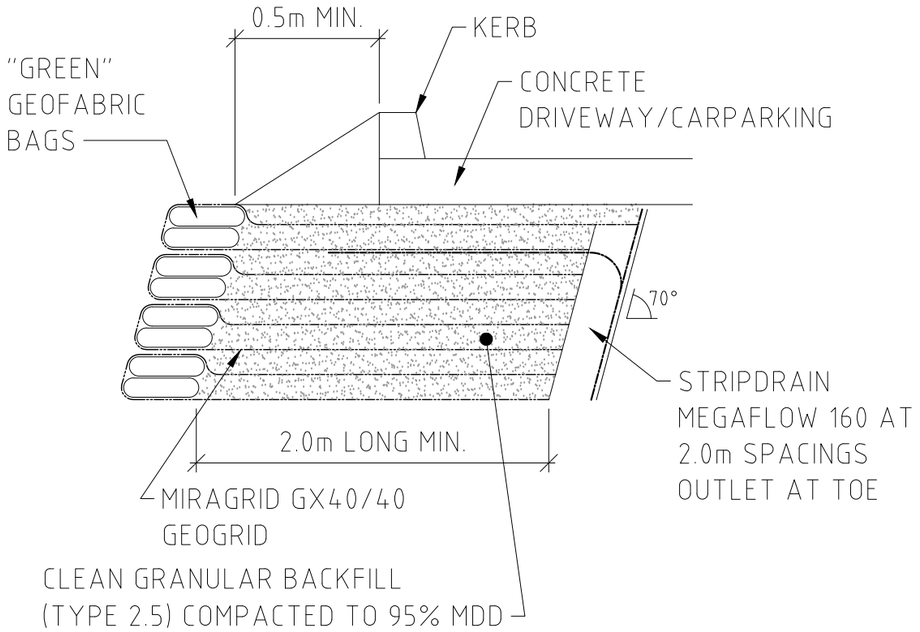
CLIENT

DRAWN KCDD DATE 14/07/22
CHECKED EWK DATE 14/07/22
SCALE

PROJECT: PROPOSED RETAINING WALL
14 MURPHY STREET, PORT DOUGLAS

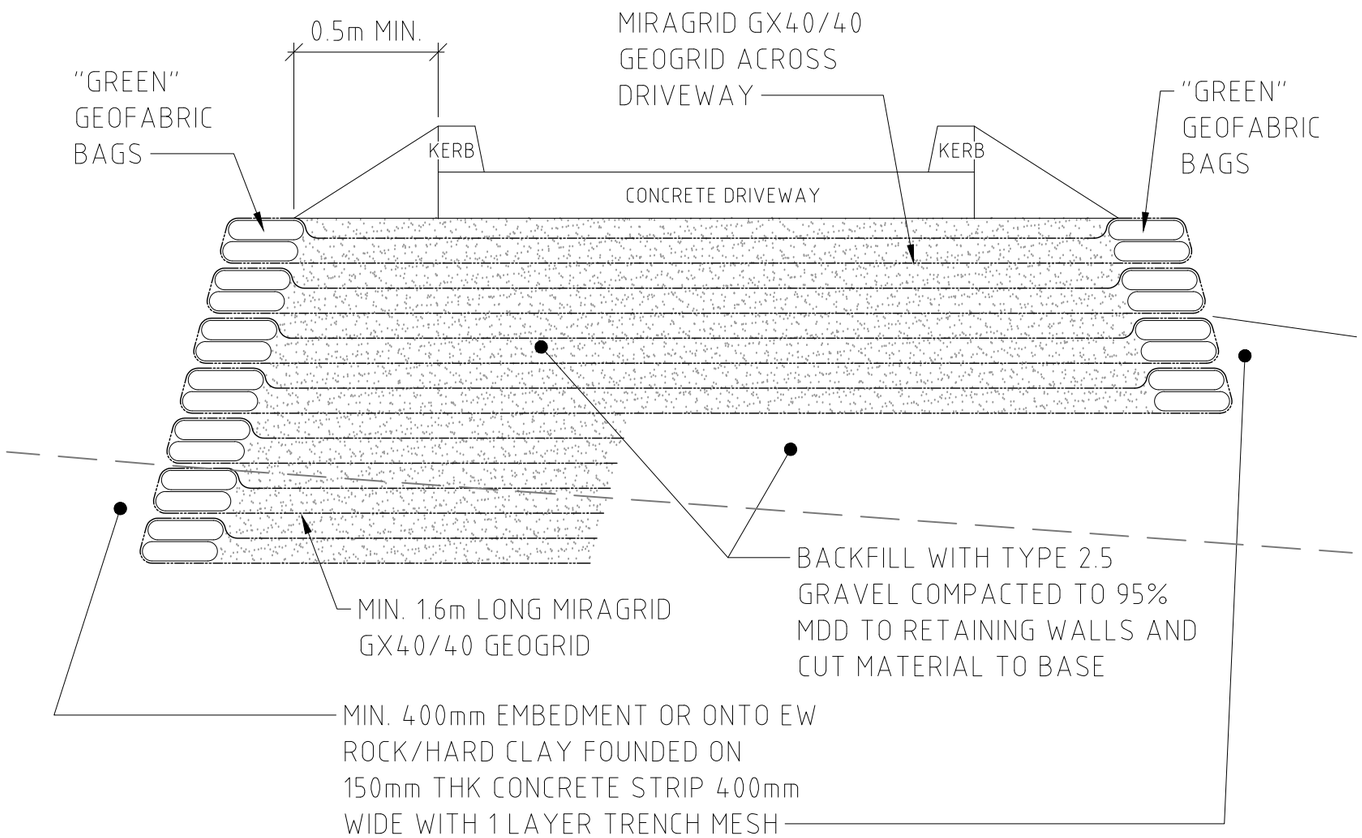
TITLE: TYPICAL SECTIONS
SHEET 2

PROJECT No 22010AA-D | DRAWING No C02 | REV A | A3



TYPICAL SECTION 3

(GCS WALL IN AREAS OF CUT OR WHERE SINGLE FACE ONLY REQUIRED)
N.T.S.



TYPICAL SECTION 4

(SITE ACCESS)
N.T.S.

ISSUED FOR
PRELIMINARY
NOT FOR CONSTRUCTION

REV	DESCRIPTION	APP'D	DATE
P1	PRELIMINARY ISSUE		14/07/22

R.P.E.Q. NAME: Steve Ford
R.P.E.Q. No.: 25762
SIGNATURE:
DATE:

GEO

CLIENT

DRAWN KCDD DATE 14/07/22
CHECKED EWK DATE 14/07/22
SCALE

PROJECT: PROPOSED RETAINING WALL
14 MURPHY STREET, PORT DOUGLAS

TITLE: TYPICAL SECTIONS
SHEET 3

PROJECT No 22010AA-D | DRAWING No C03 | REV A | A3

Form 15 Compliance certificate for building design or specification

Queensland Government

This form is to be used by an appointed competent person for the purposes of section 10 of the *Building Act 1975* and sections 73 and 77 of the Building Regulation 2021 (Design-specification certificate) stating that an aspect of building work or specification will, if installed or carried out as stated in this form, comply with the building assessment provisions.

Additional explanatory information is included in the Appendix at the end of this form.

1. Property description

This section need only be completed if details of street address and property description are applicable.

E.g. in the case of (standard/generic) pool design/shell manufacture and/or patio and carport systems this section may not be applicable.

The description must identify all land the subject of the application.

The lot and plan details (e.g. SP/RP) are shown on title documents or a rates notice.

If the plan is not registered by title, provide previous lot and plan details.

Street address *(include number, street, suburb/locality and postcode)*

14 Murphy Street

Port Douglas State QLD Postcode 4877

Lot and plan details *(attach list if necessary)*

LOT 114 PTD2094

Local government area the land is situated in

Douglas Shire Council

2. Description of aspect/s certified

Clearly describe the extent of work covered by this certificate, e.g. all structural aspects of the steel roof beams.

Design of retention systems, namely
Section 1 - Soil Nail and Shotcrete Wall for the northern cut batter and natural slopes at the rear of the proposed residence.
Section 2 - Shotcrete retaining wall with fixing pins for the eastern and western boundaries adjacent to the proposed residence.
Sections 3 & 4 - GCS wall for proposed fill areas.

3. Basis of certification

Detail the basis for giving the certificate and the extent to which tests, specifications, rules, standards, codes of practice and other publications were relied upon.

AS 4678:2002 Earth Retaining Structures
AS 2159:1995 Piling
Department of Transport and Main Roads MRTS03

4. Reference documentation Clearly identify any relevant documentation, e.g. numbered structural engineering plans.	DRAWINGS BY EDGE CONSULTING ENGINEERS Job number: 220614 Drawings CSK001 and CSK002. Geotechnical Investigation by GEO Design (Ref: 22010AA-D-R01) GEO Design Letter 22058AA-D-L01 dated 21 July, 2022 GEO Design Drawings 22010AA-D C01 to C03 Revision A

5. Building certifier reference number and building development application number	Building certifier reference number Building development application number *(if available)*

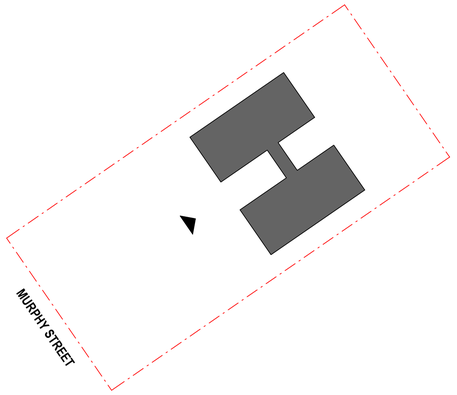
6. Appointed competent person details Under Part 6 of the Building Regulation a person must be assessed as a competent for the type of work (design-specification) by the relevant building certifier.	Name *(in full)* Stephen Ralph Ford Company name *(if applicable)* GEO Design Pty Ltd Contact person Steve Ford Business phone number 07 4038 2702 Mobile number 0421 569 969 Email address Steve.Ford@geo-group.com.au Postal address PO Box 808 Smithfield State QLD Postcode 4878 Licence class or registration type *(if applicable)* RPEQ 25762 Licence or registration number *(if applicable)* QBCC 1190304

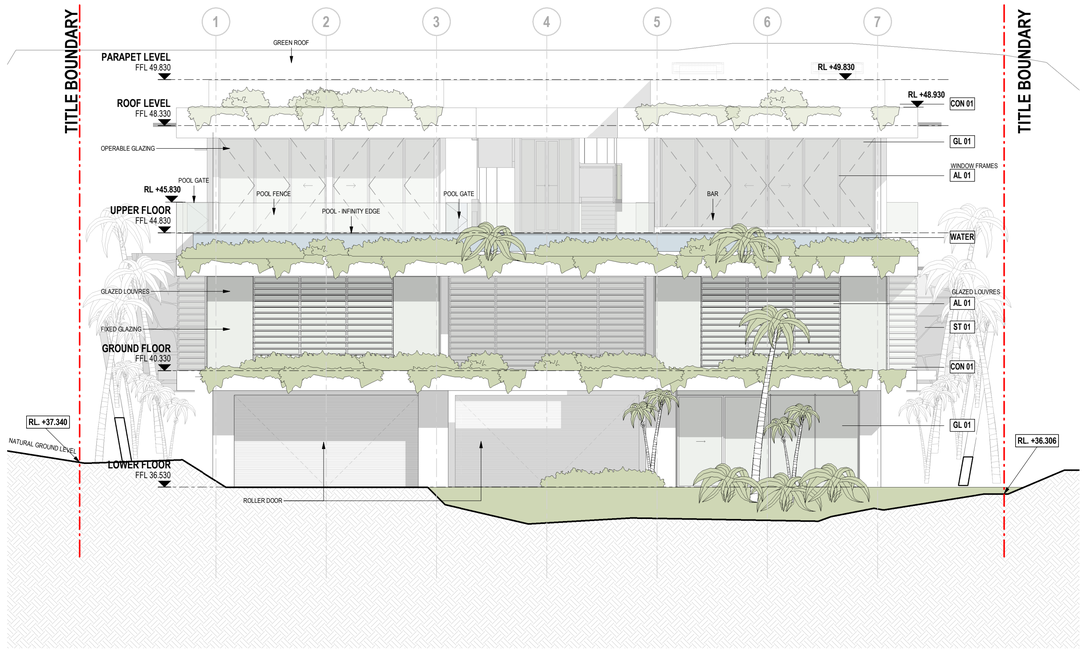
7. Signature of appointed competent person This certificate must be signed by the individual assessed and appointed by the building certifier as competent to give design-specification help.	Signature Date 21/07/2022

