

April 2025

# Taronga Zoo Sky Safari

Appendix O  
Landscape Report  
RTS Revision 2  
Part 2

PREPARED BY

NewScape

PREPARED FOR

**TARONGA**   
CONSERVATION SOCIETY AUSTRALIA

*For the Wild*



# Proposed Tree Management Plan Summary

## Summary notes

- The retention of 124 trees, removal of 62 trees (13 Important tree and 49 unimportant trees)
- The project aims to have a ratio of 2:1 for the replacement of all trees removed as a result of the works. Category A will be replaced with the largest possible (eg 750-1000L) endemic species in better locations on site and Category Z tree planting replacement will be addressed by Taronga Horticultural Team.
- Replacement trees will be from the site’s endemic plant list.
- Replacement trees are as follows:
  - » Lower Station: 2 - Angophora costata
  - » Top Station: 1 - Banksia integrifolia
  - » 1 - Elaeocarpus reticulatus
  - » The balance of additional trees will be planted within the Zoo in consultation with the Taronga Horticultural Team.
- Please note that the Taronga Horticultural Team have done an independent review of trees along the southern perimeter of the current overflow parking area (north of the proposed maintenance and storage area). They have determined the trees need to be removed due to issues of tree health from damaged roots and danger of falling branches to the public. While these trees have been previously show on plans presented to the State Design Review Panel, they are no longer under the project scope. These trees do not form part this SSDA.
- Please refer to the Arborist Report for complete details of impact appraisal and method statement which has been submitted as a separate document.

## Summary plant schedule

Plant List						
ID	Plant Qty	Common Name	Botanical Name	Scheduled Size	Mature Height	Mature Spread
Trees						
AnCo	2	Sydney Red Gum, Smooth-barked Apple	Angophora costata	700L	15 - 20m	6 - 10m
BanIntTre	1	Coastal Banksia	Banksia integrifolia (tree)	100L	10-15m	5-6m
ElRe	1	Blueberry Ash	Elaeocarpus reticulatus	100L	5 - 10m	3.5 - 6m
Shrubs and Perennials						
AcLi	1	Flax Wattle	Acacia linifolia	45L	5 m	1.4-4m
KuAm	2	Tick Bush	Kunzea ambigua	45L	1.5 - 3m	1.2 - 2.0m
WeFr	9	Coastal Rosemary	Westringia fruticosa	45L	0.9 - 1.5m	0.9 - 1.2m
Ground Covers						
HaVi	30	Purple Twining-pea, False Sarsaparilla	Hardenbergia violacea	140mm	0.5-2m	1.2 - 2.0m
ViHe	28	Native Violet	Viola hederacea	140mm	0.0 - 0.3m	1.2 - 2.0m
Grasses						
PoLaLa	23	Tussock Grass	---	140mm	0.75 - 0.9m	0.6 - 0.9m
DiCa	138	Paroo Lily, Blue Flax-lily	Dianella caerulea	140mm	0.45 - 0.6m	0.3 - 0.6m
JuCo	22		Juncus continuus	140mm	1m	0.2-0.4m
LoLo	16	Spiny-headed Mat-Rush	Lomandra longifolia	140mm	0.75 - 0.9m	0.9 - 1.2m
Fern						
AsAu	12	Crow's Nest Fern	Asplenium australasicum	140mm	0.9 - 1.5m	2.0 - 3.5m
Total	285					

## Summary of existing trees affected by the development

Impact	Reason	Important trees		Unimportant trees	
		AA	A	Z	ZZ
Retained trees that may be affected through disturbance to TPZs	Removal of existing surfacing/structures/landscaping and/or installation of new surfacing/structures/landscaping	TOTAL 8	TOTAL 93	TOTAL 9	TOTAL 2
Trees to be removed	Civil and construction and/or level variations within TPZ	TOTAL 0	TOTAL 13	TOTAL 41	TOTAL 8



# Proposed Re-planting Areas

The project aims to have a ratio of 2:1 for the replacement of all trees removed as a result of the works. Category A trees will be replaced with the largest possible (eg 750-1000L) endemic species in better locations on site and Category Z tree planting replacement will be addressed by Taronga Horticultural Team.

Please refer to the plan on the right for proposed planting areas. Most suitable replacement zones have been identified around the Lower Station, following an assessment of available spaces by the Taronga Zoo team. Tree species selected for each zone are based on the Surrounding Vegetation Community (Pre-clearing) Data, with all zones classified under the Sydney Coastal Sandstone Foreshore Forest vegetation type.

**LOCATION KEY:**

- 1. Remnant bushland along existing fire track / service road
- 2. Remnant bushland along existing service road
- 3. Tree belt along existing paths
- 4. Tree belt along road and pedestrain path to Sky Safari
- 5. Area around coastal walk next to Water Treatment Plant





# Proposed Re-planting Areas

Tree species selected for each zone are based on the Surrounding Vegetation Community (Pre-clearing) Data, with all zones classified under the Sydney Coastal Sandstone Foreshore Forest vegetation type.

Tree Species			
Botanical Name	Common Name	Mature Height	Mature Spread
Acacia binervata	Two-veined Hickory Wattle	10m	3-5m
Acacia elata	River Wattle	15m	4-6m
Acacia parramattensis	Parramatta Wattle	10m	3-5m
Acacia prominens	Mountain Hickory Wattle	10m	3-5m
Acmena smithii	Lilly Pilly	4m	2-3m
Allocasuarina littoralis	Black Sheoak	15m	4-6m
Allocasuarina torulosa	Forest Oak	20m	6-8m
Angophora costata	Sydney red gum	15-20m	6-10m
Angophora floribunda	Rough-barked Apple	20m	6-8m
Banksia integrifolia	Coast Banksia	15m	6-8m
Banksia serrata	Old Man Banksia	20m	6-10m
Brachychiton acerifolius	Illawarra Flame Tree	15m	6-8m
Casuarina glauca	Swamp Oak	20m	5-7m
Ceratopetalum gummiferum	Christmas Bush	4m	3-4m
Clerodendrum tomentosum	Hairy Clerodendrum	4m	3m
Corymbia eximia	Yellow Bloodwood	20m	6-8m
Corymbia gummifera	Red Bloodwood	25m	8-10m
Corymbia maculata	Spotted Gum	30m	10-12m
Cupaniopsis anacardioides	Tuckeroo	15m	6-8m
Endiandra sieberi	Grey Walnut	25m	8-12m
Eucalyptus botryoides	Coast Grey Box	25m	8-10m
Eucalyptus camfieldii	Camfield's Box	15m	5-7m
Eucalyptus haemastoma	Scribbly Gum	15m	5-7m

Tree Species			
Botanical Name	Common Name	Mature Height	Mature Spread
Eucalyptus microcorys	Tallowwood	40m	12-15m
Eucalyptus paniculata	Grey Ironbark	25m	8-10m
Eucalyptus pilularis	Blackbutt	60m	15-20m
Eucalyptus piperita	Sydney Peppermint	15m	5-7m
Eucalyptus punctata	Grey Gum	25m	8-10m
Eucalyptus resinifera	Red Mahogany	50m	12-15m
Eucalyptus robusta	Swamp Mahogany	40m	12-15m
Eucalyptus scias	Large-fruited Red Mahogany	20m	10-12m
Eucalyptus sieberi	Silvertop Ash	30m	10-12m
Eucalyptus tereticornis	Forest Red Gum	20-50m	8-10m
Eucalyptus umbra	Black Gum	25m	8-10m
Ficus rubiginosa	Rusty Fig	15m	6-8m
Glochidion ferdinandi	Cheese Tree	10m	4-6m
Guioa semiglauca	Guioa	8m	3-5m
Lophostemon confertus	Brisbane Brush Box	20m	6-8m
Melaleuca quinquenervia	Paperbark Tea Tree	15m	5-7m
Notelaea longifolia	Long-leaved Mock Olive	6m	2-4m

