Preliminary Arboricultural Report

Sydney Internet Exchange Facility
639 Gardeners Road, Mascot, NSW

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Introduction

Edaw Pty Ltd. has commissioned Stuart Pittendrigh, *Consulting Arborist*, to assess the trees presently growing within the proposed development site known as 639 Gardeners Road, Mascot.

The purpose of this assessment is to provide information on the trees: species, condition, suitability and quality assessment. This information is to be used by planners and designers, in conjunction with any planning controls and other legislation, to develop the design layout in such a way that trees selected for retention are provided with enough space. The preliminary report is not intended to be the comprehensive tree protection report.

Each tree on site is numbered for ease of identification and referenced by the number in this report and can be identified within the tree assessment schedule.

Tree Protection Zones (TPZ) are nominated for trees that will be preserved in the final site development.

The Safe Useful Life Expectancy (SULE) rating in a planning context is the time that a tree can be usefully retained. Refer Appendix B

Information contained in this Preliminary Arboricultural Assessment covers only the trees that were examined and reflects the condition of the trees at the time of inspection.

The Site

The site is located on the southeastern corner at the intersection of Gardeners and Bourke Street, Mascot.
The site supports a two storey concrete building with an open car park and perimeter landscaping to Gardeners Road and Bourke Street frontages.

Methodology

The body of this tree report is based on a visual ground level assessment. The trees assessed are number on the attached Tree Location Plan TP 01 to coincide with the Site Survey No.16235 prepared by Bee & Lethbridge Pty. Ltd.

The height of the trees were estimated, the crown spread and trunk diameters were measured at chest height (DCH).

Stuart Pittendrigh (Consulting Arborist) conducted the site assessment on 25 August 2009.

Stuart Pittendrigh
Consultant Arborist

TERMS USED IN TREE SURVEY AND REPORT

Age Class

(Y) - ***Young*** *refers to a well established but juvenile tree.*
(SM) - ***Semi-mature*** *refers to a tree at growth stages between immaturity and full size. A tree that has reached First Adult Form i.e. displays adult characteristics.*
(M) - ***Mature*** *refers to a full size tree with some capacity for further growth.*
(OM) - ***Over-mature*** *refers to a tree approaching decline or already declining.*

Health *refers to the tree's vigour, growth rate, disease and/or insects.*

Condition *summarises observations about the health and structure of the tree on a scale of 1-5.*
(G) Good, (F) Fair, (A) Average, (P) Poor and ***(VP) Very Poor.***

Height *expressed in metres refers to estimated overall height of tree.*

Spread *expressed in meters refers to estimated spread of crown at the drip line.*

(DBH) Diameter at Breast Height *expressed in millimeters refers to the trunk diameter at 1.4 metres above ground level.*

(PRZ) Primary Root Zone *refers to a radial offset equal to 10 times the trunk DBH measured from the centre of the tree.*

(CRZ) Critical Root Zone *refers to a radial offset equal to 5 times the trunk DBH measured from the centre of the tree.*

(TPZ) Tree Protection Zone *refers to a specific radial offset expressed in metres to ensure root and ground protection.*

S.U.L.E. Safe Useful Life Expectancy *Refer to Appendix.*

Assessment of individual trees

The following table notes physical dimensions, age class, condition and health at the time of assessment.