LOCAL GOVERNMENT USE ONLY

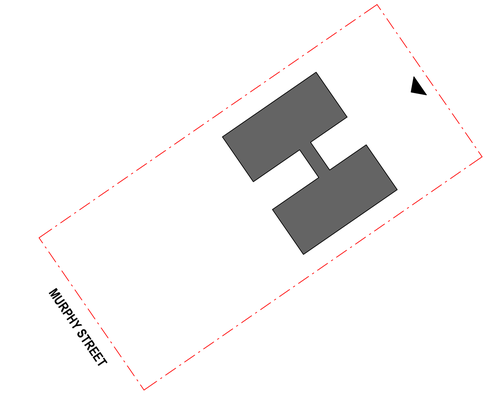
Date received		**Reference number/s**	

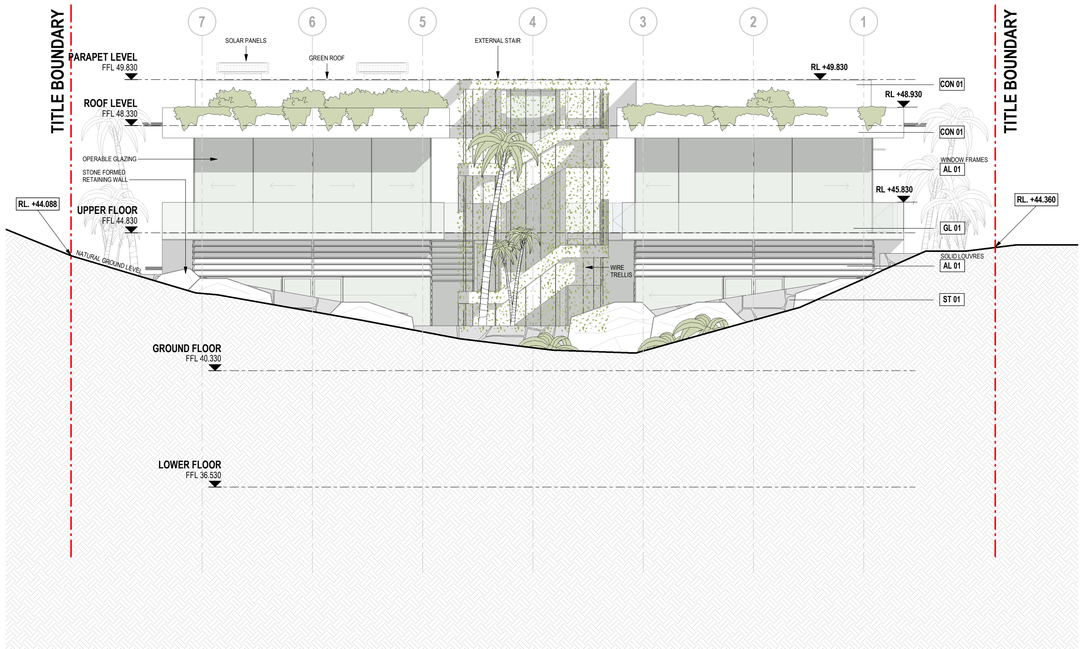
Annexure 5: Building Elevations & Sections





1 SOUTH WEST ELEVATION
TP104
1 : 100





2 NORTH EAST ELEVATION
1 : 100

ST 01
LOCAL NATURAL STONE

CON 01
CONCRETE

GL 01
CLEAR GLAZING

LANDSCAPING

WATER

AL 01
ALUMINIUM - LIGHT COLOURED

GENERAL NOTES

01. DO NOT SCALE FROM DRAWINGS. USE FIGURED DIMENSIONS ONLY.
02. CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCEMENT OF WORK OR PREPARATION OF SHOP DRAWINGS.
03. ALL DIMMISIONS, AMBIGUITIES AND DISCREPENCIES TO BE REPORTED TO THE ARCHITECT IMMEDIATELY.

REVISION

REV	DESCRIPTION	DATE

PROJECT STATUS
DEVELOPMENT APPLICATION
NOT TO BE USED FOR CONSTRUCTION

CLIENT
George Argyrou

PROJECT NO
1789

PROJECT NAME
14 MURPHY ST, PORT DOUGLAS

BayleyWard
Architecture & Interiors
21-23 Chessell Street
Southbank VIC 3006
T: 03 9695 0222
E: info@bayleyward.com

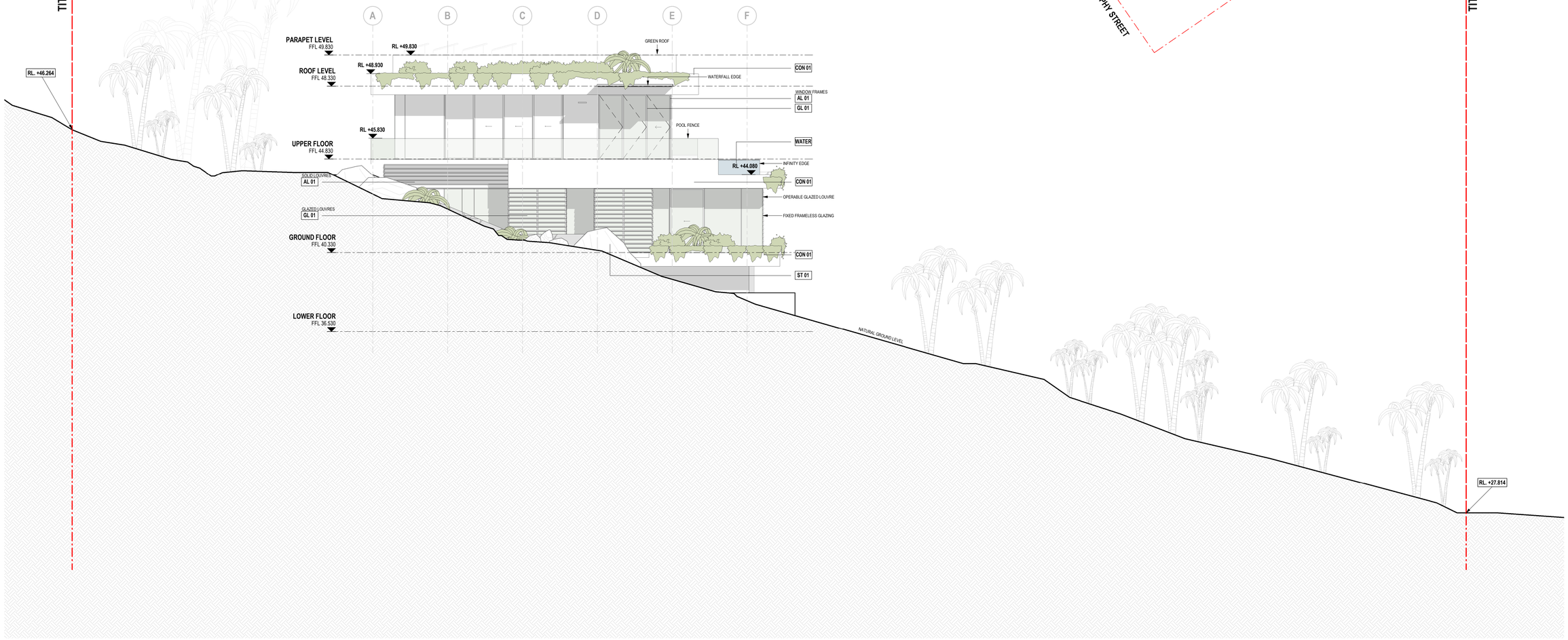
BAYLEY WARD

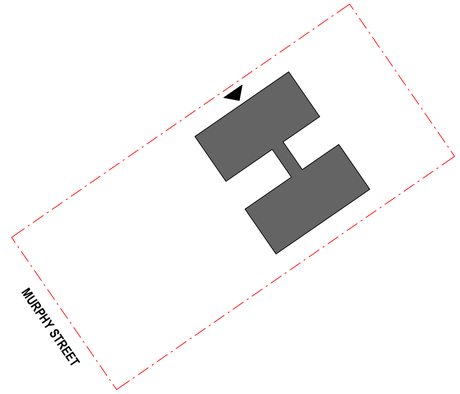
DRAWING NAME
SOUTH WEST AND NORTH EAST ELEVATIONS

SCALE **1:100** @ A1 / 50%@ A3 DRAWN BY **Author** CHECKED BY **Checker**

DRAWING NUMBER
TP201

REVISON





ST 01
LOCAL NATURAL STONE

CON 01
CONCRETE

GL 01
CLEAR GLAZING

LANDSCAPING

WATER

AL 01
ALUMINIUM - LIGHT COLOURED

GENERAL NOTES

01. DO NOT SCALE FROM DRAWINGS. USE FIGURED DIMENSIONS ONLY.
02. CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCEMENT OF WORK OR PREPARATION OF SHOP DRAWINGS.
03. ALL OMMISSIONS, AMBIGUITIES AND DISCREPANCIES TO BE REPORTED TO THE ARCHITECT IMMEDIATELY.

REVISION

REV	DESCRIPTION	DATE

PROJECT STATUS

DEVELOPMENT APPLICATION

NOT TO BE USED FOR CONSTRUCTION

CLIENT

George Argyrou

PROJECT NO

1789

PROJECT NAME

14 MURPHY ST, PORT DOUGLAS

BayleyWard
Architecture & Interiors
21-23 Chessell Street
Southbank VIC 3006
T: 03 9695 0222
E: info@bayleyward.com

BAYLEY WARD

DRAWING NAME

NORTH WEST ELEVATION

SCALE **As indicated@** A1 / 50%@ A3 DRAWN BY **Author** CHECKED BY **Checker**

DRAWING NUMBER

TP202

REVISON

ST 01
LOCAL NATURAL STONE

CON 01
CONCRETE

GL 01
CLEAR GLAZING

LANDSCAPING

WATER

AL 01
ALUMINIUM - LIGHT COLOURED

GENERAL NOTES

01. DO NOT SCALE FROM DRAWINGS. USE FIGURED DIMENSIONS ONLY.
02. CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCEMENT OF WORK OR PREPARATION OF SHOP DRAWINGS.
03. ALL OMMISSIONS, AMBIGUITIES AND DISCREPENCIES TO BE REPORTED TO THE ARCHITECT IMMEDIATELY.

REVISION

REV	DESCRIPTION	DATE

PROJECT STATUS
DEVELOPMENT APPLICATION
NOT TO BE USED FOR CONSTRUCTION

CLIENT
George Argyrou

PROJECT NO
1789

PROJECT NAME
14 MURPHY ST, PORT DOUGLAS

BayleyWard
Architecture & Interiors
21-23 Chessell Street
Southbank VIC 3006
T: 03 9695 0222
E: info@bayleyward.com

BAYLEY WARD

DRAWING NAME
SOUTH EAST ELEVATION

SCALE **As indicated**@ A1 / 50%@ A3 DRAWN BY **Author** CHECKED BY **Checker**

DRAWING NUMBER
TP203

REVISON

GENERAL NOTES

01. DO NOT SCALE FROM DRAWINGS. USE FIGURED DIMENSIONS ONLY.
02. CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCEMENT OF WORK OR PREPARATION OF SHOP DRAWINGS.
03. ALL OMMISIONS, AMBIGUITIES AND DISCREPENCIES TO BE REPORTED TO THE ARCHITECT IMMEDIATELY.