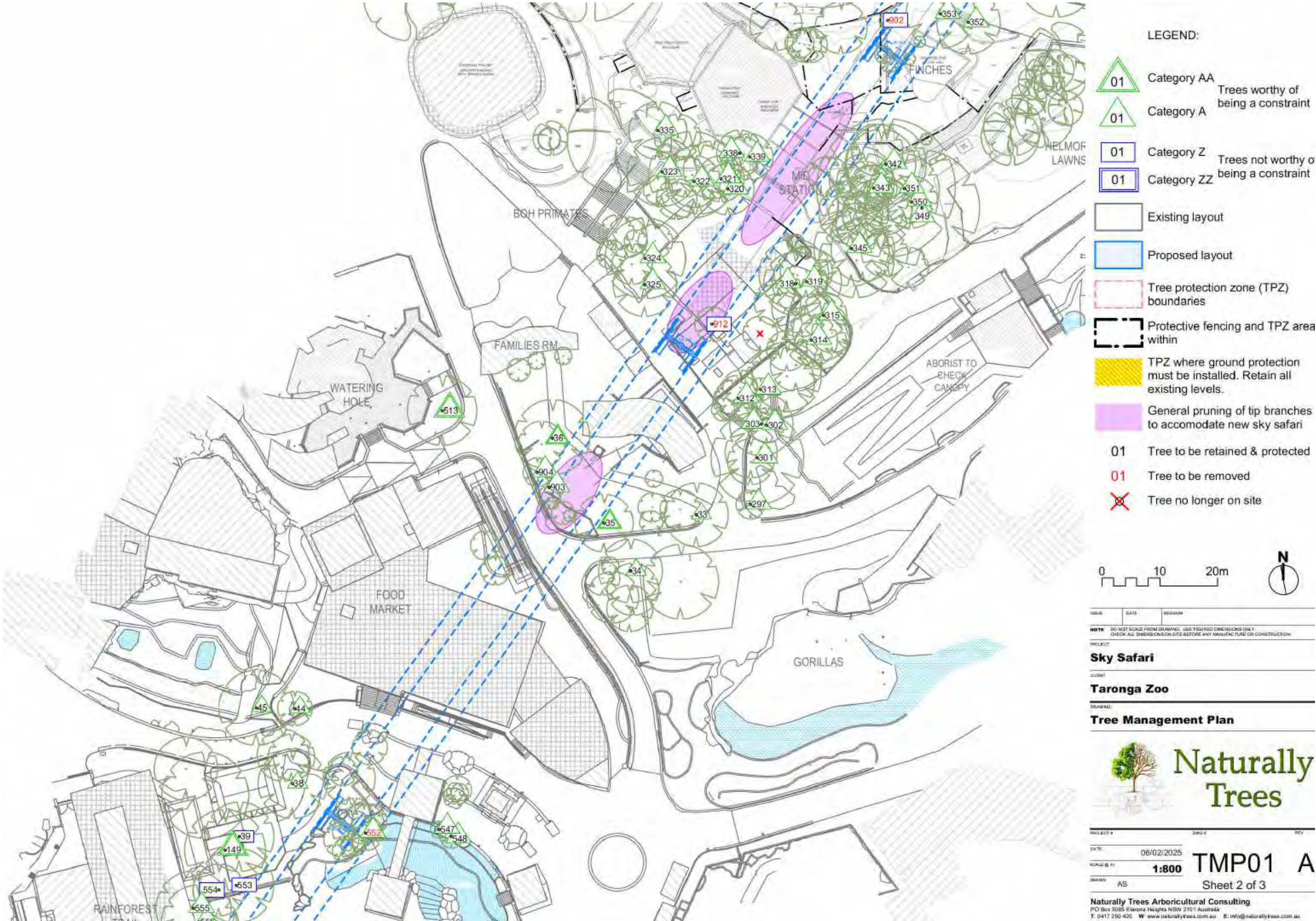


# Proposed Tree Management Site Plan - Lower Station





# Proposed Tree Management Site Plan - Middle Route Alignment





# Proposed Tree Management Site Plan - Top Station









# Tree Impacts Study Summary Statement

## Study Scope:

This Tree Impact Study has been undertaken in response to concerns raised in submissions regarding the proposed pylon height. As part of their key issues letter, the DPHI requested the Applicant consider the extent of tree loss and tree trimming required if a lower pylon height was proposed.

This study assesses the impact on the tree canopy under three scenarios:

1. SSDA pylon height and 12.5m corridor width (to allow for new gondolas)
2. Investigation into reduced pylon height to 12m (matching the existing Sky Safari height) with a proposed width of 12.5m (increased from 9m) for the new gondolas.
3. Pylon height within the range of 12m existing and proposed, and 12.5m corridor width (to allow for new gondolas)

## Notable Considerations:

- The investigation into reducing the pylon height to 12m (existing Sky Safari height) with a proposed width of 12m for the new gondolas indicates that the Heritage Hoop Pines (T35 and T36) would be “severely impacted” and could require extensive pruning and possible removal. For detailed information on the impact of this proposal, please refer to page 38 of the Landscape Report. These trees hold heritage significance, as outlined in the Statement of Heritage Impact report, and are listed under the Heritage and Conservation Register (Section 170 of the Heritage Act 1977).
- Please note that this study mainly focuses on the cable car buffer zone. Trees located within the excavation zone at the Bottom Station will also need to be removed, as detailed in the Arborist Report. The Landscape Report has considered the potential impacts of reducing the pylon height on surrounding trees, with detailed information provided on pages 38-44.

## Conclusion Impact:

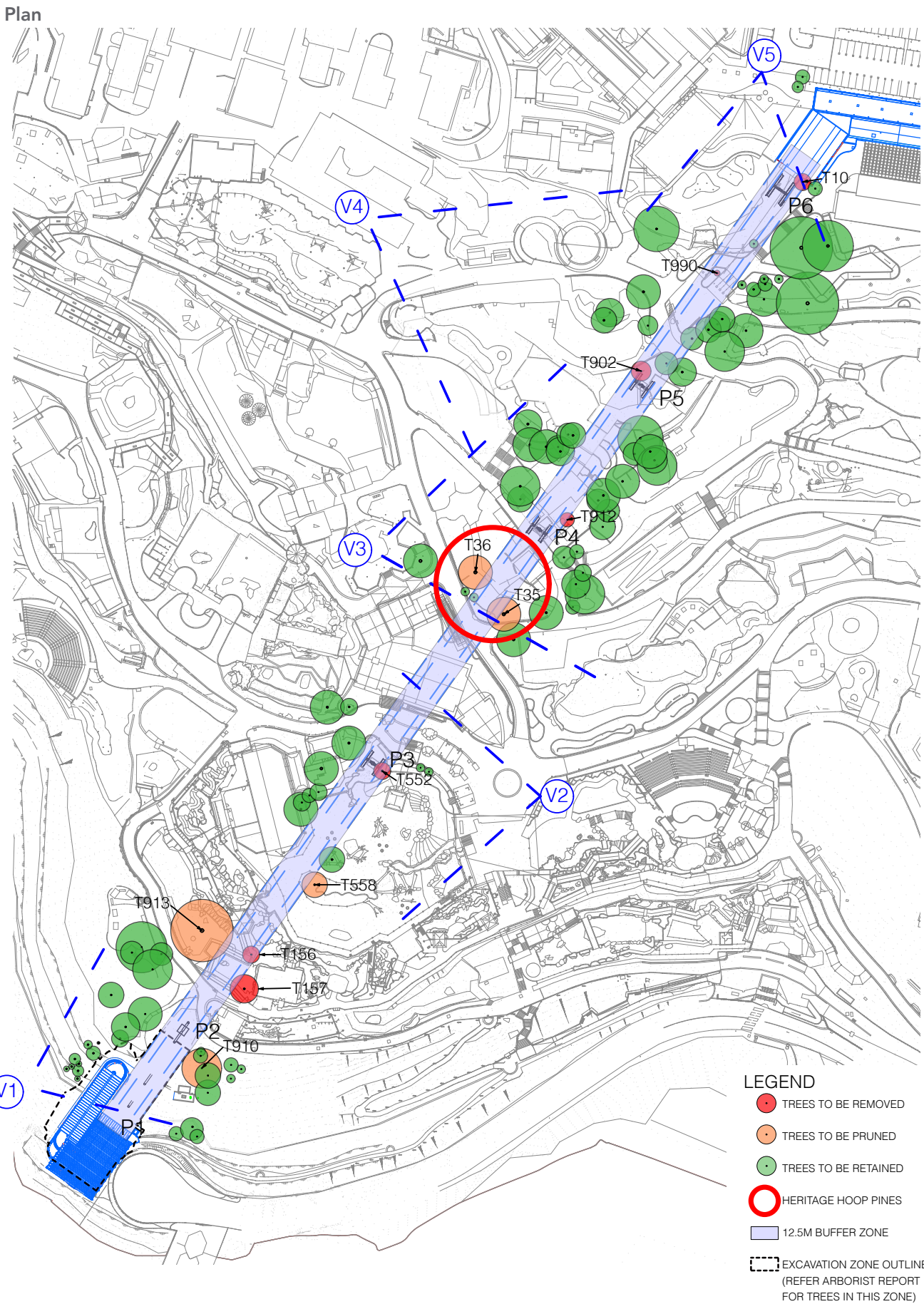
- Seven trees are required to be removed along the cable car route with the SSDA pylon heights.
- Eleven additional trees would need to be removed along the cable car route as a result of the reduced pylon heights (to match the existing Sky Safari height), this represents an 157% increase from the proposed tree removal along the route. Of significance, this includes the removal of two heritage listed Hoop Pines.
- Seven trees to be pruned. Noting the extent of pruning may be more significant once on site.
- Fifteen trees which may be impacted in future through pruning or removal as the tree matures