Tree No	Botanical Name *Common name*	Age Class	Height metres	Spread metres	D.C.H mm.	Condition / Comments / Actions	TPZ Rad.	SULE.
1	Casuarina glauca *Swamp oak*	M	15	8	425	Evergreen tree indigenous to the locality not considered rare or endangered. Good condition, healthy, structure and form typical of the species.	4m	2a
2	Ulmus parvifolia *Chimese elm*	M	7	7	Multi stem 215 bole	Deciduous tree introduced to the site, not considered rare or endangered. Good condition, healthy, structure and form typical of the species.	3m	2a
3	Ulmus parvifolia *Chimese elm*	M	6	6	175	Deciduous tree introduced to the site, not considered rare or endangered. Good condition, healthy, structure and form typical of the species.	3m	2a
4	Corymbia maculata *Spotted gum*	M	12	5	250	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, structure and form typical of the species.	3m	2a
5	Gleditsia 'Sunburst' *Golden Honey locust*	M	5	5	220	Deciduous tree introduced to the site, not considered rare or endangered. Good condition, healthy, structure and form modified by past pruning.	3m	2a
6	Ulmus parvifolia *Chimese elm*	M	6	6	155	Deciduous tree introduced to the site, not considered rare or endangered. Good condition, healthy, structure and form typical of the species.	3m	2a
7	Ulmus parvifolia *Chimese elm*	M	7	4	165	Deciduous tree introduced to the site, not considered rare or endangered. Good condition, healthy, structure and form typical of the species.	3m	2a
8	Ulmus parvifolia *Chimese elm*	SM	6	3	85	Deciduous tree introduced to the site, not considered rare or endangered. Good condition, healthy, structure and form typical of the species.Suppressed west elevation.	3m	2a
9	Ulmus parvifolia *Chimese elm*	M	3.5	3	95	Deciduous tree introduced to the site, not considered rare or endangered. Good condition, healthy, structure and form typical of the species.Suppressed west elevation.	3m	2a
10	Casuarina cunninghamiana *River she oak*	M	18	7.5	550	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, structure and form modified by past pruning.Suppressed west elevation.	6m	2a
11	Casuarina cunninghamiana *River she oak*	M	18	7	420	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, structure and form modified by past pruning.Suppressed east elevation.	4m	2a
12	Cupaniopsis anacardioides	M	5	5.5	140	Evergreen native tree introduced to the site	3m	2a

Tree No	Botanical Name *Common name* *Tuckeroo*	Age Class	Height metres	Spread metres	D.C.H mm.	Condition / Comments / Actions	TPZ Rad.	SULE.
						not considered rare or endangered. Good condition, healthy, structure and form typical of the species.		
13	*Eucalyptus sideroxylon* *Iron bark*	M	6	8	360	Evergreen native tree introduced to the site not considered rare or endangered. Poor condition, small branch and twid die back throughout crown, thinning canopy,epicormics. Structure and form modified by past pruning.	4m	3e
14	Corymbia maculata *Spotted gum*	M	15	4.5	260	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, structure and form typical of the species.	3m	2a
15	Corymbia maculata *Spotted gum*	M	11	5	235	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, structure and form typical of the species.	3m	2a
16	Corymbia maculata *Spotted gum*	M	12	6	310	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, structure and form typical of the species.	3m	2a
17	Corymbia maculata *Spotted gum*	M	10	6	265	Evergreen native tree introduced to the site not considered rare or endangered. Fair condition, healthy, structure and form typical of the species, small branch die back.	3m	2e
18	Corymbia maculata *Spotted gum*	M	16	5	290	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, structure and form typical of the species.	3m	2a
19	*Eucalyptus sideroxylon* *Iron bark*	M	11	11	515	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, structure and form modified by past pruning.	5m	2a
20	Corymbia maculata *Spotted gum*	SM	5	4	125	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, structure and form typical of the species.Suppressed by adjoining iron bark.	3m	2a
21	*Eucalyptus sideroxylon* *Iron bark*	M	11	10	600	Evergreen native tree introduced to the site not considered rare or endangered. Fair condition, small branch and twig die back throughout crown, jewel beetle activity, structure and form modified by past pruning.	6m	2e
22	Corymbia maculata *Spotted gum*	M	10	4	125	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, structure and form typical of the species.Co -dominant stems at 2.8m above ground level,strong union.	3m	2a
23	Corymbia maculata *Spotted gum*	M	9	6	200	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, structure and form typical of the species.	3m	2a