REVISION

REV	DESCRIPTION	DATE

PROJECT STATUS

DEVELOPMENT APPLICATION

NOT TO BE USED FOR CONSTRUCTION

CLIENT

George Argyrou

PROJECT NO

1789

PROJECT NAME

14 MURPHY ST, PORT DOUGLAS

BayleyWard
Architecture & Interiors
21-23 Chessell Street
Southbank VIC 3006
T: 03 9695 0222
E: info@bayleyward.com

BAYLEY WARD

DRAWING NAME

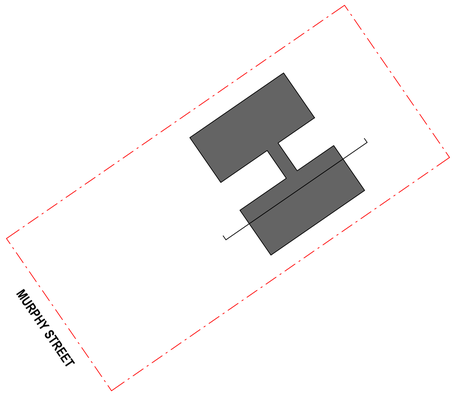
BUILDING SECTION A-A

SCALE **As indicated**@ A1 / 50%@ A3 DRAWN BY **Author** CHECKED BY **Checker**

DRAWING NUMBER

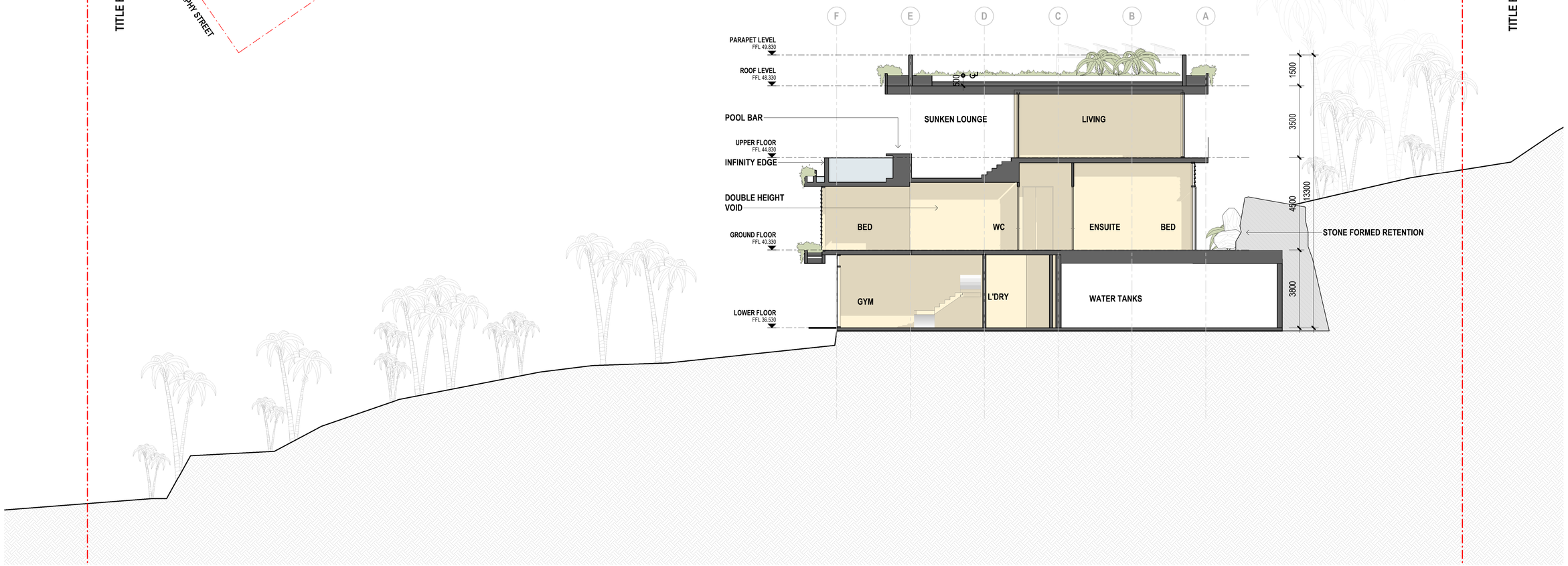
TP301

REVISON



TITLE BOUNDARY

TITLE BOUNDARY



GENERAL NOTES

01. DO NOT SCALE FROM DRAWINGS. USE FIGURED DIMENSIONS ONLY.
02. CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCEMENT OF WORK OR PREPARATION OF SHOP DRAWINGS.
03. ALL OMMISIONS, AMBIGUITIES AND DISCREPENCIES TO BE REPORTED TO THE ARCHITECT IMMEDIATELY.

REVISION

REV	DESCRIPTION	DATE
1		

SECTION BB

TP101 1 : 100

PROJECT STATUS

DEVELOPMENT APPLICATION

NOT TO BE USED FOR CONSTRUCTION

CLIENT

George Argyrou

PROJECT NO

1789

PROJECT NAME

14 MURPHY ST, PORT DOUGLAS

BayleyWard
Architecture & Interiors
21-23 Chessell Street
Southbank VIC 3006
T: 03 9695 0222
E: info@bayleyward.com

BAYLEY WARD

DRAWING NAME

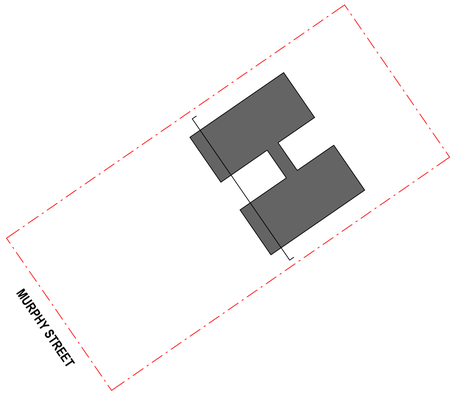
BUILDING SECTION B-B

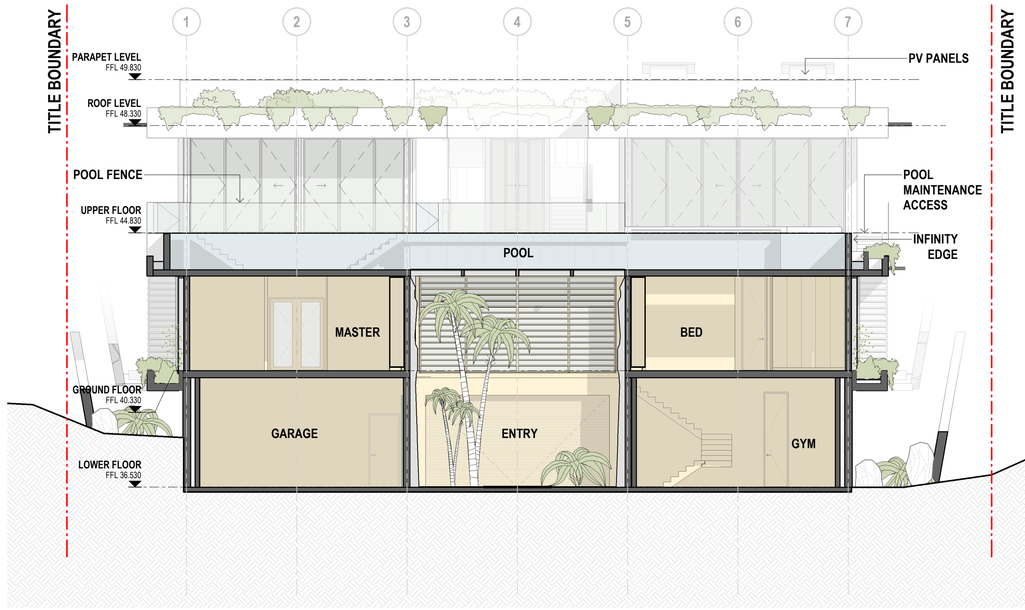
SCALE As indicated@ A1 / 50%@ A3 DRAWN BY Author CHECKED BY Checker

DRAWING NUMBER

TP302

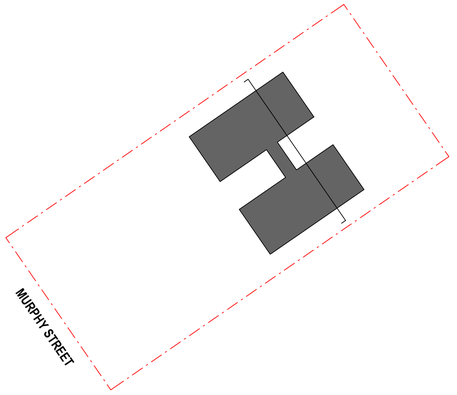
REVISON

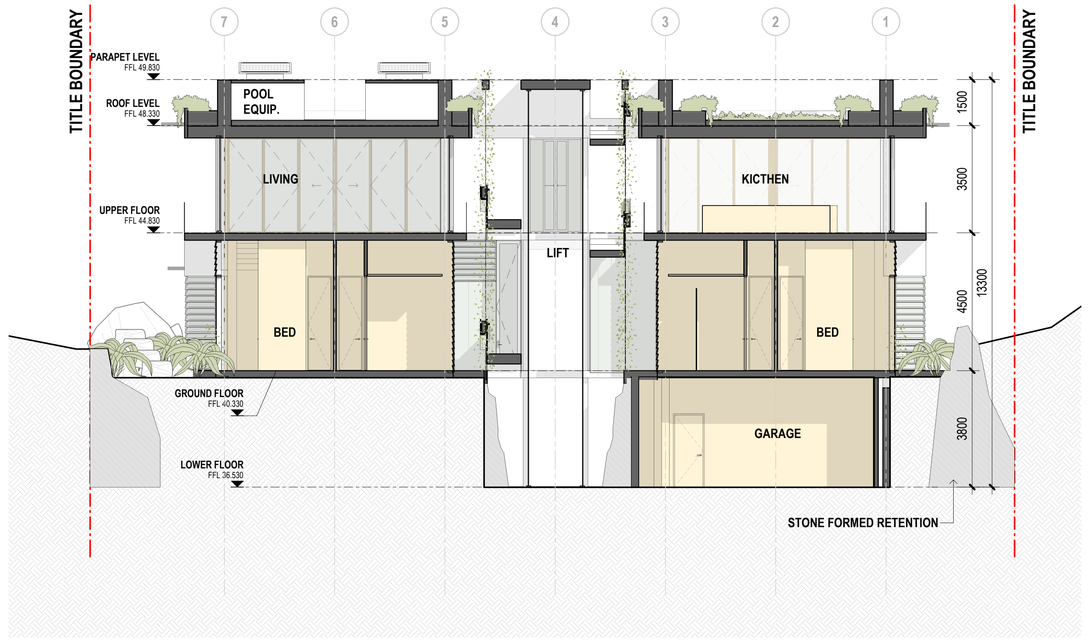




1 TP101 **SECTION CC**

1 : 100





2 TP101 **SECTION DD**

1 : 100

GENERAL NOTES

01. DO NOT SCALE FROM DRAWINGS. USE FIGURED DIMENSIONS ONLY.
02. CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCEMENT OF WORK OR PREPARATION OF SHOP DRAWINGS.
03. ALL OMMISSIONS, AMBIGUITIES AND DISCREPENCIES TO BE REPORTED TO THE ARCHITECT IMMEDIATELY.

REVISION

REV	DESCRIPTION	DATE

PROJECT STATUS

DEVELOPMENT APPLICATION

NOT TO BE USED FOR CONSTRUCTION

CLIENT

George Argyrou

PROJECT NO

1789

PROJECT NAME

14 MURPHY ST, PORT DOUGLAS

BayleyWard
Architecture & Interiors
21-23 Chessell Street
Southbank VIC 3006
T: 03 9695 0222
E: info@bayleyward.com

BAYLEY WARD

DRAWING NAME

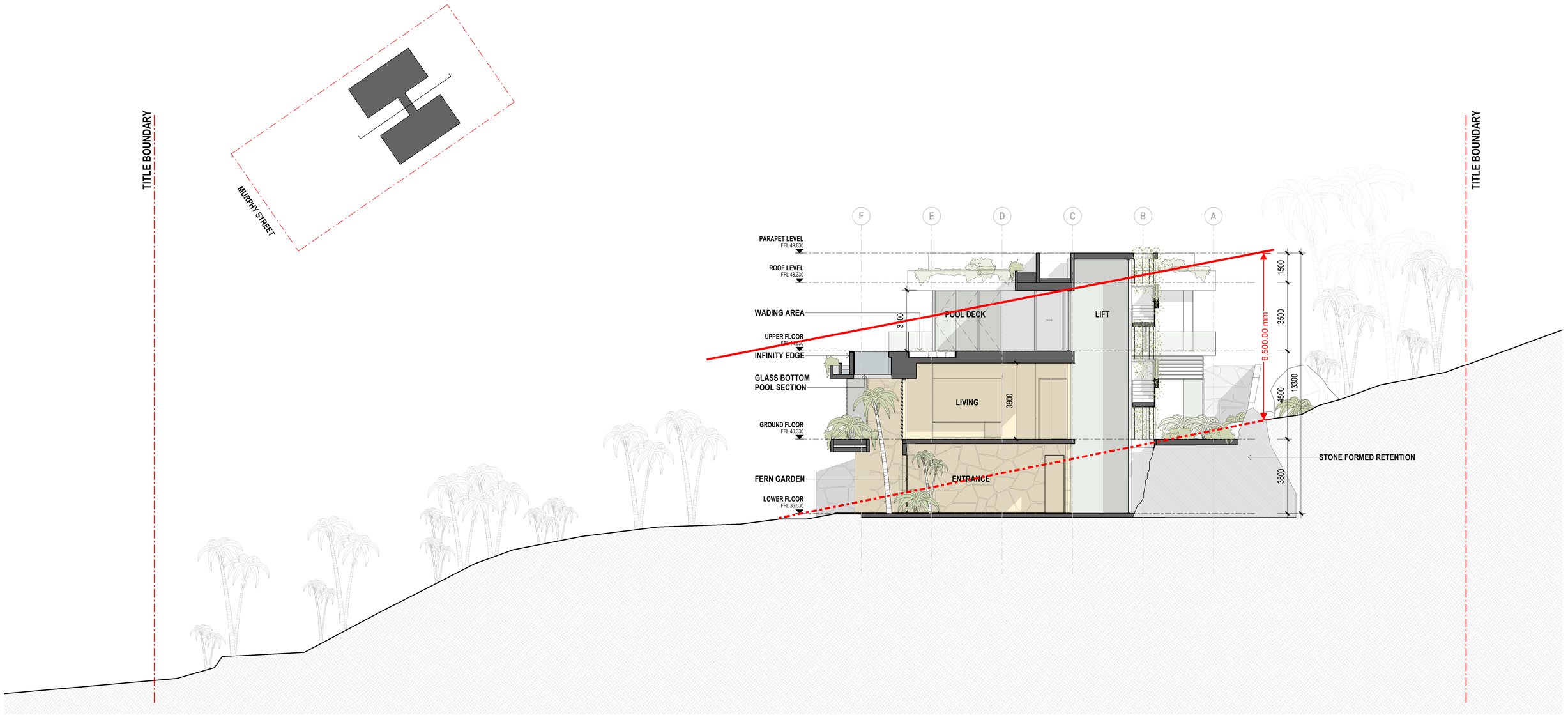
BUILDING SECTION C-C & D-D

SCALE **As indicated**@ A1 / 50%@ A3 DRAWN BY **Author** CHECKED BY **Checker**

DRAWING NUMBER

TP303

REVISON



GENERAL NOTES

01. DO NOT SCALE FROM DRAWINGS. USE FIGURED DIMENSIONS ONLY.
02. CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCEMENT OF WORK OR PREPARATION OF SHOP DRAWINGS.
03. ALL OMMISIONS, AMBIGUITIES AND DISCREPENCIES TO BE REPORTED TO THE ARCHITECT IMMEDIATELY.