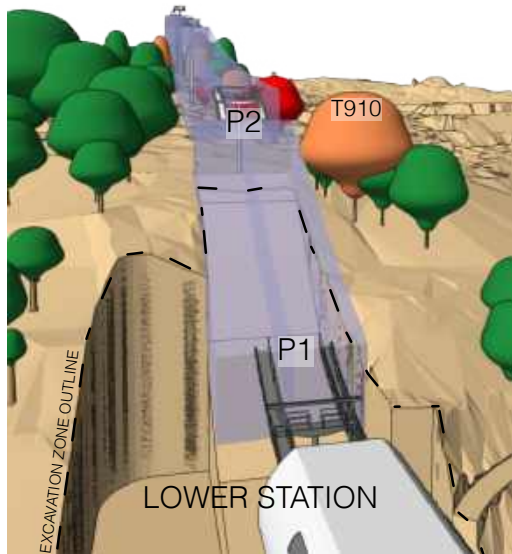
# Tree Impacts Study 1

SSDA pylon height and 12.5m corridor width (to allow for new gondolas) - current tree height

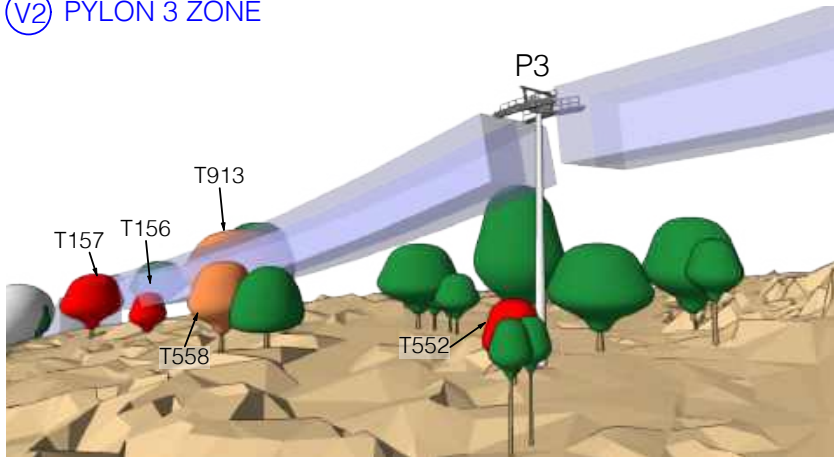


## Visualisation

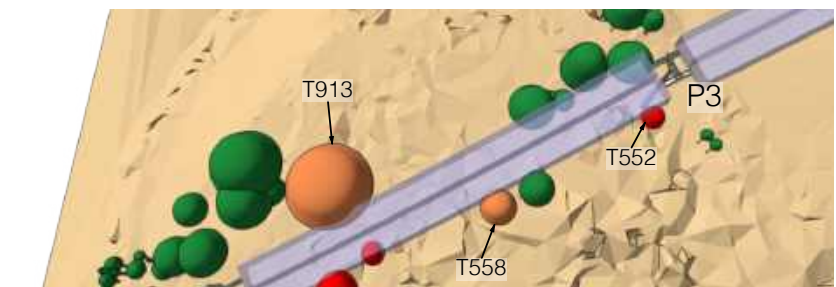
V1 PYLON 1 AND PYLON 2 ZONE



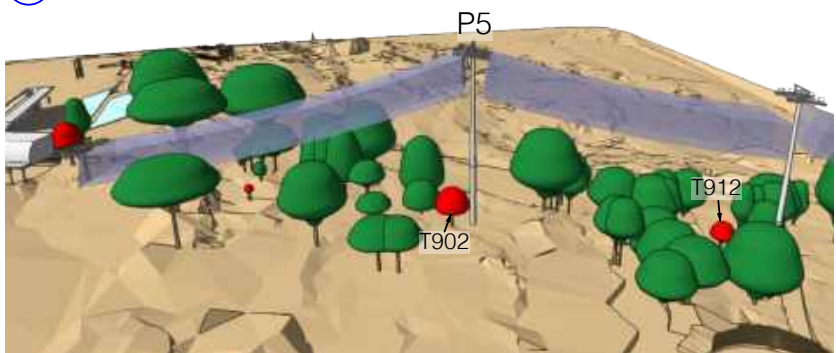
V2 PYLON 3 ZONE



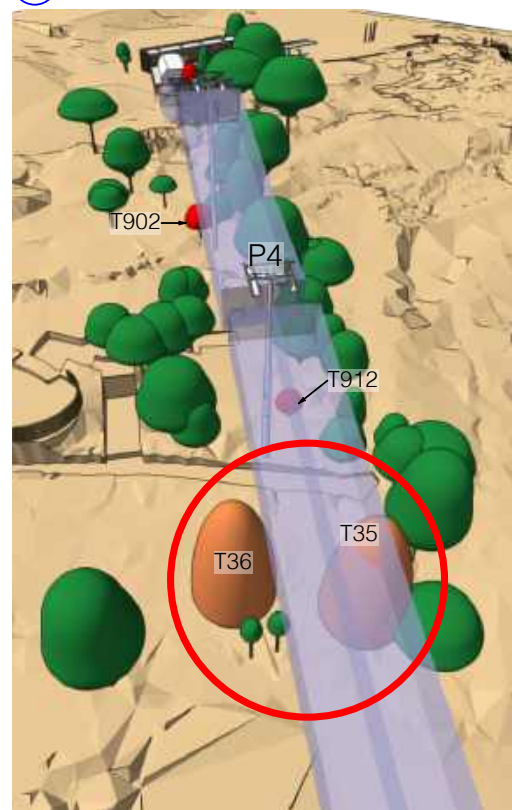
V2 PLAN VIEW



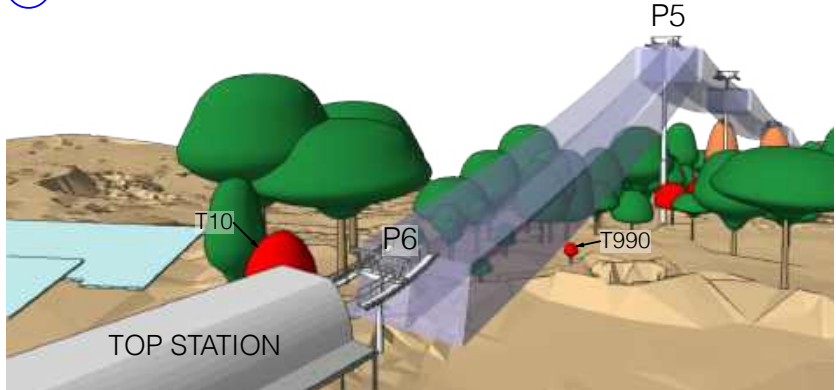
V4 PYLON 5 ZONE



V3 PYLON 4 ZONE

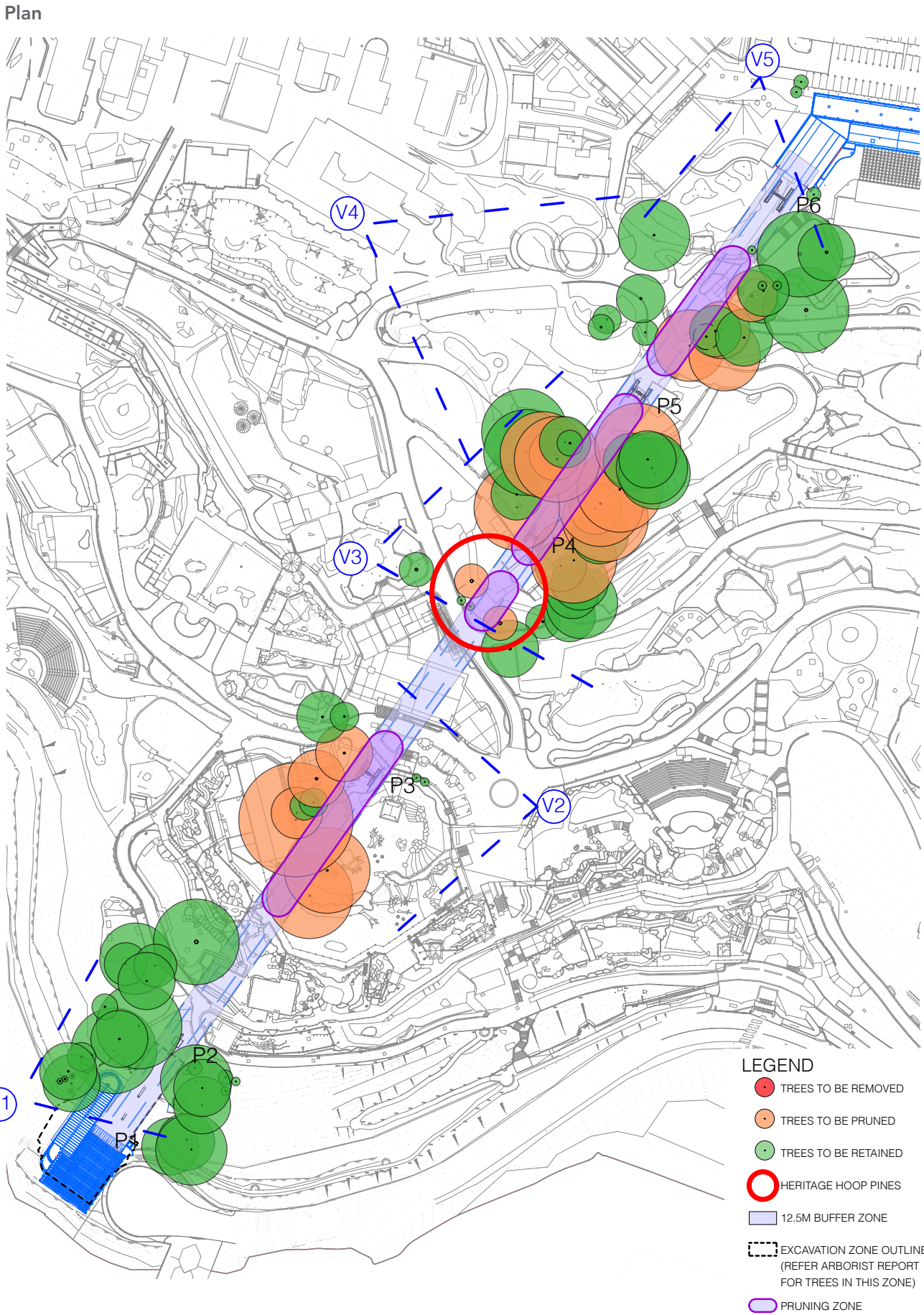


V5 PYLON 5 AND PYLON 6 ZONE





SSDA pylon height and 12.5m corridor width (to allow for new gondolas) - mature tree height