Tree No	Botanical Name *Common name*	Age Class	Height metres	Spread metres	D.C.H mm.	Condition / Comments / Actions	TPZ Rad.	SULE.
24	Corymbia maculata *Spotted gum*	SM	6	2	130	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, structure and form typical of the species.	3m	2a
25	Eucalyptus scoparia *Willow gum*	M	11	10	515	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, structure and form typical of the species.Small branch and twig die back throughout crown. Branches impact on adjacent aerial cables.	5m	2a
26	*Eucalyptus sideroxylon* *Iron bark*	M	10	8.5	480	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, structure and form modified by past pruning.	5m	3a
27	Eucalyptus microcorys *Tallow- wood*	M	21	12	695	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, structure and form typical of the species.Small branch and twig die back throughout crown. Branches overhang adjoining roof.	7m	2a
28	Cupaniopsis anacardioides *Tuckeroo*	M	6	5	Multi stem	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, co-dominant stems, strong union.	3m	2a
29	Casuarina cunninghamiana *River she oak*	M	18	7	485	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, structure and form typical of the species. Lean towards north, slight ground heave, tension roots.	5m	2a
30	Cupaniopsis anacardioides *Tuckeroo*	M	4	4	2x50	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, co-dominant stems, included bark.	3m	2a
31	Cupaniopsis anacardioides *Tuckeroo*	M	5.5	3	Multi stem	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, co-dominant stems, strong union.	3m	2a
32	Cupaniopsis anacardioides *Tuckeroo*	M	6	6	135 stem	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, structure and form typical of the species.	3m	2a
33	Casuarina cunninghamiana *River she oak*	M	13	5	1x190 1x260	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, co-dominant stems, strong union.	3m	2a
34	Casuarina cunninghamiana *River she oak*	M	13	6.5	350	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, structure and form typical of the species.Suppressed east elevation.	4m	2a
35	Casuarina cunninghamiana *River she oak*	M	18	8	580	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, structure and form modified by past pruning.	6m	2a