REVISION

REV	DESCRIPTION	DATE

PROJECT STATUS

DEVELOPMENT APPLICATION

NOT TO BE USED FOR CONSTRUCTION

CLIENT

George Argyrou

PROJECT NO

1789

PROJECT NAME

14 MURPHY ST, PORT DOUGLAS

BayleyWard
Architecture & Interiors
21-23 Chessell Street
Southbank VIC 3006
T: 03 9695 0222
E: info@bayleyward.com

BAYLEY WARD

DRAWING NAME

BUILDING SECTION A-A

SCALE **As indicated**@ A1 / 50%@ A3 DRAWN BY **Author** CHECKED BY **Checker**

DRAWING NUMBER

TP301

REVISON

Annexure 6: Visual Amenity Report

Visual Amenity Report & Vegetation Survey for 14 Murphy Street

Port Douglas (Lot 114 on PTD2094)

Prepared for Patagorang Holdings Pty Ltd

In relation to Information Request by Douglas Shire Council (ref. MCUC2022_4732/1)

by John Sullivan Bach.App.Sc.Hort.

Hortulus Australia Pty/Ltd

PO Box 798 Port Douglas Q. 4877

30th June 2022.

Figure 1 Alstonia scholaris (Tree 39) Canopy from base of tree.

HORTULUS

LANDSCAPE | DESIGN | CONSTRUCT | MAINTAIN

P 4099 1861 | HORTULUS.COM.AU

Introduction

Hortulus Australia Pty Ltd has been asked to provide a tree survey of existing vegetation on 14 Murphy Street (Lot 114 PTD 2094) Port Douglas and the adjoining Murphy Street, road verge to the front of the site. In addition to this provide comment on the Visual Amenity of the Landscape with reference to privacy and views to the site over time. The survey is to include all trees with a trunk diameter of 500mm or more as measured from 1000mm above natural ground level. The survey is to include species name, approximate height, trunk girth, estimated age, extent of canopy, and estimated root zone.

The survey was conducted Thursday 30th June 2022.

The Site

The subject site currently exists largely as a derelict site with climaxed wattle trees to the south and west of the site. The central area is cleared land dominated by weed species, remnants of previous gardening. The land falls approximately 20m over the 67m length of the site, with areas evident of previous access tracks and embankments from earthworks. At the north of the site stands two majestic trees, a Queensland Blue Gum (Tree 40) & a Milky Pine (Tree 39).

Figure 2 Trees 39 & 40 viewed from Lot 113north west boundary note cleared site with weed species.

The Murphy Street road easement on the southwest boundary, is approximately 30m wide with vegetation dominating 20m of this area adjoining the property, with drainage and bitumen carriageway the remaining. There is currently a cleared gravel track to the site, from the bitumen road.

Figure 3 South west corner boundary peg center of photo showing existing gravel access road to boundary.

Vegetation Survey

The site was surveyed on foot with transects along each boundary and locations of each tree measured or approximated in relation to existing survey marks, trees already located and topography. These locations have been noted on the current survey plan, with locations approximate and not shown for construction purposes at this stage.

Species have been identified from foliage, fruit, and trunk characteristics available at the time of survey.

Girth has been measured on each tree.

Height & Canopy has been estimated onsite.

Estimated age of the trees is approximate, and based on the known longevity of each species, their current condition, knowledge of fire regimes and previous tree surveys of the site publicly available.

Root zones of large trees vary greatly, with some having roots up to 2km away from their trunk. In providing an estimate of root zone, we have assumed an estimate of Structural Root Zone is required. This figure varies greatly, not only considering the distance from the trunk but also the percentage of Total Root System proposed to be damaged on any individual specimen. The Structural Root Zone is a mathematical formula determined by the girth of the tree and is only an indication of an area of roots to be protected to provide stability of the tree if excavation is required. The species & post excavation care of a tree/palm also influences its ability to cope with root disturbance on an individual basis.

Removal status has been determined on individual specimens being in a proposed construction zone (house, driveway or excavation/retaining) or being part of a climax community. The Wattle Trees (Acacia sp.) on the site, generally belong to a community of plants that are short lived (20 years) & regenerated by fire. Fire hasn't been present on the western side of Flagstaff Hill for over 40 years. Most of the Wattles are in senescence showing evidence of reduced canopies, rot, and collapse, rendering them dangerous to build around. Additional evidence of regenerating native species clearly indicates a shift to closed rainforest species with juvenile Solitaire Palms (*Ptycosperma elegans*), Flame Trees (*Brachychiton acerifolius*), Native Olive (*Chionanthus ramiflorus*), Umbrella

Tree (*Schefflera actinophylla*), Lime berry (*Micromelum minutum*) amongst others, occurring below the existing canopy.

Weed species

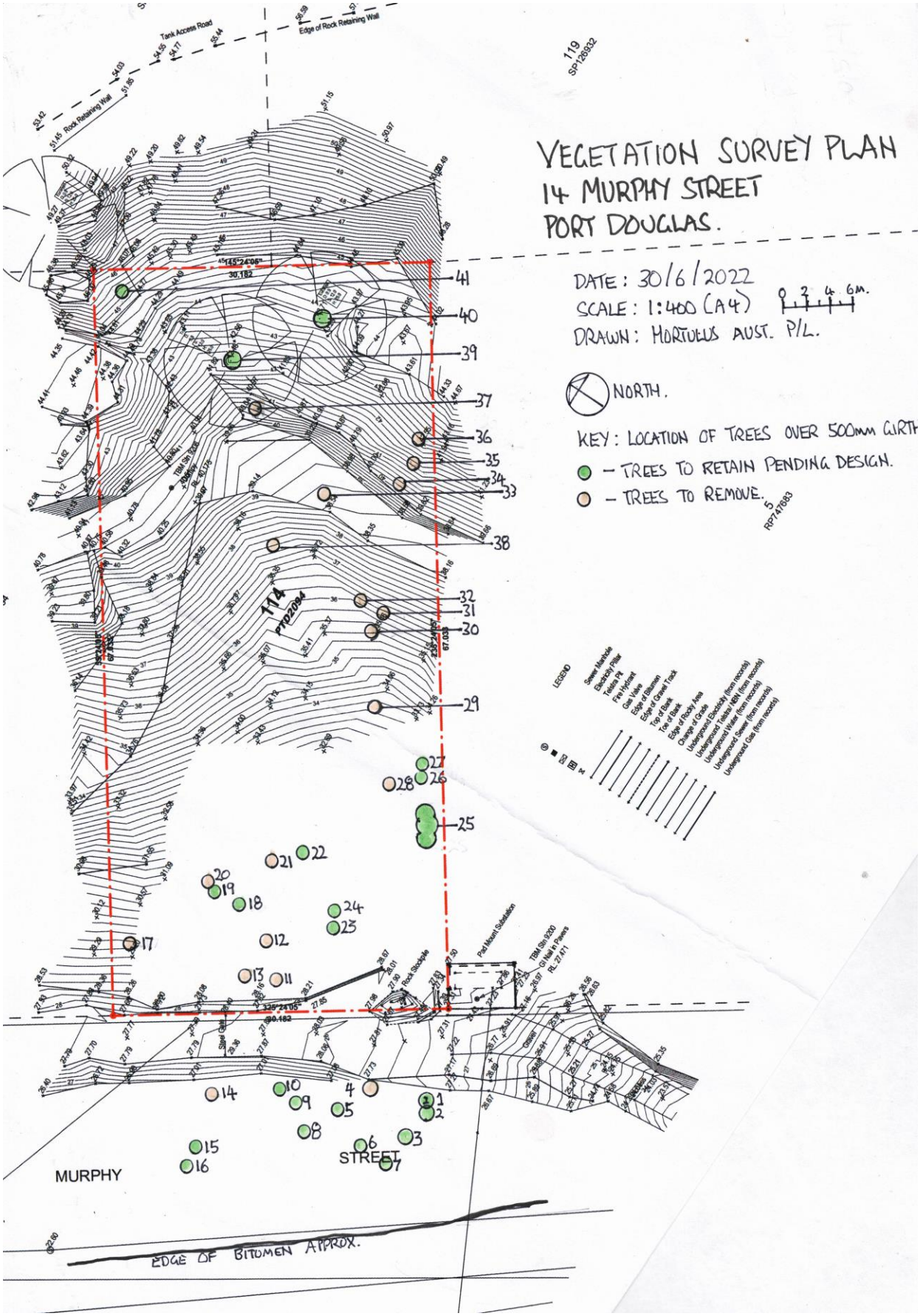
The site is dominated by shrubby weeds with most native tree species to the southwest boundaries of the site. A large percentage of the vine growth over trees is a deciduous Yam species (Dioscorea sp.) that maybe a cultivated form, based on other tropical food plants present on site. Many of the species present seem to be largely garden escapees, which should be managed through the construction process. The development of a predominantly native garden as per proposed landscape plan by Hortulus (14 March 2022), in accordance with requirements for the Special Area Flagstaff Hill Zoning, should produce better visual & habitat outcomes.

The Murphy Street road easement has predominantly native species however the access driveway has an infestation of Tree Lucerne (*Leucaena leucocephala*) and Singapore Daisy (*Sphagneticola trilobata*) with the latter being presents across the entire site. Notable weed species are listed below.

BOTANICAL NAME	**COMMON NAME**
Allamanda cathartica	Climbing Allamanda
Elaeis guineensis	African oil Palm
Heliconia stricta	Bird of Paradise
Leucaena leucocephala	Tree Lucerne
Manihot esculenta	Cassava
Megathyrsus maximus	Guinea Grass
Musa acuminata var.	Sugar Banana
Ravenala madagascariensis	Travellers palm
Sphagneticola trilobata	Singapore Daisy
Stachytarpheta cayennensis	Blue Snake weed

Figure 4 view from Tree 20 looking up hill to Trees 39 & 40 at the top of the site. Note general weed growth.

Vegetation Survey Plan



Tree Numbers refer to the accompanying Tree Survey Plan (Above).

