

ASTIR MARINA LANDSCAPE

**ECOLOGICAL BALANCE REPORT:  
EXECUTIVE SUMMARY PRESENTATION**

2021\_06\_07



*Ecological Balance:*

"A state of dynamic equilibrium within a community of organisms in which genetic, species, and ecosystem diversity remain relatively stable, subject to gradual changes through natural succession."

"A balance in the numbers of each species in an ecosystem."

EXISTING VOULIAGMENI PENINSULA FOREST





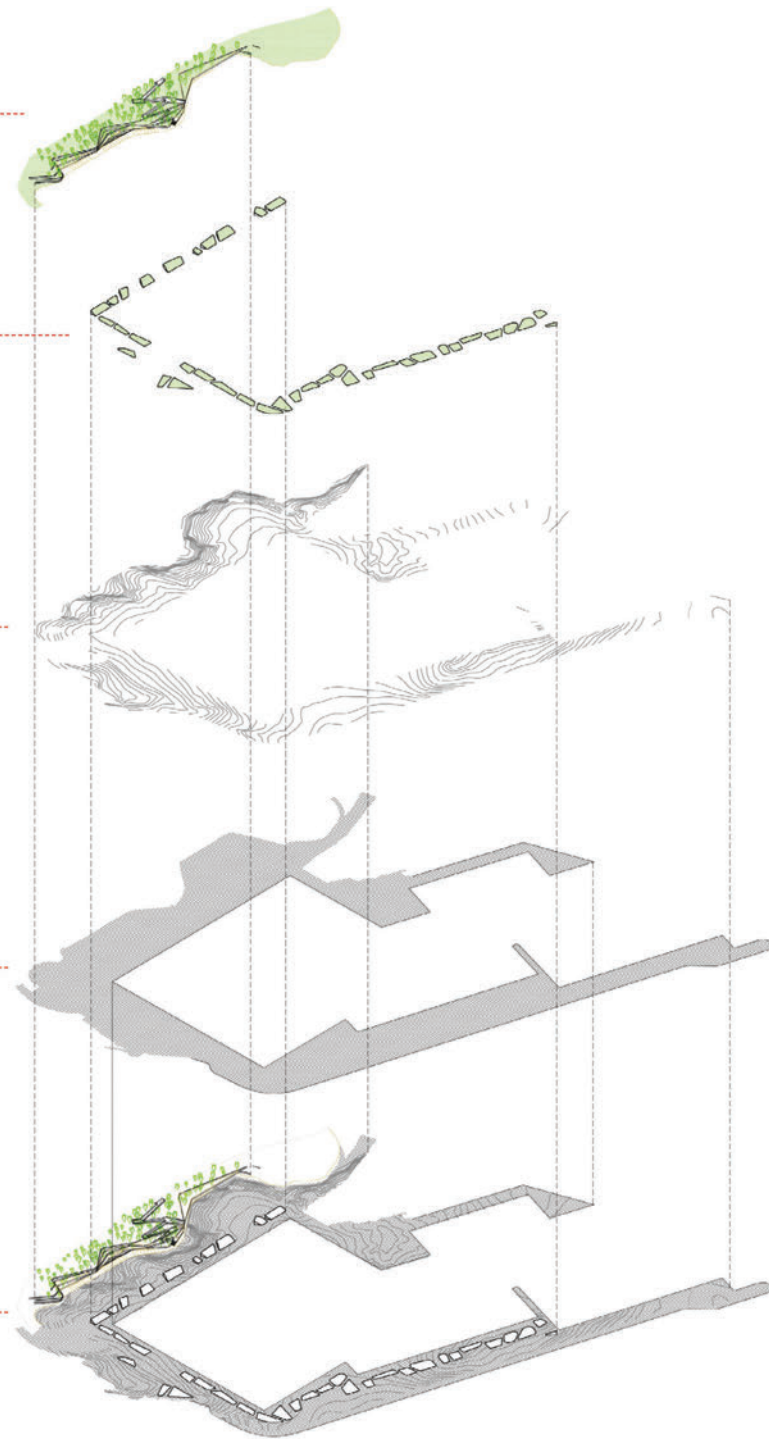
INHABITABLE  
RETAINING WALL

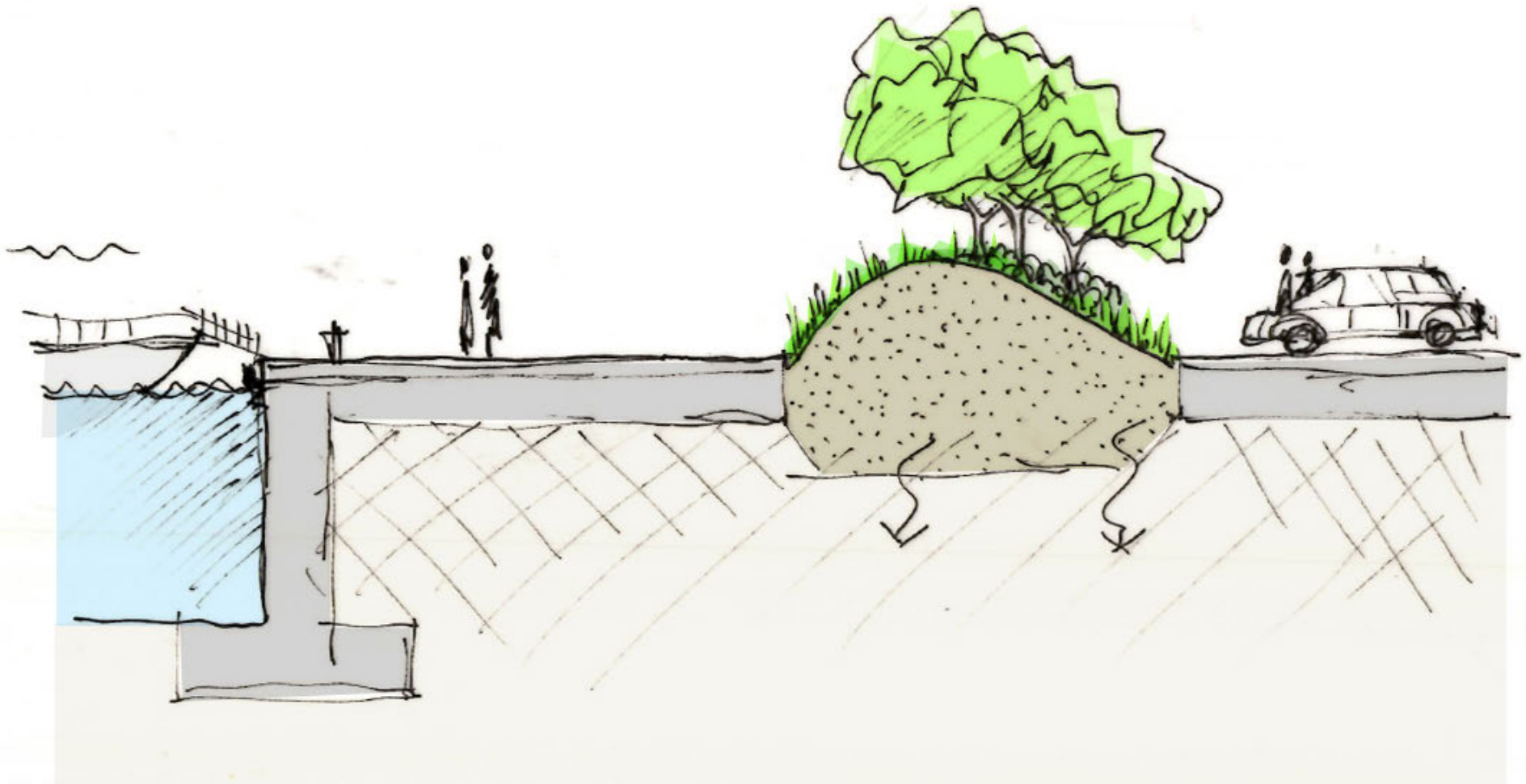
GREEN  
ISLANDS

HISTORIC  
CONTOURS

ORIENTATING  
GRID

LANDSCAPE  
MASTERPLAN







## ECOLOGICAL BALANCE STRATEGIES

The development includes the following measures to restore and improve the Vouliagmeni Peninsula Forest for the future, including:

- PROTECT AND NURTURE ALL REMAINING EXISTING TREES
- PLANT 318 NEW TREES
- CREATE LOW STONE WALLS TO RETAIN SOIL AND ENABLE NEW TREES TO BE PLANTED ON THE ROCKY SLOPES
- CREATE LARGE SOFTSCAPE PLANTING MOUNDS AROUND THE WATERFRONT TO EXTEND THE FOREST COVER
- INCREASE THE TOPSOIL DEPTH, PROVIDE GEOCELL SOIL REINFORCEMENT, DRAINAGE, AND INSTALL IRRIGATION TO SUPPORT A NEW POPULATION OF NATIVE TREES WITH SIGNIFICANT ROOTING VOLUME
- ORGANISE INFRASTRUCTURE INTO COMMON SERVICE TRENCHES TO PRESERVE ROOTING VOLUME FOR TREES
- CREATE GREEN ROOF PLANTERS ON THE UPPER LEVELS OF THE BUILDING AND ON THE ROOF OF THE UNDERGROUND PARKING