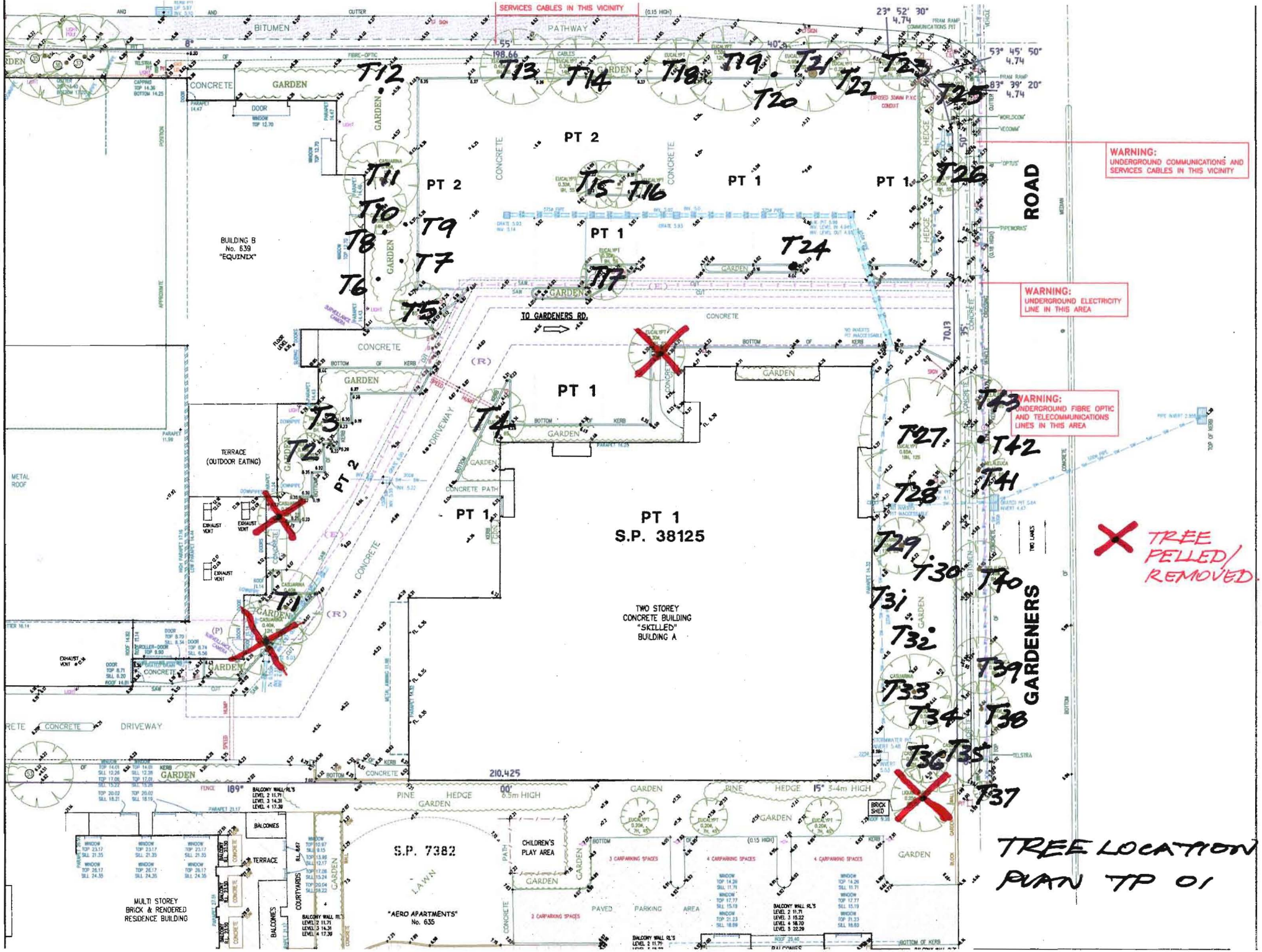
Tree No	Botanical Name *Common name*	Age Class	Height metres	Spread metres	D.C.H mm.	Condition / Comments / Actions	TPZ Rad.	SULE.
36	Casuarina cunninghamiana *River she oak*	M	15	6.5	600	Evergreen native tree introduced to the site not considered rare or endangered. Good condition, healthy, structure and form modified by past pruning.	6m	2a
	Street Trees							
37	Casuarina glauca *Swamp oak*	M	8	4	200	Evergreen tree indigenous to the locality not considered rare or endangered. Average condition,structure and form modified by extensive pruning.	3m	3e
38	Casuarina glauca *Swamp oak*	M	5	2.5	235	Evergreen tree indigenous to the locality not considered rare or endangered. Average condition,structure and form modified by extensive pruning.	3m	3e
39	Casuarina glauca *Swamp oak*	M	9	2	280	Evergreen tree indigenous to the locality not considered rare or endangered. Average condition,structure and form modified by extensive pruning.	3m	3e
40	Melaleuca quinquenervia *Broad leaf paper-bark*	M	6	4	390	Evergreen tree indigenous to the locality not considered rare or endangered. average condition, small branch and twig die back, epicormics, structure and form modified by extensive pruning.	4m	3e
41	Melaleuca quinquenervia *Broad leaf paper-bark*	M	5	2	1x280 1x300	Evergreen tree indigenous to the locality not considered rare or endangered. poor condition, co-dominant stems,strong union epicormics, structure and form modified by extensive pruning.	4m	3e
42	Casuarina glauca *Swamp oak*	M	5	1.5	160	Evergreen tree indigenous to the locality not considered rare or endangered. Average condition,structure and form modified by extensive pruning.	3m	3e
43	Melaleuca quinquenervia *Broad leaf paper-bark*	M	5	3	340	Evergreen tree indigenous to the locality not considered rare or endangered. average condition, small branch and twig die back, structure and form modified by extensive pruning.	4m	3e

NOTES ON SAFE USEFUL LIFE EXPECTANCY (SULE RATING) AS USED IN TREE DESCRIPTION TABLE

In a planning context the time a tree can expect to be usefully retained is the most important long-term consideration. Safe Useful Life Expectancy (SULE) is the life expectancy of the tree modified first by its age, health, condition, safety and location (to give safe life expectancy), then by economics, effects on better trees and sustained amenity (Barrel! 1993 and 1995). Trees with short SULE may at present be making a contribution to the landscape but their value to the local amenity will decrease rapidly towards the end of this period, prior to their being removed for safety or aesthetic reasons.