TREE 1. *Euroschinus falcata* Pink Poplar
Height; 10m Girth; 860mm Age; 20 Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 2.9m Removal Status; Remain

TREE 2. *Euroschinus falcata* Pink Poplar
Height; 10m Girth; 760mm Age; 20 Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 2.8m Removal Status; Remain

TREE 3. *Euroschinus falcata* Pink Poplar
Height; 11m Girth; 875mm Age; 25 Canopy Diameter; 7m
Structural Root Zone (radius from trunk); 2.9m Removal Status; Remain

TREE 4. *Euroschinus falcata* Pink Poplar
Height; 11m Girth; 850mm Age; 25 Canopy Diameter; 7m
Structural Root Zone (radius from trunk); 2.9m Removal Status; Remove for entry road

TREE 5. *Chionanthus ramiflorus* Native Olive
Height; 6m Girth; 560mm Age; 15 Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 2.5m Removal Status; Remain

TREE 6. *Acacia crassicarpa* Lancewood
Height; 7m Girth; 670mm Age; 30 Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 2.7m Removal Status; Remain

TREE 7. *Acacia crassicarpa* Lancewood
Height; 8m Girth; 780mm Age; 30 Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 2.8m Removal Status; Remain

TREE 8. *Euroschinus falcata* Pink Poplar
Height; 9m Girth; 1090mm Age; 30 Canopy Diameter; 8m
Structural Root Zone (radius from trunk); 3.3m Removal Status; Remain

TREE 9. *Buchanania arborescens* Satinwood
Height; 11m Girth; 820mm Age; 40 Canopy Diameter; 6m
Structural Root Zone (radius from trunk); 2.9m Removal Status; Remain

TREE 10. *Terminalia sericocarpa* Damson
Height; 14m Girth; 910mm Age; 20 Canopy Diameter; 8m
Structural Root Zone (radius from trunk); 3m Removal Status; Remain

TREE 11. *Acacia crassicarpa* Lancewood
Height; 10m Girth; 1140mm Age; 40+ Canopy Diameter; 6m
Structural Root Zone (radius from trunk); 3.4m Removal Status; Remove due to age

TREE 12. *Acacia crassicarpa* Lancewood
Height; 4m Girth; 1200mm Age; 40+ Canopy Diameter; 0m
Structural Root Zone (radius from trunk); 0m Removal Status; Remove Dead

TREE 13. *Acacia crassicarpa* Lancewood
Height; 6m Girth; 750mm Age; 30+ Canopy Diameter; 4m
Structural Root Zone (radius from trunk); 2.9m Removal Status; Remove due to age

TREE 14. *Mangifera indica* Mango Tree
Height; 9m Girth; 600mm Age; 20 Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 2.7m Removal Status; Remove not native

TREE 15. *Buchanania arborescens* Satinwood
Height; 11m Girth; 740mm Age; 30+ Canopy Diameter; 6m
Structural Root Zone (radius from trunk); 2.9m Removal Status; Remain

TREE 16. *Euroschinus falcata* Pink Poplar
Height; 10m Girth; 1460mm Age; 40+ Canopy Diameter; m
Structural Root Zone (radius from trunk); 3.9m Removal Status; Remain

TREE 17. *Acacia crassicarpa* Lancewood
Height; 11m Girth; 1175mm Age;40+ Canopy Diameter; 6m
Structural Root Zone (radius from trunk); 3.5m Removal Status; Remove due to age

TREE 18. *Terminalia muelleri* Mueller's Damson
Height; 7m Girth; 600mm Age; 15 Canopy Diameter; 4m
Structural Root Zone (radius from trunk); 2.5m Removal Status; Retain pending drive design

TREE 19. *Chionanthus ramiflorus* Native Olive
Height; 7m Girth; 540mm Age; 10 Canopy Diameter; 6m
Structural Root Zone (radius from trunk); 2.5m Removal Status; Retain pending drive design

TREE 20. *Acacia crassicarpa* Lancewood
Height; 6m Girth; 600mm Age;30+ Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 2.7m Removal Status; Remove due to age

TREE 21. *Acacia crassicarpa* Lancewood
Height; 6m Girth; 690mm Age;30+ Canopy Diameter; 4m covered in vine
Structural Root Zone (radius from trunk); 2.9m Removal Status; Remove due to age

TREE 22. *Terminalia muelleri* Mueller's Damson
Height; 7m Girth; 700mm Age;15 Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 3m Removal Status; Retain pending drive design

TREE 23. *Chionanthus ramiflorus* Native Olive
Height; 7m Girth; 790mm Age; 10 Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 3m Removal Status; Retain pending drive design

TREE 24. *Chionanthus ramiflorus* Native Olive
Height; 6m Girth; 580mm Age; 10 Canopy Diameter; 4m
Structural Root Zone (radius from trunk); 2.6m Removal Status; Retain pending drive design

TREE 25. *Ficus sp.*(possibly *ficus rubignosa*) Fig Tree This tree has 4 trunks
Height; 14m Girth; 4000mm Age;25+ Canopy Diameter; 12m
Structural Root Zone (radius from trunk); 4m (due to vigour) Removal Status; Retain

TREE 26. *Euroschinus falcata* Pink Poplar
Height; 13m Girth; 1300mm Age; 30+ Canopy Diameter; 8m
Structural Root Zone (radius from trunk); 3.5m Removal Status; Retain

TREE 27. *Euroschinus falcata* Pink Poplar
Height; 12m Girth; 880mm Age;20+ Canopy Diameter; 6m
Structural Root Zone (radius from trunk); 3m Removal Status; Retain

TREE 28. DEAD TREE
Height; 4m Girth; 700mm Age; NA Canopy Diameter; 0m
Structural Root Zone (radius from trunk); NA Removal Status; Remove dangerous

TREE 29. *Acacia crassicarpa* Lancewood
Height; 7m Girth; 720mm Age; 30+ Canopy Diameter; 4m
Structural Root Zone (radius from trunk); 2.9m Removal Status; Remove due to age

TREE 30. DEAD TREE *Acacia crassicarpa* Lancewood
Height; 6m Girth; 760mm Age; NA Canopy Diameter; 0m
Structural Root Zone (radius from trunk); NA Removal Status; Remove dangerous

TREE 31. *Acacia crassicarpa* Lancewood
Height; 7m Girth; 800mm Age; 30+ Canopy Diameter; 4m smothered in vine
Structural Root Zone (radius from trunk); 3.1m Removal Status; Remove due to age

TREE 32. *Acacia crassicarpa* Lancewood
Height; 8m Girth; 720mm Age; 30+ Canopy Diameter; 4m
Structural Root Zone (radius from trunk); 2.9m Removal Status; Remove due to age

TREE 33. *Acacia crassicarpa* Lancewood
Height; 7m Girth; 550mm Age; 25+ Canopy Diameter; 4m
Structural Root Zone (radius from trunk); 2.6m Removal Status; Remove due to age

TREE 34. *Acacia crassicarpa* Lancewood
Height; 8m Girth; 720mm Age; 30+ Canopy Diameter; 4m
Structural Root Zone (radius from trunk); 2.9m Removal Status; Remove due to age

TREE 35. *Acacia crassicarpa* Lancewood
Height; 8m Girth; 700mm Age; 30+ Canopy Diameter; 4m
Structural Root Zone (radius from trunk); 2.8m Removal Status; Remove due to age

TREE 36. *Acacia crassicarpa* Lancewood
Height; 8m Girth; 980mm Age; 30+ Canopy Diameter; 4m
Structural Root Zone (radius from trunk); 3.1m Removal Status; Remove due to age

TREE 37. *Polyscias elegans* Celerywood
Height; 6m Girth; 580mm Age; 10+ Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 2.7m Removal Status; Remove construct zone

TREE 38. *Polyscias elegans* Celerywood
Height; 8m Girth; 1200mm Age; 15+ Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 3.5m Removal Status; Remove construct zone

TREE 39. *Alstonia scholaris* Milky Pine
Height; 20m Girth; 2800mm Age;40+ Canopy Diameter; 10m
Structural Root Zone (radius from trunk); 5m Removal Status; Retain

TREE 40. *Eucalyptus tetericornis* Queensland Blue Gum
Height; 18m Girth; 2400mm Age; 40+ Canopy Diameter; 8m
Structural Root Zone (radius from trunk); 4.8m Removal Status; Retain

TREE 41. *Choinanthus ramiflorus* Native Olive
Height; 8m Girth; 750mm Age; 10 Canopy Diameter; 5m
Structural Root Zone (radius from trunk); 2.9m Removal Status; Retain

VISUAL AMENITY COMMENTS

The comments on visual Amenity of the site and its vegetation refer to.
1. The existing Vegetation Survey and proposed tree removal(within this report),
2. The proposed ground Planting Plan by Hortulus Australia P/L dated 20 July 2022 &,
3. The vegetation Schematic Elevations of existing trees to be retained and proposed planting at establishment, five years growth & 10 years growth.

Existing Trees

There are three significant trees on this site. Tree 25. Ficus sp., Tree 39. Milky Pine and Tree 40. the Queensland Blue Gum. They are all trees of good health, vigour and are young trees in relation to their species know longevity. Trees 39 & 40 have always intended to be retained, with the proposed building designed suitably. Tree 25 will require the driveway to be slightly adjusted in the Building Design process but can be easily retained as it sits close to the boundary and figs are known to cope well with root disturbance. This tree will become a major feature on the way up the driveway to the house.

Tree retention onsite will be based on the percentage of root disturbance being balanced with the Structural Root Zone, with protection areas to be excluded from all building site activity, debris, and waste. Supervision and required tree shaping will be undertaken by a qualified consulting arborist.

All Wattle Trees (Acacia sp.) are advised to be removed and replaced with native trees of better longevity, and better screening capabilities to provide neighbours privacy.

Many of the remainder of the trees are in suitable positions to remain with only a few requiring removals pending the location of the driveway when detail design occurs. The trees that remain will form part of the existing screening and ecosystem of Flagstaff Hill and will be enhanced through irrigation, horticultural practices & added native planting. Being predominantly to the Murphy Street portion of the site, these trees will provide some initial screening to the building site on the upper area.

Proposed Landscape Plan

The proposed Landscape plan provides for a predominantly dense native planting scheme (total site plants 1683), with 76.5% (1289 plants) of plants on the ground level to be native with 23.5% exotics (394 plants) generally located directly around the building. There are 176 existing & new native trees and palms on the plan that have a minimum mature height of at least six meters.

The landscape is intended to emulate the flow of water across the site into bioswales to allow the recharging of the water table and the excess to be captured to provide some irrigation over the Dry Season. This design allows for several microclimates to be created, utilising rainforest plants like Tree ferns, Daintree Gardenia, and Lilly Pilly. The top of the site allows for slightly dryer plantings with more honey flora for the creation of habitat, including the fast-growing Ulysses Butterfly Tree, Dwarf Golden Penda, and Dutchman's Pipe Vine for the Cairns Birdwing Butterfly.

Plant sizes have been recommended knowing that plants in smaller pot sizes, recover more quickly from transplanting and will initially outgrow larger plant stock in a shorter period, producing stronger and more stable plants.

Side Boundary Screening

The proposed building footprint leaves 4000mm on each side of the building to the property side boundaries. In this area it is intended to provide a 1000mm to 1500mm wide access pathway and steps including a naturalistic stormwater catchment swale. This will leave a 2500mm wide planting area, to provide screening to the neighbouring properties. It is assumed that adjoining properties would provide a similar area of planting in accordance with the requirements for special area Flagstaff Hill in the Douglas Shire Town plan. In total an area of screen would be achieved of 5000mm wide, adequate for screening between windows & balconies.

Planting density in this zone, has been specified to allow the selected species to provide dense foliage from the top of the plant all the way down. Heavily planted screening areas often end up shading out the lower foliage of the trees & palms allowing views in the understory. The *Syzygium australe* "Straight & narrow", *Ptycosperma macartherii*, and *Callistemon* "Slim", specifically have narrow forms with dense foliage provided they are not shaded out. Additional screen planting can be added as an understory as shade allows and as it is required.

Murphy Street Visibility

The lower half of the site provides for excellent screening of the built from Murphy Street, as the building is over 30m from the front of the site, with some existing trees remaining and additional screen planting provided.

From the southern edge of bitumen on the Murphy Street pavement, there will be a majority of existing trees left in the road easement and lower portion of the site with the additional planting as provided on the Planting Plan to screen any views to the proposed residence above.

As the driveway enters from the Southwest corner of the site there will be no visual access to the building from Murphy Street.

THE AUTHOR

John Sullivan Bach.App.Sc.Hort. has been specialising in tropical landscape in northern Australia since 1992 acting as a consultant in vegetation management in both natural and urban environments. He has designed & constructed many landscapes with several featuring in books & publications both in Australia & overseas. Sullivan has been a Director at the Mossman Botanic Gardens for 8 years.