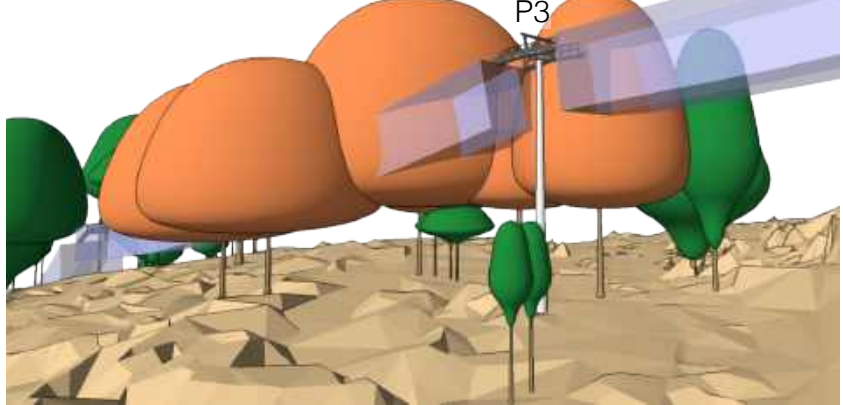


Visualisation

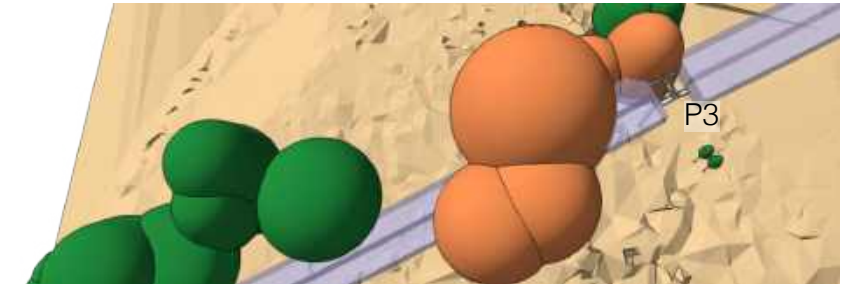
V1 PYLON 1 AND PYLON 2 ZONE



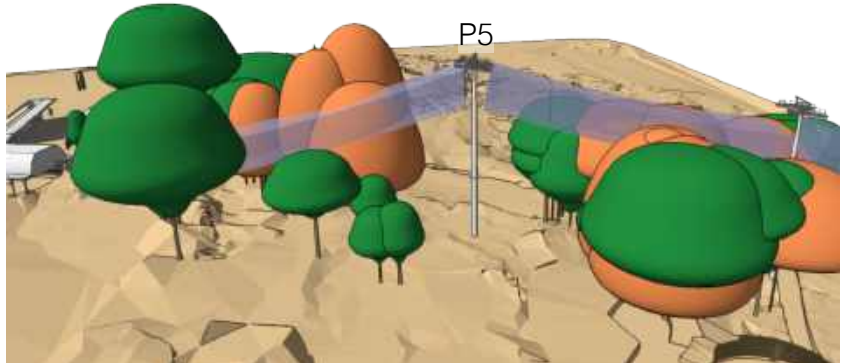
V2 PYLON 3 ZONE



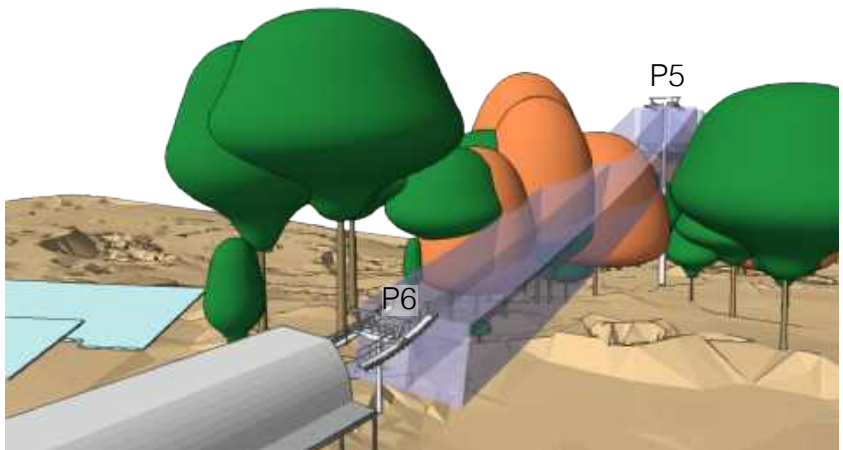
V2 PLAN VIEW



V4 PYLON 5 ZONE



V5 PYLON 5 AND PYLON 6 ZONE





# Tree Impact Study 1 - Summary Table

SSDA pylon height and 12.5m corridor width (to allow for new gondolas)

Trees to be removed - Current tree height

Tree Number	Genus species	Tree AZ	Proposed Action	Percentage of tree encroachment
T10	Podocarpus elatus	A1		100% tree is construction zone
T156	Ficus obliqua	A1		80% of the tree canopy is in buffer zone
T157	Glochidion ferdinandi	A1		48% of the tree canopy is in buffer zone
T552	Commersonia fraseri	A1		100% tree is construction zone
T902	Olea sp.	Z3		100% tree is construction zone
T912	Castanospermum australe	Z12		100% tree is construction zone
T990	Stenocarpus sinuatus	Z1		100% tree is construction zone

Trees to be removed - Already factored into SSDA and RTS submission

Trees to be pruned - Current tree height

Tree Number	Genus species	Tree AZ	Proposed Action	Percentage of tree encroachment
T35	Araucaria cunninghamii	AA3	Heritage Hoop Pines	7% of the tree crown in buffer zone
T36	Araucaria cunninghamii	AA3	Heritage Hoop Pines	3% of the tree crown in buffer zone
T558	Ficus rubiginosa	A1		9% of the tree canopy in buffer zone
T910	Eucalyptus tereticornis	A1		1% of the tree canopy in buffer zone
T913	Ficus microcarpa var. hillii	AA1		9% of the tree canopy in buffer zone

Trees to be pruned

Trees which have grater than 15% encroachment within the pylon buffer zone have been proposed for removal.

Please note that the encroachment percentage provided is an estimate based on 3D data derived from the survey and arborist assessment. Not all trees are depicted on the plan view, particularly the additional trees to be removed at the bottom station. For complete details, please refer to the Arborist Report.

The T156 and T157 tree were initially reviewed as part of our methodology and were assessed for removal. However, after further evaluation by the arborist, T156 is identified as having potential to be successfully retained without any adverse effects, provided that appropriate protective measures are properly specified and controlled through a detailed arboricultural method statement.

Additionally, the arborist has noted that the tree T156 and T157 have already been pruned in the cable car zone and recommends that this pruning be sustained in the future to ensure their continued health and safety. For further details, please refer to the arborist’s report.

Mature tree height

Tree Number	Genus species	Tree AZ	Proposed Action
T38	Lophostemon confertus	A1	
T39	Eucalyptus punctata	Z9	
T313	Ficus rubiginosa	A1	
T315	Ficus microcarpa var. hillii	A1	
T318	Aleurites moluccanus	A1	
T319	Ficus rubiginosa	A1	
T320	Ficus microcarpa var. hillii	A1	
T321	Syzygium floribundum	A1	
T322	Ficus microcarpa var. hillii	A1	
T325	Mallotus discolour	A1	
T342	Ficus obliqua	A1	
T345	Ficus rubiginosa	A1	
T475	Ficus obliqua	A1	
T476	Lophostemon confertus	A1	
T555	Toona australis	A1	
T556	Ficus macrophylla	A1	
T557	Ficus rubiginosa	A1	
T900	Eucalyptus botryoides	A1	
T988	Melaleuca quinquenervia	A1	

Trees to be pruned

These additional trees in the table will require maintenance once they reach maturity. At their current size, they do not encroach upon the cable car zone, but future maintenance should be considered as they grow.

According to the arborist report, pruning should be limited to no more than 15% of the tree’s total canopy.