SULE categories

	1 LONG SULE	2 MEDIUM SULE	3 SHORTSULE	4 REMOVALS	5 MOVED OR REPLACED
A	Long: appeared to be retainable alt the time of assessment for over 40 years with an acceptable degree of risk, assuming reasonable maintenance.	Medium: appeared to be retainable at the time of assessment for 15 to 40 years with an acceptable degree of risk, assuming reasonable maintenance.	Short- appeared to be retainable at the time of assessment for 5 to 15 years with an acceptable degree of risk, assuming reasonable maintenance.	Removal: trees which should be removed within the next 5 years.	Moved or Replaced: Trees which can be readily moved or replaced
B	Structurally sound trees located in positions that can accommodate future growth	Trees that may only live between 15 and 40 more years	Trees that may only live between 5 and 1 5 more years.	Dead, dying, suppressed or declining trees through disease or inhospitable conditions	Small trees less than 5 metres (m) in height
C	Trees that could be made suitable for long-term retention by remedial tree care.	Trees that may live for more than 40 years but would be removed for safety or nuisance reasons.	Trees that may live for more than 15 years but would be removed for safety or nuisance reasons.	Dangerous trees through damage, structural defect, instability or recent toss of adjacent trees.	Young trees less than 1 5 years old but over 5m in height
D	Trees of special significance for historical, commemorative or rarity reasons that would warrant extraordinary efforts to secure their long term retention.	Trees that may live for more than 40 years but should be removed to prevent interference with more suitable individuals or to provide space for new planting.	Trees that may live for more than 15 years but should be removed to prevent interference with more suitable individuals or to provide space for new planting.	Dangerous trees through structural detects including cavities, decay, included bark, wounds or poor form.	Trees that have been regularly pruned to artificially control growth'
E		Trees that could be made suitable for retention in the medium term by remedial tree care	Trees that require substantial remedial tree care and are only suitable for retention in the short term.	Damaged trees that are' clearly not safe to retain	
F				Trees that may live for more than 5 years but should be removed to prevent interference with more suitable individuals or to provide space for new planting	
G				Trees that are damaging or may cause damage to existing structures within 5 years	
H				Trees that will become dangerous after removal of other trees for the reasons given in A) to F).	


SERVICES CABLES IN THIS VICINITY
WARNING: UNDERGROUND COMMUNICATIONS AND SERVICES CABLES IN THIS VICINITY
WARNING: UNDERGROUND ELECTRICITY LINE IN THIS AREA
WARNING: UNDERGROUND FIBRE OPTIC AND TELECOMMUNICATIONS LINES IN THIS AREA
ROAD
GARDENERS
BUILDING B No. 639 "EQUINIX"
TERRACE (OUTDOOR EATING)
METAL ROOF
PT 1
PT 2
S.P. 38125
TWO STOREY CONCRETE BUILDING "SKILLED" BUILDING A
TO GARDENERS RD.
DRIVEWAY
CONCRETE PATH
CHILDREN'S PLAY AREA
S.P. 7382
"AERO APARTMENTS" No. 635
MULTI STOREY BRICK & RENDERED RESIDENCE BUILDING
PAVED PARKING AREA
T1 T2 T3 T4 T5 T6 T7 T8 T9 T10 T11 T12 T13 T14 T15 T16 T17 T18 T19 T20 T21 T22 T23 T24 T25 T26 T27 T28 T29 T30 T31 T32 T33 T34 T35 T36 T37 T38 T39 T40 T41 T42 T43
TREE FELLED/ REMOVED.
TREE LOCATION PLAN TP 01