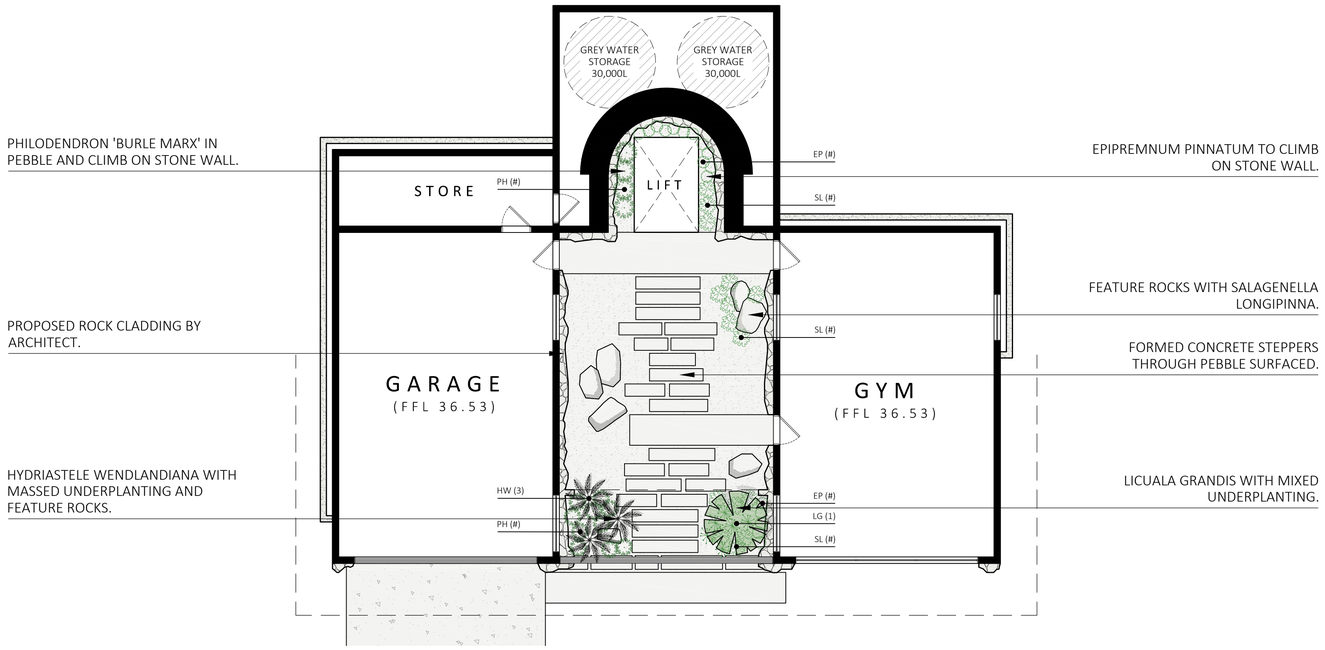
MIXED NATIVE PLANTING.
NATIVE SCREENING TREES.
FEATURE ROCKS.
CASCADE IN BIOSWALE.
NATURAL ROCK RETAINING WALL TO ENGINEERS DETAIL.
NATIVE SCREENING TREES AND PALMS.
NATURAL ROCK RETAINING WALL TO ENGINEERS DETAIL.
PEBBLE AREA GRADED TO DRIVEWAY PLANTED WITH SHRUBS.
FEATURE ROCKS WITH MASSED PLANTING.
NATURAL ROCK STAIRS AND FEATURE ROCKS TO FORM PART OF NATURAL BIOSWALE TO COLLECT STORMWATER.
ROOF CASCADE COLLECTION AREA WITH PEBBLE OVER GEOFABRIC AND STORM WATER PIT.
NATURAL ROCK RETAINING WALL TO ENGINEERS DETAIL.
GEOFABRIC BAG WALLS WITH PLANTING REFER ENGINEER.
NATURAL ROCK STEPS.
NATIVE TREES.
COMPACTED PEBBLE PATH.

NATURAL ROCK RETAINING WALL TO ENGINEERS DETAIL.
NATIVE SCREENING TREES.
BIOSWALE RETENTION AREA.
CONCRETE STEPS WITH NATURAL ROCK RETAINING WALL.
BIOSWALE RETENTION AREA.
COURTYARD PLANTED WITH TREE FERN, PALMS AND GROUNDCOVER.
VINES TO GROW UP EXTERNAL STAIRCASE ON WIRES.
NATIVE SCREENING PALMS WITH MIXED NATIVE SHRUBS AND FERNS.
EXISTING TREE.
NATIVE TREES.
FEATURE ROCKS WITH MIXED PLANTING.
MIXED PLANTING.
NATURAL ROCK STAIRS AND FEATURE ROCKS TO FORM PART OF NATURAL BIOSWALE TO COLLECT STORMWATER.
PROPOSED CASCADE IN BIOSWALE.
EXISTING EUCALYPTUS TETERICORNIS AND ALSTONIA SCHOLARIS TO BE RETAINED.

0 1 2 4 6 10 15 20m

SCALE 1:100

ARGYROU RESIDENCE	SCALE: 1:100@A1	HORTULUS AUSTRALIA PTY LTD	
SITE ADDRESS: 14 Murphy Street | Port Douglas	DATE: 22 July 2022	338 Port Douglas Road| Port Douglas QLD Australia 4877 T: 0412944793 W: www.hortulus.com.au E: design@hortulus.com.au	HORTULUS LANDSCAPE | DESIGN | CONSTRUCT | MAINTAIN P4099 1861 | HORTULUS.COM.AU
DRAWING TITLE LANDSCAPE CONCEPT PLAN	DRAWING NO. 1 | REV. A		



1 LOWER GROUND FLOOR PLAN
1:100

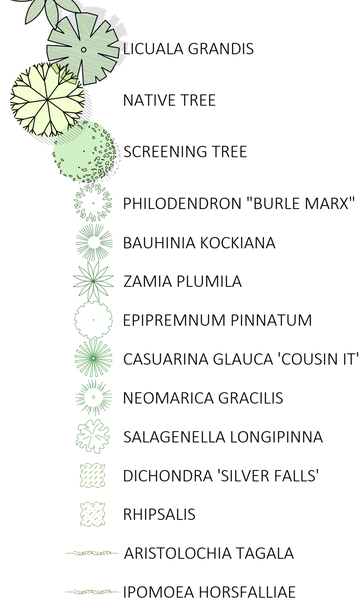
2 GROUND FLOOR PLAN
1:100

PLANT SCHEDULE

Code	Botanical Name	Common name	Qty.	Pot Size	Type	H x W
TREES & PALMS						
HW	Hydriastele wendlandiana	Elegant swamp palm	3	400mm	P	8x1.5
LG	Licuala grandis	Vanuatu fan palm	1	300mm	P	8x4
CA	Chamaedorea atrovirens	Cascade palm	4	200mm	P	1.5x1.5
SHRUBS, GRASSES, GROUNDCOVERS & CLIMBERS						
EP	Epipremnum pinnatum	Native monstera		200mm	S	5x2
PH	Philodendron 'Burle Marx'	Burle marx philodendron		140mm	S	1x0.5
SL	Salagenella longipinna	Native club fern		140mm	GC	0.1x0.2
BK	Bauhinia kockiana	Kock's bauhinia	10	200mm	C	3x3
CG	Casuarina glauca 'Cousin It'	Cousin it plant		140mm	S	0.3x1
DI	Dichondra 'Silver Falls'	Silver falls		140mm	GC	0.1x1
NG	Neomarica gracilis	Brazilian walking iris		140mm	S	0.3x0.3
RH	Rhipsalis	Mistletoe cacti				
ZP	Zamia plumila	Coontie	6	200mm	S	1x1
AT	Aristolochia tagala	Dutchman's pipe vine		140mm	C	5x5
IH	Ipomoea horsfalliae	Cardinal creeper		140mm	C	5x5

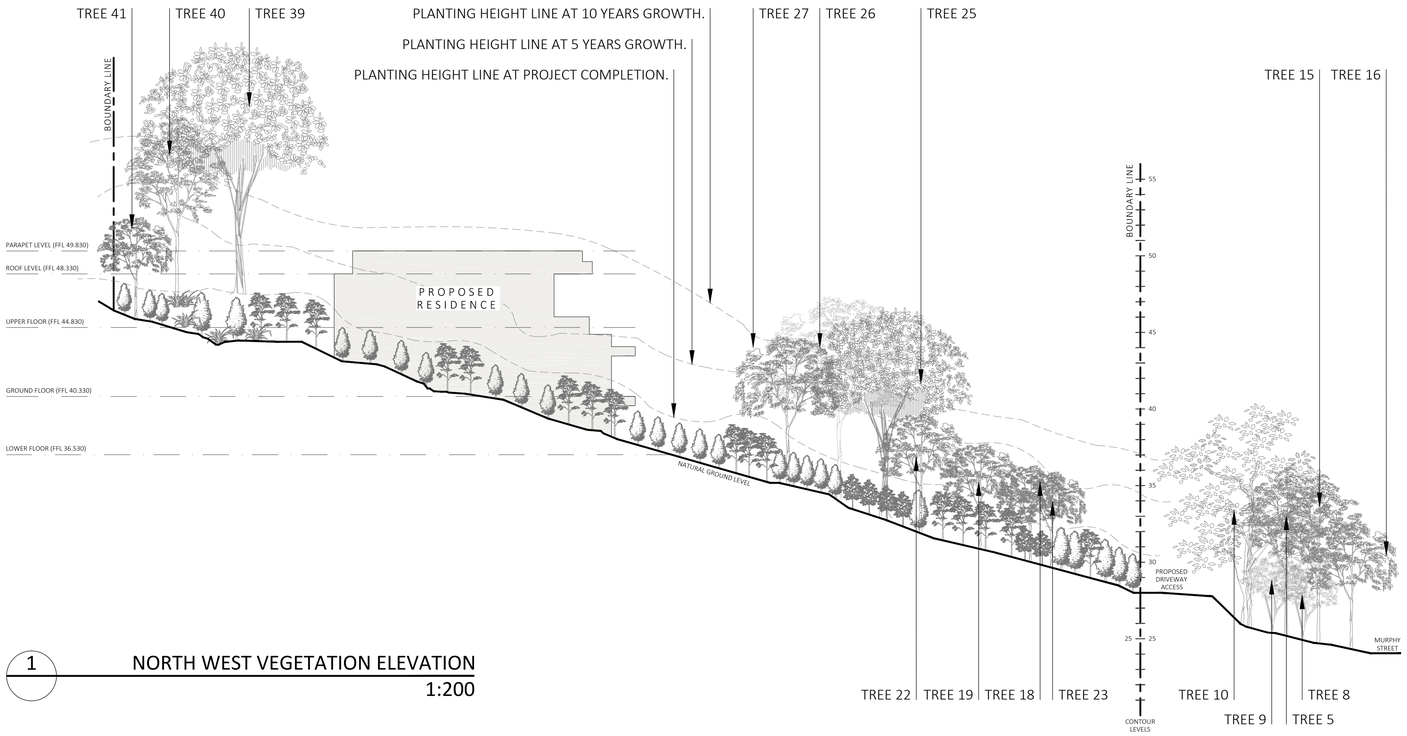
C = Climber **P** = Palm **GC** = Groundcover **S** = Shrub