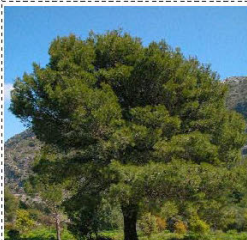




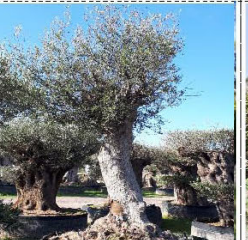
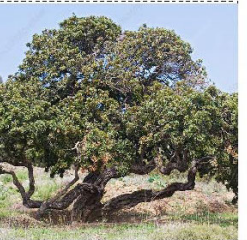



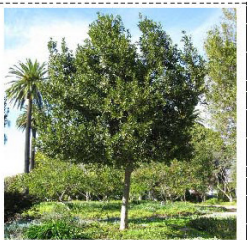


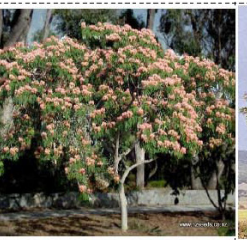

## NURSERY STOCK STRATEGY

Best practice necessitates a balance between super-advanced nursery stock, for initial impact, and mature nursery stock for better establishment, faster growth, and long-term health. The selection of sizes for new trees has therefore been based on best-practice to create a quick-establishing, fast-growing, healthy, and long-lived urban forest.



## TREE SPECIES SELECTION STRATEGY

The selection of species is based on native species and includes a significant proportion of *Pinus halapensis*, Πεύκα, so characteristic of the area. The scope of the new tree planting allows more *Pinus halapensis* to be planted than have been removed, and in addition the introduction of a number of other native tree species to improve the biodiversity of the site and the resilience of the urban forest to fire, pests, climate change, and other threats.

							
<b>A.1</b>	<b>A.2</b>	<b>A.3</b>	<b>A.4</b>	<b>A.5</b>	<b>A.6</b>	<b>A.8</b>	
Ph	Cts	Cs	Pt	Qc	Oe	Pl	
<i>Pinus halapensis</i>	<i>Ceratonja siliqua</i>	<i>Cercis siliquastrum</i>	<i>Pistacia terebrinthus</i>	<i>Quercus coccifera</i>	<i>Olea europaea</i>	<i>Pistacia lentiscus</i>	
Aleppo pine	Carob tree	Judas tree	Turpentine tree	Kermes oak	Olive	Mastic tree	
Πεύκα	Χαρουπιά	Κουτσουπιά	Τσικουδιά	Πουρνάρι	Έλια	Σκίνος	
							
<b>B.1</b>	<b>B.2</b>	<b>B.3</b>	<b>C.1</b>	<b>C.2</b>	<b>C.4</b>	<b>C.5</b>	<b>C.6</b>
Ph	Pp	Ts	Ln	Vac	Cts	Aj	Qc
<i>Pinus halapensis</i>	<i>Pinus pinea</i>	<i>Tamarix sp.</i>	<i>Laurus nobilis</i>	<i>Vitex agnus castus.</i>	<i>Ceratonja siliqua</i>	<i>Albizia julibrissin</i>	<i>Quercus coccifera</i>
Aleppo pine	Stone pine	Tamarisk	Bay laurel	Chaste tree	Carob tree	Persian silk tree	Kermes oak
Πεύκα	Κουκουναριά	Άλμυρικι	Δάφνη Απόλλωνος	Λυγαριά	Χαρουπιά	Ακακία Κοσταντινοπουλου	Πουρνάρι

## TREE BALANCE SUMMARY

Towards improving the resilience of the urban forest by improving the age profile and health of the trees.