These trees will also need to be checked annually for overall health, potential hazards, and any necessary pruning or adjustments to prevent interference with the cable car zone.

SUMMARY FINDINGS - STUDY 1

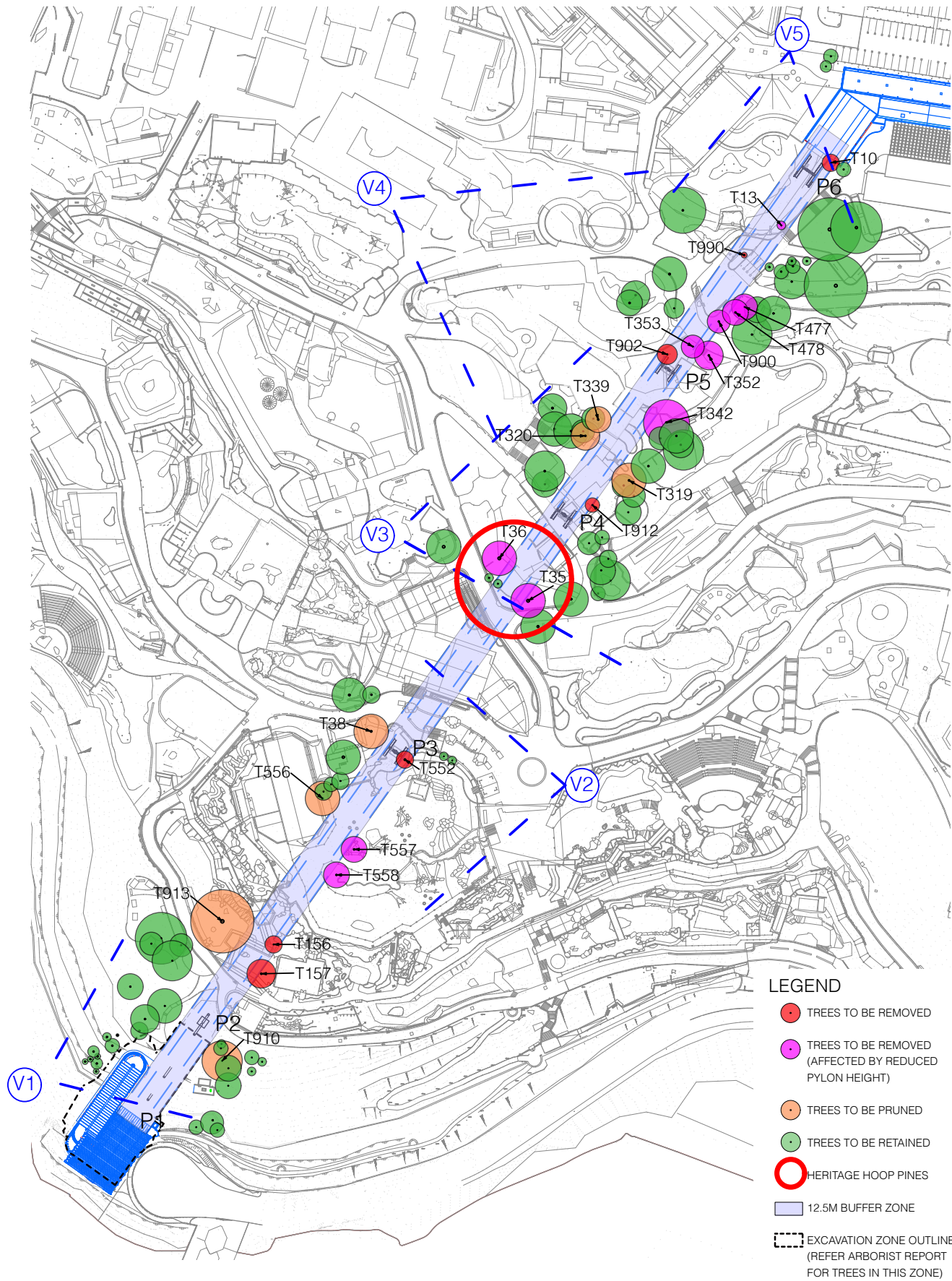
- 7 trees to be removed
- 5 trees to be pruned
- 19 trees impacted in the future



# Tree Impacts Study 2

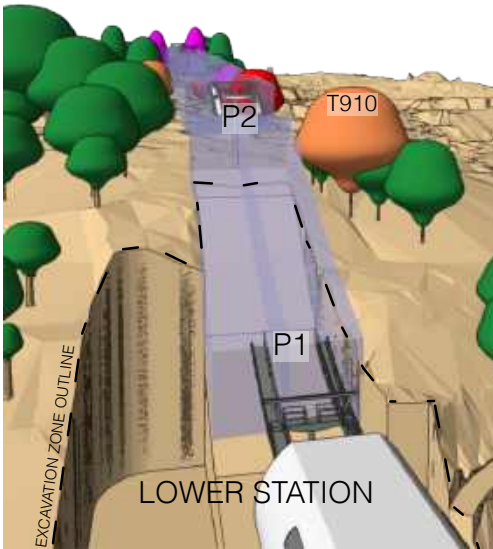
12m pylon height (to match existing Sky Safari) and 12.5m corridor width (to allow for new gondolas) - current tree height