KEY TO SYMBOLS

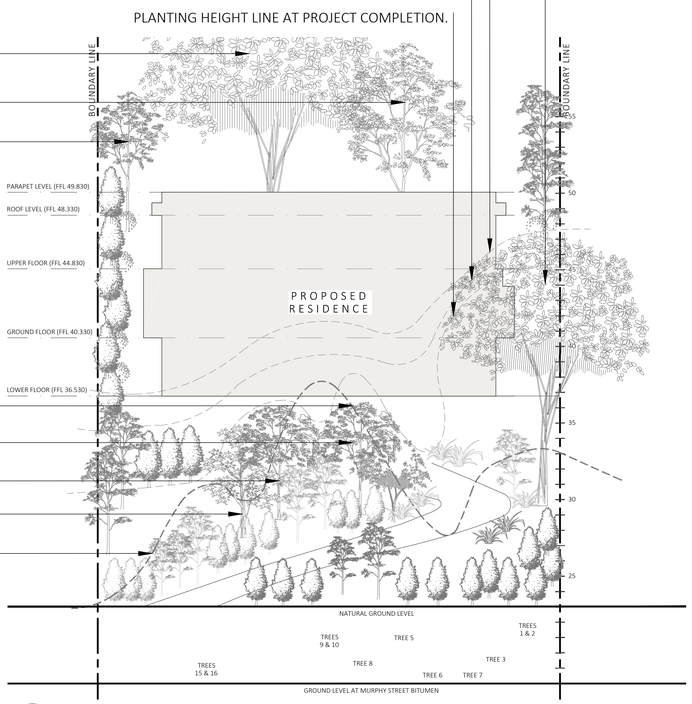


0 1 2 4 6 10 15 20m
SCALE 1:100

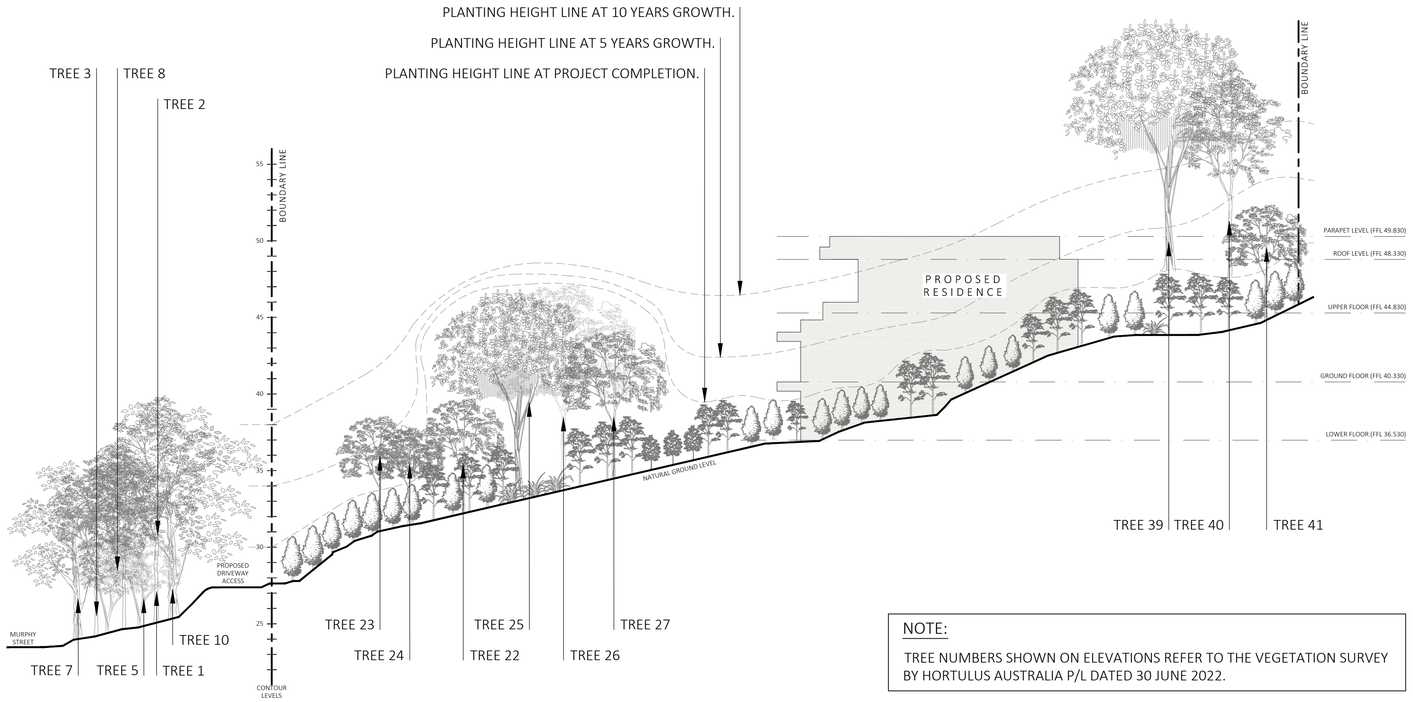
ARGYROU RESIDENCE SITE ADDRESS: 14 Murphy Street | Port Douglas DRAWING TITLE LANDSCAPE CONCEPT PLAN	SCALE: 1:100@A1 DATE: 14 March 2022 DRAWING NO. 2 REV. -	HORTULUS AUSTRALIA PTY LTD 338 Port Douglas Road| Port Douglas QLD Australia 4877 T: 0412944793 W: www.hortulus.com.au E: design@hortulus.com.au	HORTULUS LANDSCAPE | DESIGN | CONSTRUCT | MAINTAIN P 4099 1861 | HORTULUS.COM.AU



1 NORTH WEST VEGETATION ELEVATION
1:200



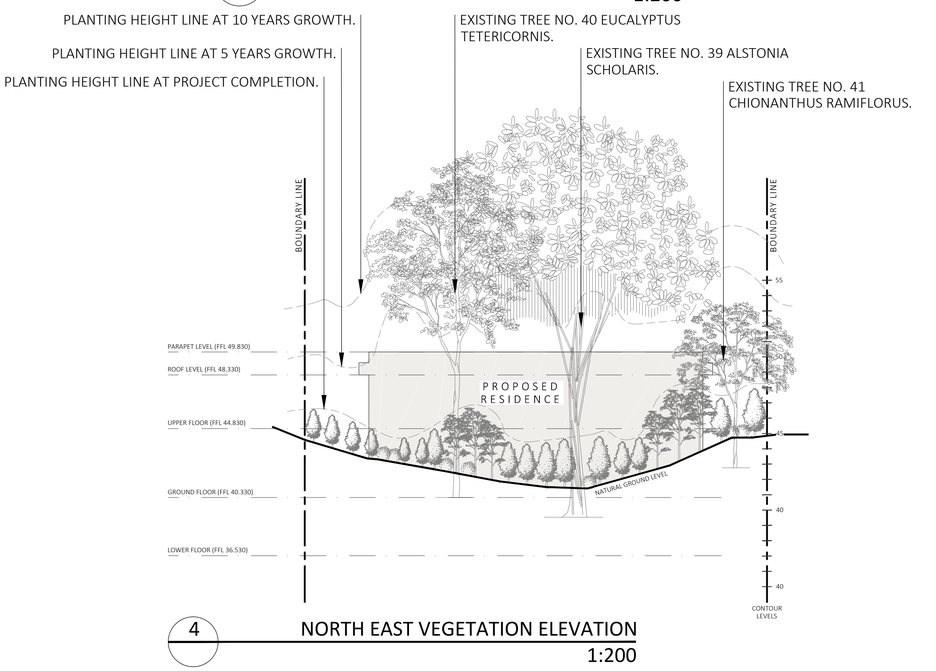
3 SOUTH WEST VEGETATION ELEVATION
1:200



2 SOUTH EAST VEGETATION ELEVATION
1:200

NOTE:

TREE NUMBERS SHOWN ON ELEVATIONS REFER TO THE VEGETATION SURVEY BY HORTULUS AUSTRALIA P/L DATED 30 JUNE 2022.



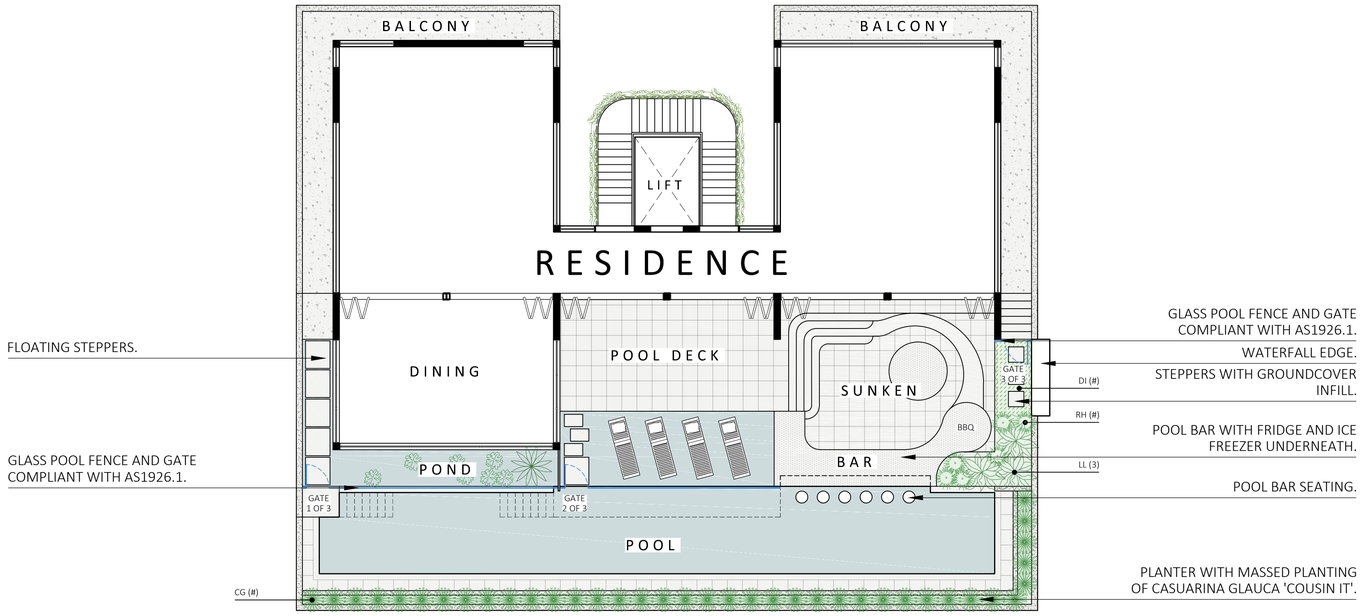
4 NORTH EAST VEGETATION ELEVATION
1:200

0 1 2 4 6 10 15 20m

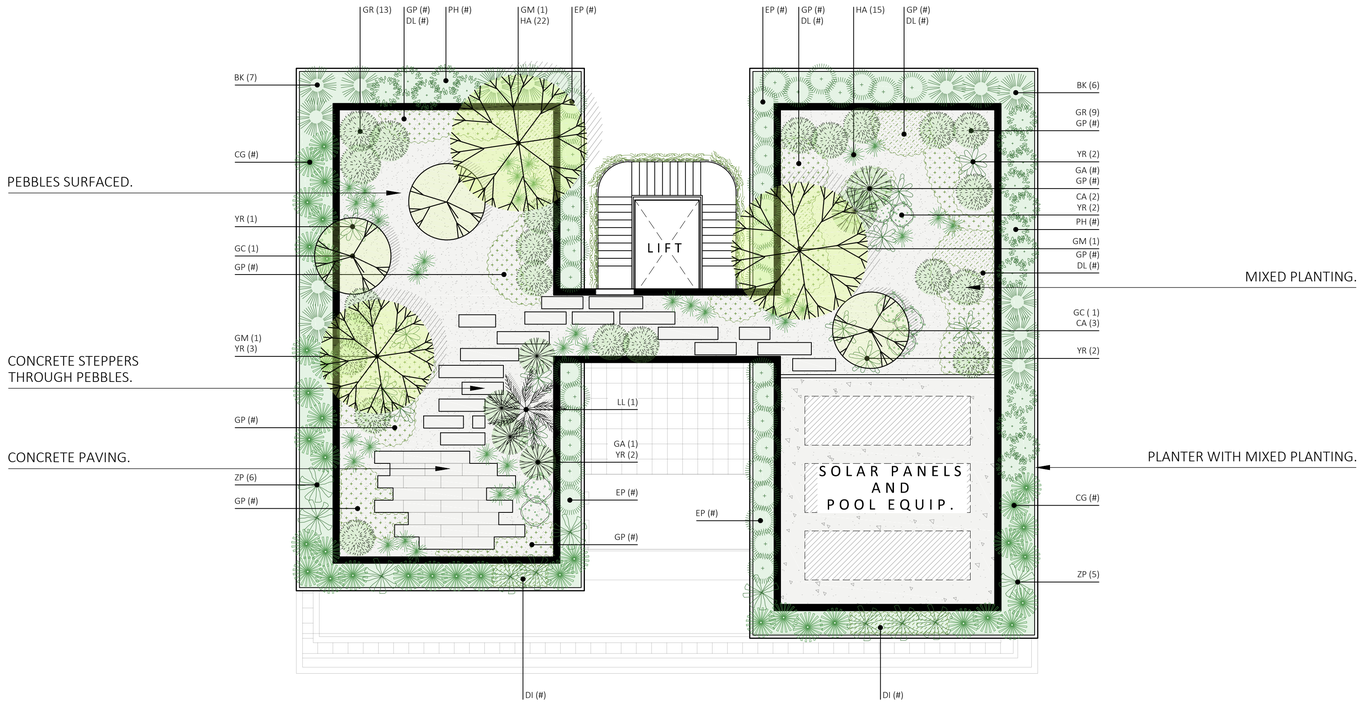
SCALE 1:100

ARGYROU RESIDENCE	SCALE: 1:200@A1	HORTULUS AUSTRALIA PTY LTD	
SITE ADDRESS: 14 Murphy Street | Port Douglas	DATE: 22 July 2022	338 Port Douglas Road| Port Douglas QLD Australia 4877	
DRAWING TITLE	DRAWING NO. 6 / REV. A	T: 0412944793	
SCHEMATIC ELEVATION		W: www.hortulus.com.au	
		E: design@hortulus.com.au	