	REMOVING	ADDING	BALANCE
SMALL/MEDIUM	63	228	<b>+165</b>
MEDIUM/LARGE	87	90	<b>+3</b>
TOTAL	150	318	<b>+168</b>

EXISTING SITUATION

Total Number of Trees: 305



# TREE SUMMARY

**Trees to be removed: 150**

**Small/Medium Trees: 63**

**Medium/Large Trees: 87**

**Trees to be planted: 318**

**Small/Medium Trees: 228**

**Medium/Large Trees: 90**

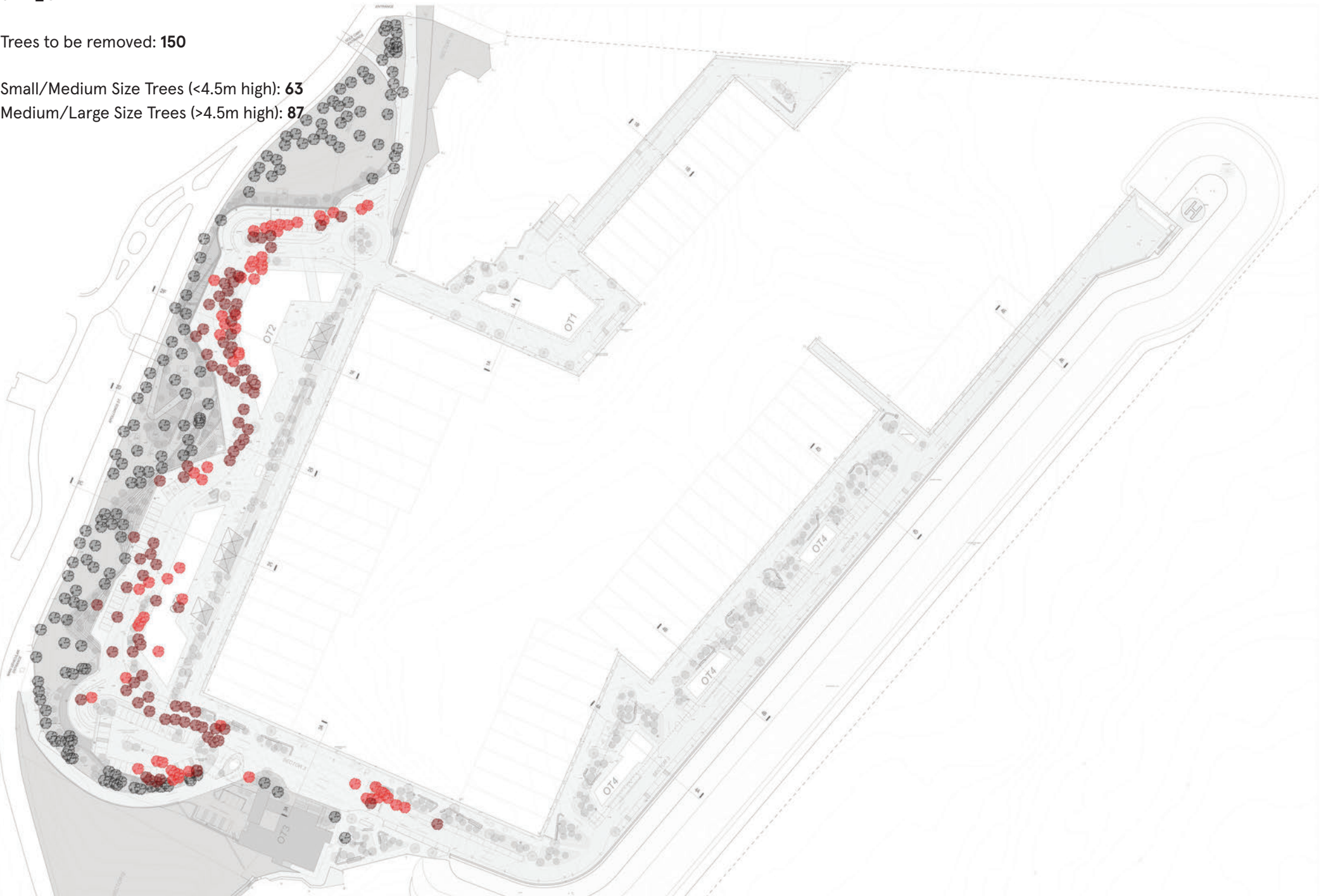


# SIZE\_OVERALL

Trees to be removed: **150**

 Small/Medium Size Trees (<4.5m high): **63**

 Medium/Large Size Trees (>4.5m high): **87**



# HEALTH\_OVERALL

Trees to be removed: **150**

- Healthy: **69** (34 S/M, 35 M/L)
- Medium Health: **67** (16 S/M, 51 M/L)
- Unhealthy: **14** (13 S/M, 1 M/L)



PROPOSAL\_PERMIT SUBMISSION

Trees to be planted: 216

● Small Size Trees: 159

● Medium Size Trees: 57



# PROPOSAL\_CURRENT DESIGN

Trees to be planted: **216**

Additional Trees to be planted: **102**

New Total: **318**

 Small Size Trees: **228**

 Medium Size Trees: **90**



EXISTING SOFTSCAPE AREA

26,933 M2



PROPOSED SOFTSCAPE AREA

27,300 M2