## Plan

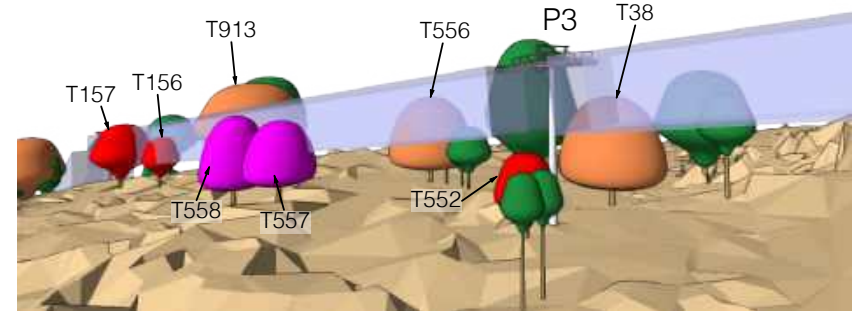


## Visualisation

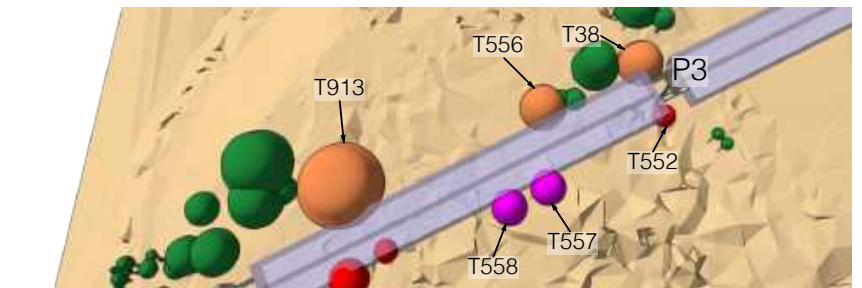
(V1) PYLON 1 AND PYLON 2 ZONE



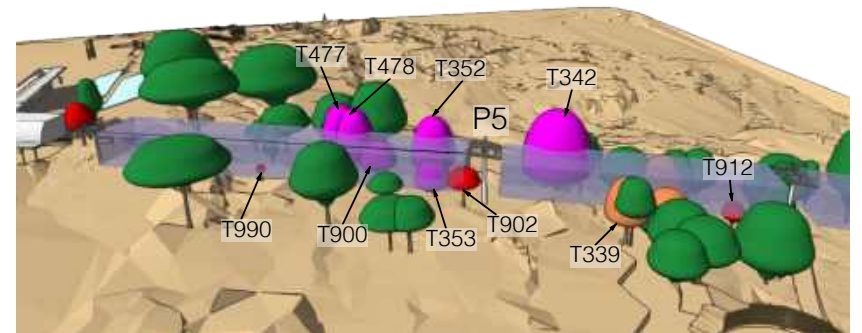
(V2) PYLON 3 ZONE



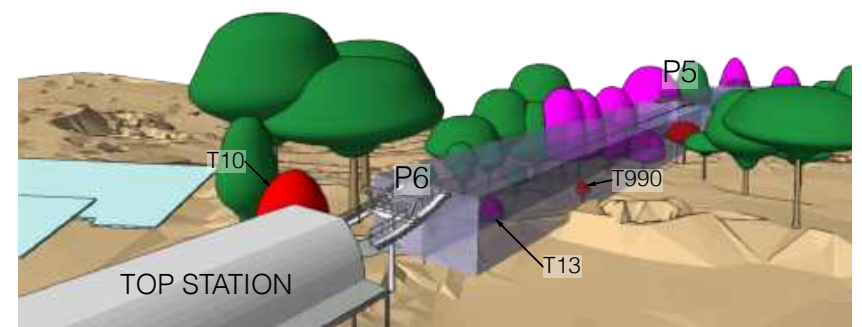
## V2 PLAN VIEW



(V4) PYLON 5 ZONE

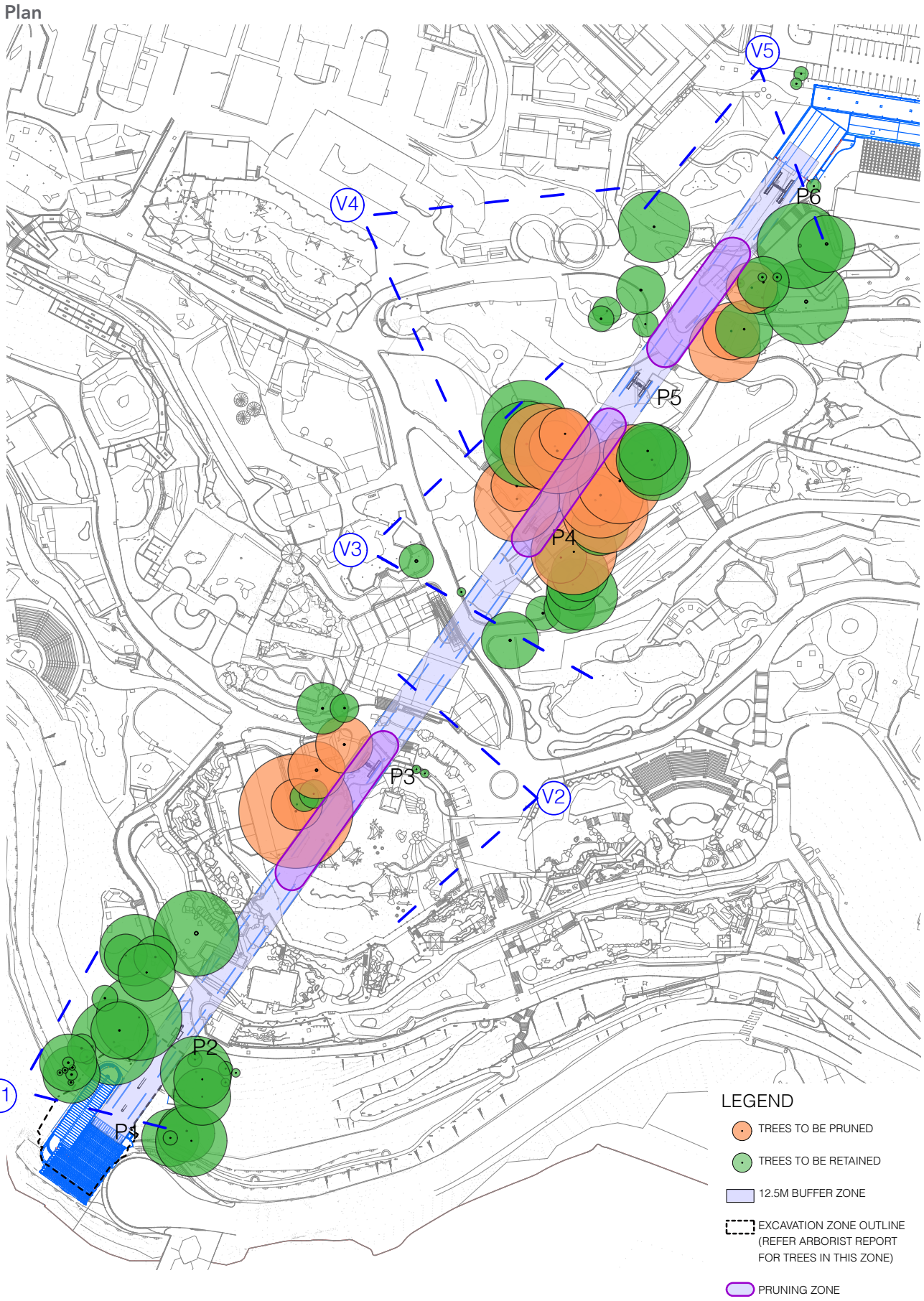


(V5) PYLON 5 AND PYLON 6 ZONE





12m pylon height (to match existing Sky Safari) and 12.5m corridor width (to allow for new gondolas) - mature tree height

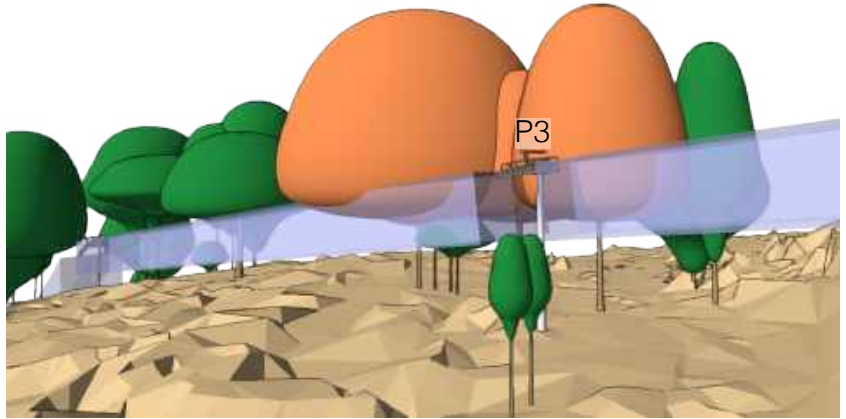


Visualisation

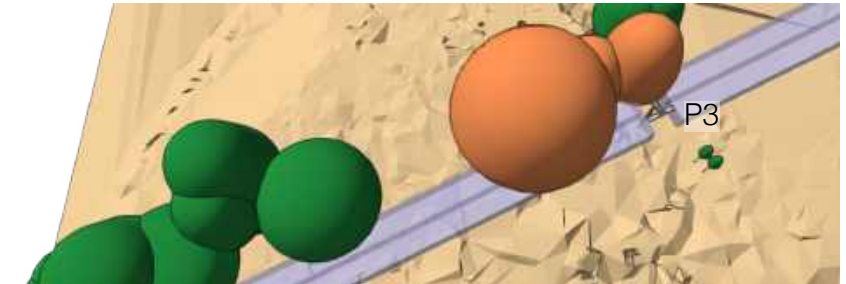
V1 PYLON 1 AND PYLON 2 ZONE



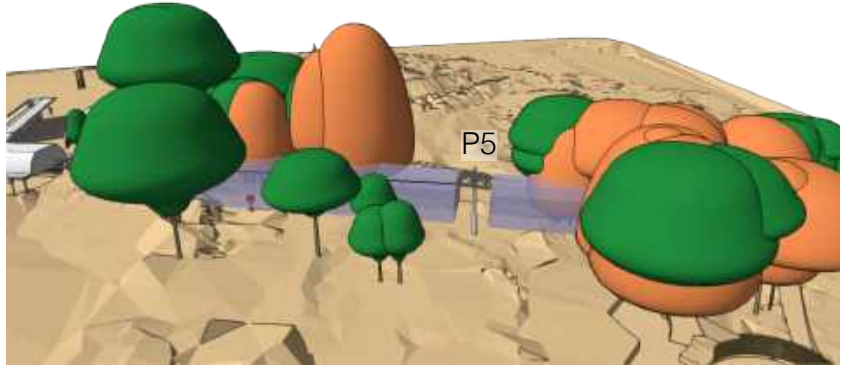
V2 PYLON 3 ZONE



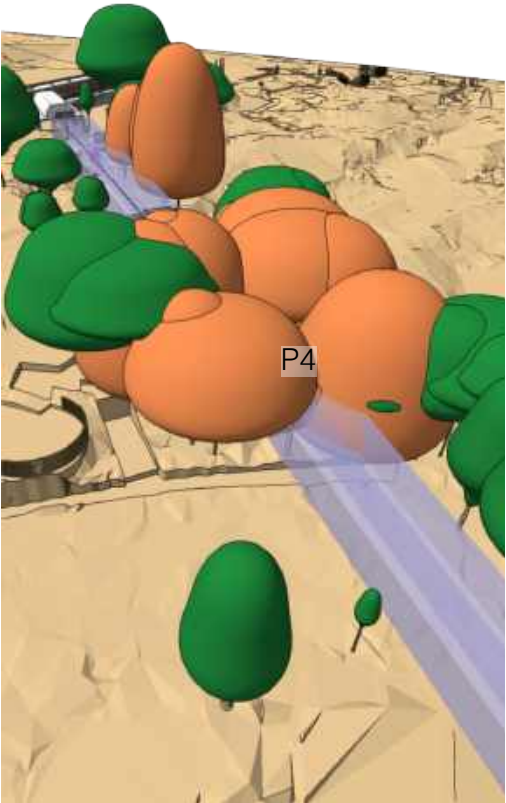
V2 PLAN VIEW



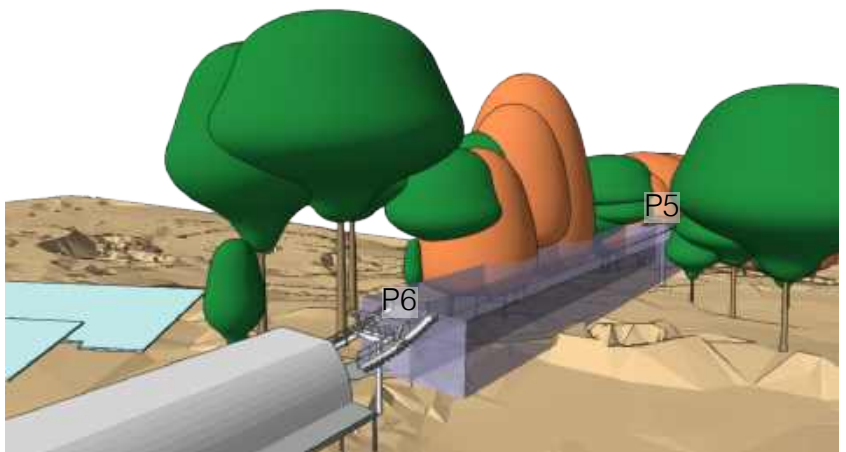
V4 PYLON 5 ZONE



V3 PYLON 4 ZONE



V5 PYLON 5 AND PYLON 6 ZONE





# Tree Impact Study 2 - Summary Table

12m pylon height (to match existing Sky Safari) and 12.5m corridor width (to allow for new gondolas)