HORTULUS
LANDSCAPE | DESIGN | CONSTRUCT | MAINTAIN
P 4099 1861 | HORTULUS.COM.AU



1 UPPER LEVEL PLAN
1:100



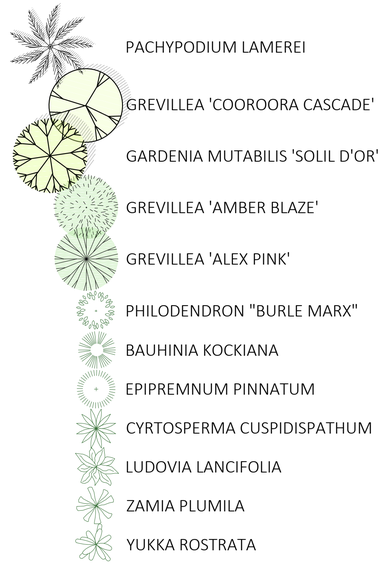
2 ROOF LEVEL PLAN
1:100

PLANT SCHEDULE

Code	Botanical Name	Common name	Qty.	Pot Size	Type	H x W
TREES & PALMS						
PL	Pachypodium lamerei	Madagascar palm	1	400mm	T	4x2
LG	Licuala grandis	Vanuatu fan palm	1	300mm	P	8x4
SHRUBS, GRASSES, GROUNDCOVERS & CLIMBERS						
LL	Ludovia lancifolia	Native monstera	3	200mm	S	1x1
NY	Nymphaea sp.	Water lily	7	200mm		0x2
CC	Cyrtosperma cuspidispathum	Giant aroid	1	300mm	S	4x2
AN	Antherium sp. Giant	Giant antherium		200mm	S	1x1
CG	Casuarina glauca 'Cousin It'	Cousin it plant		140mm	S	0.3x1
DI	Dichondra 'Silver Falls'	Silver falls		140mm	GC	0.1x1
SC	Scindapsus pictus	Satin pothos		140mm	C	4x2
RH	Rhipsalis	Mistletoe cacti				
SP	Spathophyllum 'Pablo'	Peace Lily		140mm	C	4x2
ZP	Zamia plumila	Coontie	11	200mm	S	1x1
BK	Bauhinia kockiana	Kock's bauhinia	13	200mm	C	3x3
YR	Yukka rostrata	Blue beaked yukka	12	300mm	S	2x1
PH	Philodendron 'Burle Marx'	Burle marx philodendron		140mm	S	1x0.5
GM	Gardenia mutabilis 'Solil D'or'	Golden sun gardenia	3	200mm	S	3x2
GC	Grevillea 'Cooroora Cascade'		3	140mm	GC	0.5x3
GR	Grevillea 'Amber Blaze'		22	140mm	GC	0.5x3
GA	Grevillea 'Alex Pink'		1	140mm	GC	0.5x3
CA	Casuarina glauca 'Green Wave'		7	100mm	S	1.5x1.5
DL	Dianella 'Little Jess'	Dwarf flax lily		140mm	S	0.3x0.3
HA	Haworthia dwarf aloe					
GP	Gardenia psidioides	Gardenia 'Glennie River'				
EP	Epipremnum pinnatum	Native monstera		200mm	S	5x2

C = Climber **P** = Palm **T** = Tree **GC** = Groundcover **S** = Shrub

KEY TO SYMBOLS



0 1 2 4 6 10 15 20m

SCALE 1:100

ARGYROU RESIDENCE

SITE ADDRESS: 14 Murphy Street | Port Douglas

DRAWING TITLE

LANDSCAPE CONCEPT PLAN

SCALE: 1:100@A1

DATE: 14 March 2022

DRAWING NO. 3

REV. -

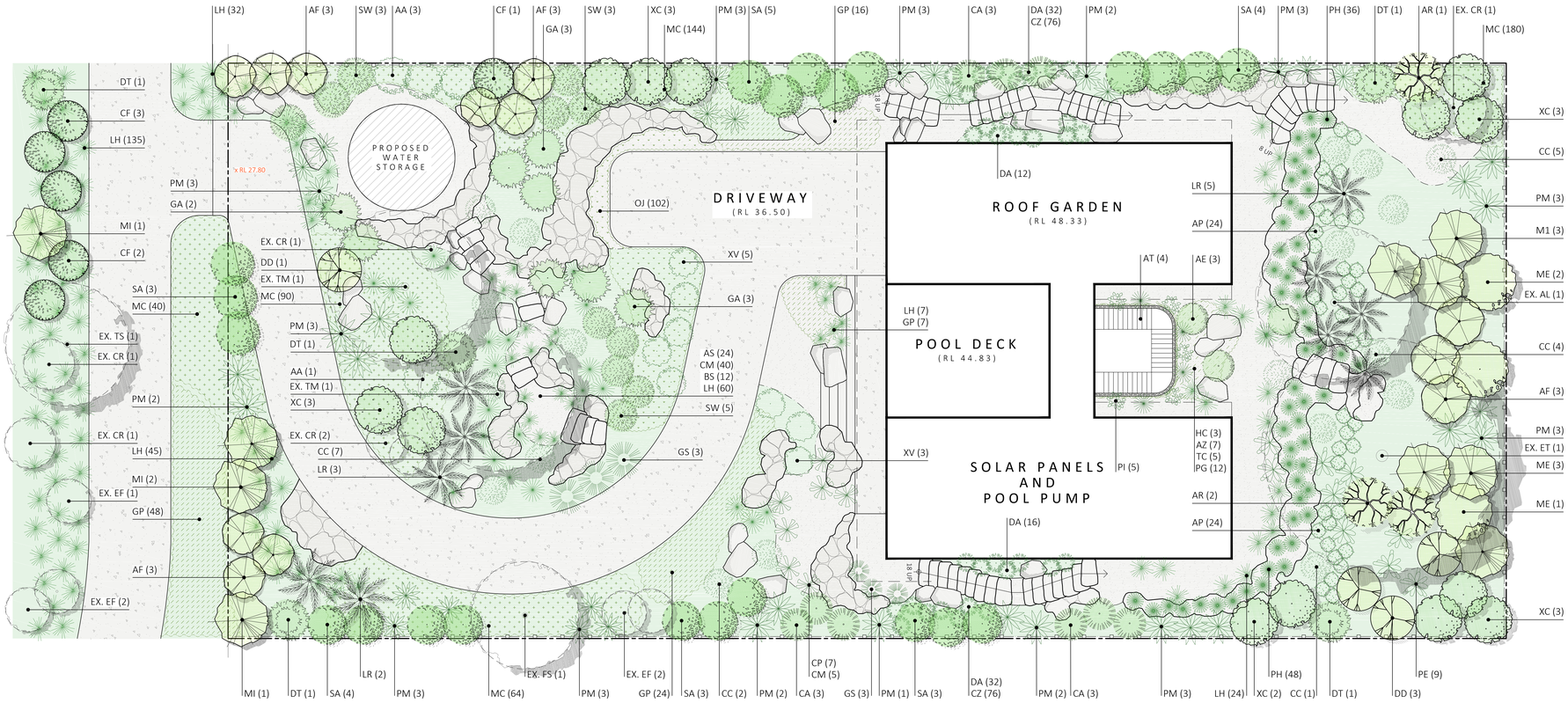
HORTULUS AUSTRALIA PTY LTD
338 Port Douglas Road| Port Douglas QLD Australia 4877
T: 0412944793
W: www.hortulus.com.au
E: design@hortulus.com.au

HORTULUS
LANDSCAPE | DESIGN | CONSTRUCT | MAINTAIN
P 4099 1861 | HORTULUS.COM.AU

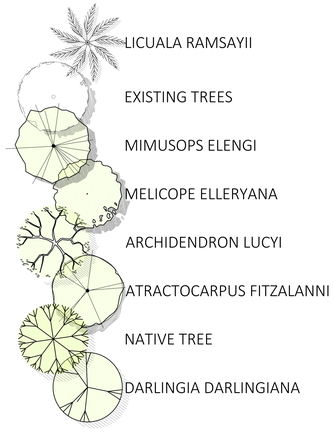
PLANT SCHEDULE

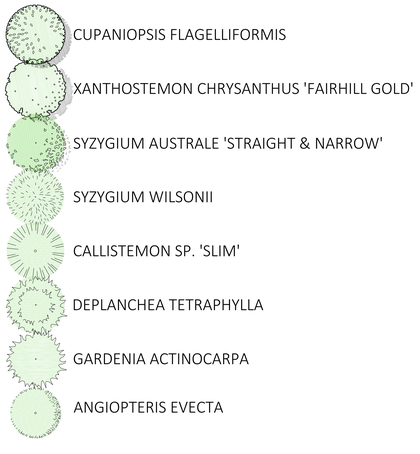
Code	Botanical Name	Common name	Qty.	Pot Size	Type	H x W
TREES & PALMS						
AR	Archidendron lucyi	Scarlet bean tree	3	300mm	T	6x4
AF	Atractocarpus fitzalanni	Brown gardenia	12	300mm	T	8x4
CF	Cupaniopsis flagelliformis	Brown tuckeroo	6	200mm	T	6x6
DD	Darlingia darlingiana	Brown silky oak	4	300mm	T	10x6
DT	Deplanchea tetraphylla	Golden bouquet tree	5	300mm	T	8x6
GA	Gardenia actinocarpa	Daintree gardenia	8	200mm	T	5x3
LR	Licuala ramsayii	Daintree fan palm	10	400mm	P	8x4
ME	Melicope elleryana	Ulysses tree	3	200mm	T	10x6
MI	Mimusops elengi	Mimusops tree	10	300mm	T	6x5
PE	Ptycosperma elegans	Solitare palm	9	400mm	P	8x3
XC	Xanthostemon chrysanthus 'Fairhill Gold'	Dwarf golden penda	14	400mm	T	6x5
AA	Arenga Australasica	Native sugar palm	4	300mm	P	8x4
CA	Callistemon sp. 'Slim'	Bottlebrush	9	300mm	S	4x2
GS	Gardenia scabrella	Cape york gardenia	6	200mm	S	2x1
PM	Ptycosperma macartheri	Macarther palm	37	400mm	P	8x3
SA	Syzygium australe 'Straight & Narrow'	Straight & Narrow lilly pilly	22	300mm	T	4x2
SW	Syzygium wilsonii	Powder puff lilly pilly	11	200mm	T	8x6
SHRUBS, GRASSES, GROUNDCOVERS & CLIMBERS						
AE	Angiopteris evecta	King fern	3	300mm	F	4x4
CP	Crinum pedunculatum	Native swamp lily	7	140mm	S	1x1
CC	Cyathea cooperi	Sun tree fern	19	300mm	F	6x4
DA	Dianella atraxis	Blue flax lily	84	140mm	S	0.3x0.3
GP	Gardenia psidiodes 'Glennie River'	Glennie river gardenia	95	140mm	GC	0.5x1
LH	Lomandra hystrix	Mat rush	243	100mm	S	1x1
MC	Molineria capitulate	Weevil lily	518	100mm	S	1x1
XV	Xanthostemon verticillatus	Bloomfeild penda	8	140mm	S	2x1
AP	Alpinia purpurata	Red shell ginger	48	200mm	G	2x2
AZ	Alpinia zerumbet variegata	Variegated shell ginger	7	200mm	G	1.2x1.2
CZ	Calathea zebrina	Zebra plant	124	140mm	G	0.5x0.5
HC	Heliconia chartacea 'Sexy Pink'	Sexy pink crab's claw	3	200mm	G	3x2
OJ	Ophiopogon japonicus 'Nana'	Dwarf mondo grass	102	140mm	GC	0.1x0.2
PH	Philodendron 'Burle Marx'	Burle marx philodendron	84	140mm	S	1x0.5
PG	Philodendron gloriosum	Quilted philodendron	12	200mm	S	1x2
TC	Tacca chantrieri	Black bat plant	5	200mm	S	0.7x0.7
AT	Aristolochia tagala	Dutchman's pipe vine	4	140mm	C	5x5
IP	Ipomoea horsfalliae	Cardinal creeper	5	140mm	C	5x5
EXISTING TREES						
AL	Alstonia scholaris	Milky pine tree	1	Existing	T	25x16
BA	Buchanania arborescens	Satinwood	1	Existing	T	12x10
CR	Chionanthus ramiflorus	Native olive	4	Existing	T	8x6
EF	Euroschinus falcata	Pink poplar	4	Existing	T	8x6
ET	Eucalyptus tetericornis	Queensland blue gum	1	Existing	T	20x10
FS	Ficus species	Fig tree (4 trunks)	1	Existing	T	20x14
TM	Terminalia muelleri	Mueller's damson	2	Existing	T	20x8
TS	Terminalia sericocarpa	Damson	1	Existing	T	20x8
BIOSWALE						
AS	Asplenium australasicum	Bird's nest fern	24	140mm	S	1x1
CM	Cordyline manners-suttoniae	Native swamp cordyline	40	140mm	S	3x1.5
BS	Bowenia spectabilis	Zamia fern	12	200mm	S	1x1
LH	Lomandra hystrix	Mat rush	60	100mm	S	1x1

C = Climber **G** = Ginger **SE** = Sedge **F** = Fern **P** = Palm **T** = Tree **GC** = Groundcover **S** = Shrub



KEY TO SYMBOLS





0 1 2 4 6 10 15 20m

SCALE 1:100

ARGYROU RESIDENCE	SCALE: 1:100@A0	HORTULUS AUSTRALIA PTY LTD
SITE ADDRESS: 14 Murphy Street | Port Douglas	DATE: 22 July 2022	338 Port Douglas Road| Port Douglas QLD Australia 4877
DRAWING TITLE	DRAWING NO. 5 / REV. -	T: 0412944793
PLANTING PLAN		W: www.hortulus.com.au
		E: design@hortulus.com.au

HORTULUS
LANDSCAPE | DESIGN | CONSTRUCT | MAINTAIN
P4099 1861 | HORTULUS.COM.AU