Trees to be removed by lowering pylon height - Current tree height

Tree Number	Genus species	Tree AZ	Proposed action	Percentage of tree encroachment
T13	Cyathea cooperi	Z12		100% tree is construction zone
T35	Araucaria cunninghamii	AA3	Heritage Hoop Pines	52% of the tree canopy in buffer zone
T36	Araucaria cunninghamii	AA3	Heritage Hoop Pines	21% of the tree canopy in buffer zone
T342	Ficus obliqua	A1		23% of the tree canopy in buffer zone
T352	Casuarina glauca	A1		23% of the tree canopy in buffer zone
T353	Melaleuca quinquenervia	A1		100% tree is construction zone
T477	Melaleuca quinquenervia	A1		17% of the tree canopy in buffer zone
T478	Melaleuca quinquenervia	A1		33% of the tree canopy in buffer zone
T557	Ficus rubiginosa	A1		28% of the tree canopy in buffer zone
T558	Ficus rubiginosa	A1		32% of the tree canopy in buffer zone
T900	Eucalyptus botryoides	A1		100% tree is construction zone

Trees to be removed - Additional due to lowered height of pylon to 12m

Trees to be pruned by lowering pylon height - Current tree height

Tree Number	Genus species	Tree AZ	Proposed action	Percentage of tree encroachment
T38	Lophostemon confertus	A1		2% of the tree canopy in buffer zone
T319	Ficus rubiginosa	A1		6% of the tree canopy in buffer zone
T320	Ficus microcarpa var. hillii	A1		13% of the tree canopy in buffer zone
T339	Ficus maclellandii	A3		14% of the tree canopy in buffer zone
T556	Ficus macrophylla	A1		10% of the tree canopy in buffer zone
T910	Eucalyptus tereticornis	A1		1% of the tree canopy in buffer zone
T913	Ficus microcarpa var. hillii	AA1		9% of the tree canopy in buffer zone

Trees to be pruned

Trees which have grater than 15% encroachment within the pylon buffer zone have been proposed for removal.

Please note that the encroachment percentage provided is an estimate based on 3D data derived from the survey and arborist assessment. Not all trees are depicted on the plan view, particularly the additional trees to be removed at the bottom station. For complete details, please refer to the Arborist Report.

Future trees to be pruned by lowering pylon height - Mature tree height

Tree Number	Genus species	Tree AZ	Proposed action
T39	Eucalyptus punctata	Z9	
T313	Ficus rubiginosa	A1	
T315	Ficus microcarpa var. hillii	A1	
T318	Aleurites moluccanus	A1	
T321	Syzygium floribundum	A1	
T322	Ficus microcarpa var. hillii	A1	
T324	Syzygium floribundum	A1	
T325	Mallotus discolor	A1	
T338	Commersonia bartramia	A1	
T343	Flindersa schottiana	A1	
T345	Ficus rubiginosa	A1	
T475	Ficus obliqua	A1	
T476	Lophostemon confertus	A1	
T555	Toona australis	A1	
T988	Melaleuca quinquenervia	A1	

Trees to be pruned

These additional trees in the table will require ongoing maintenance as they mature. While their current size does not interfere with the cable car zone, future growth should be carefully monitored. Maintenance considerations should be factored in as they develop.

According to the arborist report, pruning should be limited to no more than 15% of the tree’s total canopy.

These trees will also need to be checked annually for overall health, potential hazards, and any necessary pruning or adjustments to prevent interference with the cable car zone.

## SUMMARY FINDINGS - STUDY 2

- 18 trees to be removed including Heritage Hoop Pines (Heritage number 53L) and 7 trees from Study 1
- 7 trees to be pruned
- 15 trees impacted in the future



# Tree Impacts Study 3 - Heritage Hoop Pines

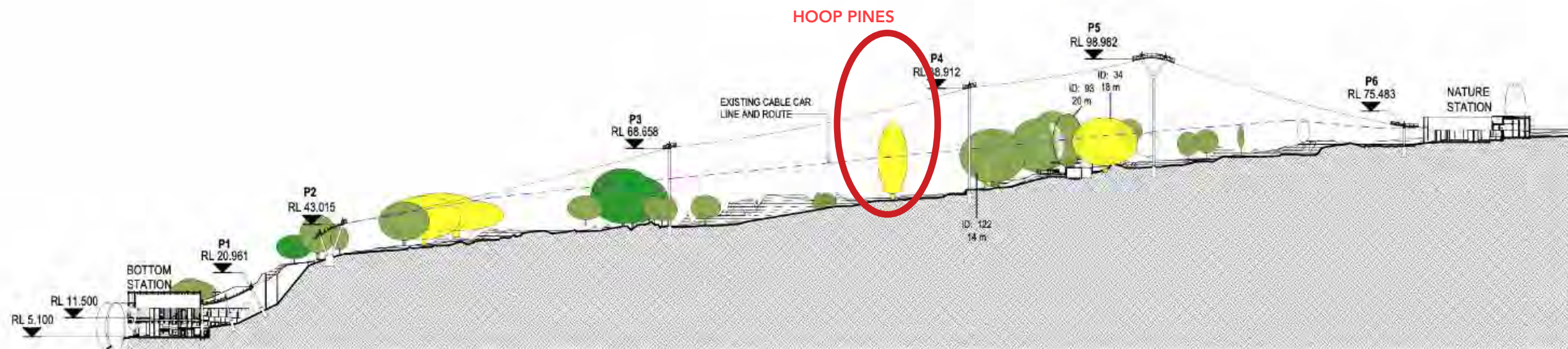
## Heritage Significance Heritage Hoop Pines

It is important to note that both of these trees—T35 and T36—hold heritage significance, as outlined in the Statement of Heritage Impact report. This report highlights the trees' inclusion in the Heritage and Conservation Register under Section 170 of the Heritage Act 1977, which encompasses over 250 individual items. Please refer to Section 4.4 of the report, which provides further details. The referenced report is Reference Number 53L, and the information is also outlined under Section 170.

Given the heritage value of these trees, their removal would have significant implications, which should be considered in any decision

## Comment from HIS

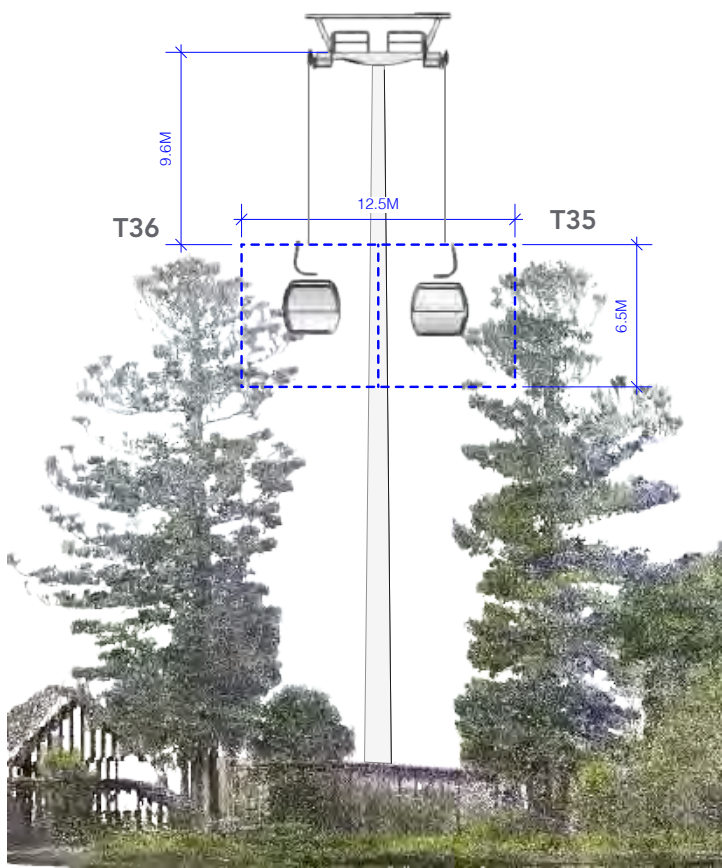
From their location and mature form, it would appear that these trees were planted early on in the establishment of the Zoo, during the period when it was being developed as a zoological garden. The Hoop Pines were believed to be planted in 1919 (or before). TZB minutes record the planting of pines in 1919. These are likely to be this group of Hoop Pines.





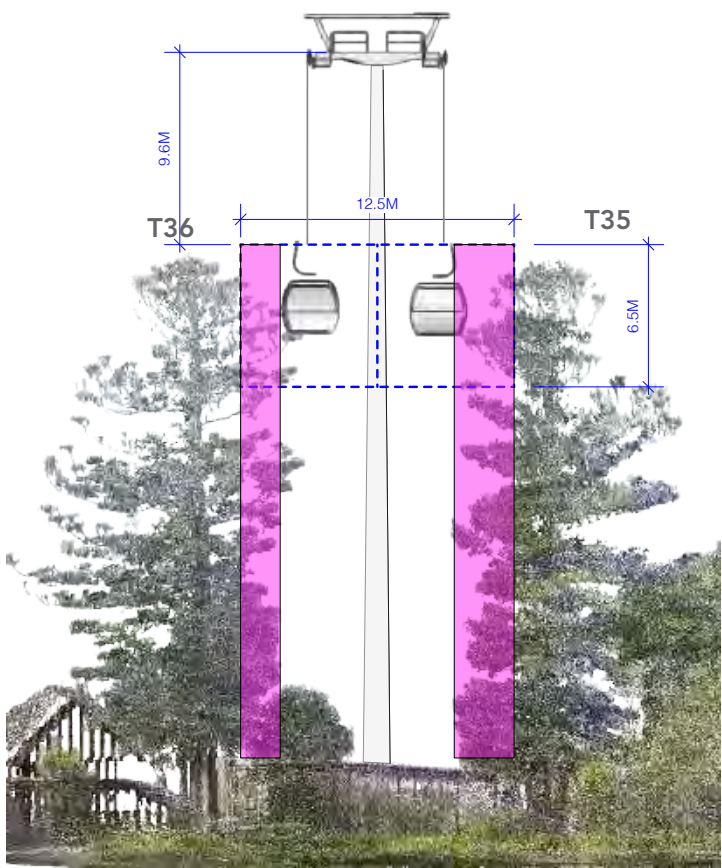
Section 1

Study 1: SSDA pylon height and 12.5m corridor width (to allow for new gondolas)



- Proposed Pylon Height
  - » Width: 12.5m
  - » Height: 31 M at hoop pines
  - » Minor pruning to hoop pines at T36 3% and T35 7%.

Study 3: Pylon height within the range of 12m existing and proposed, and 12.5m corridor width (to allow for new gondalas)

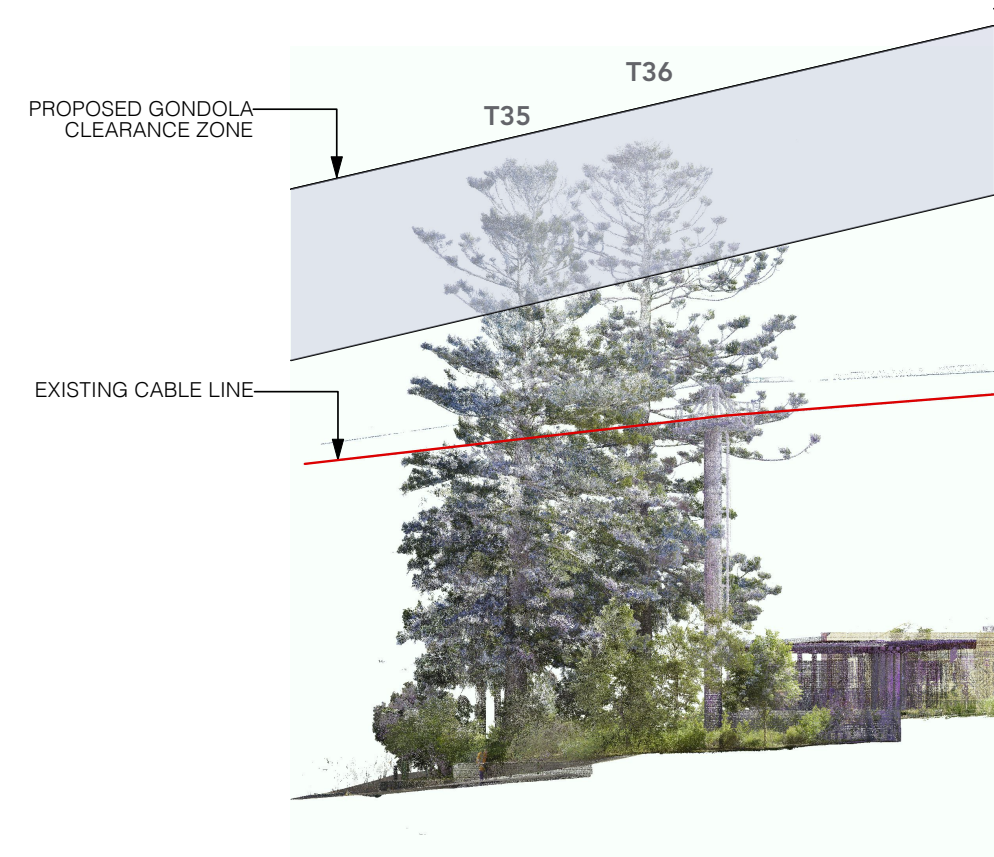


- Reduced pylon height between 12m – 36m
  - » Width: 12.5m
  - » Height: Varies
  - » Pylon height between 12-36m would result in significant pruning and impacts on tree health.
  - » It is likely that the Heritage Hoop Pines would require removal due to the extensive pruning required for the cable car corridor.



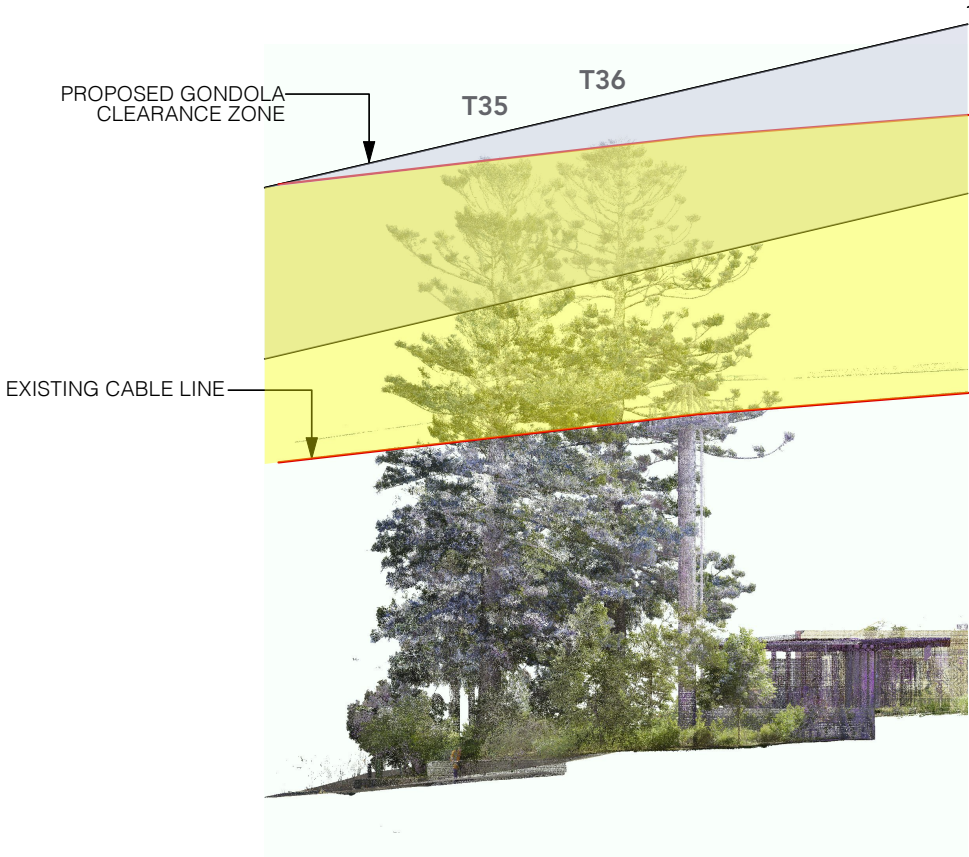
Section 2

Study 1: SSDA pylon height and 12.5m corridor width (to allow for new gondolas)



» The pylon height was proposed to result in very minimal pruning to the Heritage Hoop pines.

Study 3: Pylon height within the range of 12m existing and proposed, and 12.5m corridor width (to allow for new gondolas)



» The yellow zone demonstrates the increased impact to the top of the Heritage Hoop Pines caused by the existing Sky Safari with increased widening.



Pruning

Study 1: SSDA pylon height and 12.5m corridor width (to allow for new gondolas)



» Area of required pruning of Hoop Pines (yellow dashed line)

Study 3: Pylon height within the range of 12m existing and proposed, and 12.5m corridor width (to allow for new gondalas)



» Area of required pruning of Hoop Pines (pink dashed line)





# NewScape

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