

DC Submission For
Private / Public Building Developments

NParks

Contents

PART 1 INFORMATION REQUIREMENTS

1. Plans, Application Form and Checklist

A registered architect / professional engineer is required to submit and sign all layers of drawing digitally, a completed NParks' application form, relevant checklist and enclose the letter of authorization from the developer :

The plans should comprise of :

- a.) Key and location plans of the development site (scale 1 : 10000 or 1 : 5000) with access to the site from a street or road
- b.) Site plan (scale 1 : 500, 1 : 200 or 1 : 100)
- c.) Address Lot and/or plot number of the development site and neighbouring lots
- d.) 1st storey plan (scale 1 : 500, 1 : 200 or 1 : 100)
- e.) Basement plan (scale 1 : 500, 1 : 200 or 1 : 100)
- f.) Survey plan (survey done less than 2 years at the point of application and endorsed by a qualified surveyor). Not applicable for Alteration & Additions proposal

2. Site Information (if applicable) drawing

		Site Plan	Cross Sectional Drawing
(a)	Development boundary verged in red	Indicate	
(b)	Proposed development layout	Indicate	
(c)	Existing and proposed road reserve line verged in red	Indicate	Indicate
(d)	Width of proposed road	Indicate	
(e)	Category of existing and proposed roads	Indicate	
(f)	Existing and proposed road sidetable	Indicate	
(g)	Existing and proposed levels of the development site	Indicate	Indicate
(h)	Basement line highlighted in brown dotted line	Indicate	
(i)	Boundary / retaining wall is to be highlighted in orange.	Indicate	
(j)	Fire engine access and fire hardstanding areas.	Indicate	
(k)	Schematic engineering drawing with dimensions of retaining / boundary wall and foundation.		Indicate

3 Conservation Of Trees / Single-Stem Palms Within Development Site

(only applicable if the development is within the gazetted Tree Conservation Area or on vacant land)

		Layout Plan	Cross Sectional Drawing
(a)	All existing trees / single-stem palms, with species, girth, height and the numbering indicated on plan.	Indicate	

i.) Trees / single-stem palms within the site boundary and on the neighbouring lot (up to 5m from the boundary); with the following information indicated:

- species
- girth size (measured 0.5m from the ground)
- height (if available)

ii.) All trees / single-stem palms are uniquely numbered. The numbering should be unique and consistent with architectural plans (if applicable) throughout the project.

Notes:

1) Qualified Person / Surveyor is to obtain permission from the neighbouring owners to gather the information required.

2) Refer to Annexes 4-1 to 4-4 on method of measuring girth of a tree/single-stem palm.

		Layout Plan	Cross Sectional Drawing
(b)	The colour code for existing trees / palms / shrubs is as follows:	Indicate	

Table 3b - Colour Code for existing trees/palms/shrubs

Status of existing trees/palms/shrubs	Outline in colour
To be retained	Green
To be removed	Yellow
Removed without written approval	Red
Removed with written approval	*Yellow (indicate the approved date in the tree schedule)
Non-existence after inspection	Indicate a 'cross' on tree symbol

		Layout Plan	Cross Sectional Drawing
c)	All existing trees / single-stem palms indicated on the survey plan should be reflected on site plan and indicated in Annexes 1 and 2.	Indicate	

4 Retention Of Roadside Trees / Palms / Shrubs

		Layout Plan	Cross Sectional Drawing
(a)	All existing trees / palms / shrubs, with species, girth, height and the numbering indicated on plan.	Indicate	

i) Roadside trees / palms / shrubs abutting the development boundary and up to 10m on both sides of the boundary; with the following information indicated:

- species
- girth size (for tree/ single-stem palm; measured 1.0m from the ground)
- height (if available) and number (cluster palm / shrub)

ii.) All trees / palms are uniquely numbered. The numbering should be unique and consistent with architectural plans (if applicable) throughout the project.

		Layout Plan	Cross Sectional Drawing
(b)	The colour code for existing trees / palms / shrubs is as follows:	Indicate	

Table 4b - Colour Code for existing trees/palms/shrubs

Status of existing trees/palms/shrubs	Outline in colour
To be retained	Green
To be removed	Yellow
Removed without written approval	Red
Removed with written approval	*Yellow (indicate the approved date in the tree schedule)
Non-existence after inspection	Indicate a 'cross' on tree symbol

		Layout Plan	Cross Sectional Drawing
c)	All existing trees / palms / shrubs indicated on the survey plan should be reflected on site plan and indicated in Annex 3.	Indicate	

5. Photographs

Photographs of trees and single stem palms proposed for retention within development site in Tree Conservation Area or on vacant land are to be submitted

The trees in the photographs are numbered according to numbering shown on plan

6. Planting Provision

		Layout Plan	Cross Sectional Drawing
a)	All proposed green buffer/planting verges/roadside planting verges (whenever applicable) are coloured green on the site plan and 1 st storey plan.	Indicate	
b)	Widths of all proposed planting provisions provided in 6(a) are indicated.	Indicate	Indicate
c)	All slopes are shown on plan with standard symbols. The gradients of all proposed slopes are shown.	Indicate	Indicate

7. Hedge Planting Around Proposed Bin Centre and Substation

(only applicable to public building developments)

		Layout Plan	Cross Sectional Drawing
	Hedge planting to be indicated on plan with a wavy green line.	Indicate	

8. Proposed SWA Section 18 Road (if applicable)

		Layout Plan	Cross Sectional Drawing
	Width of proposed road	Indicate	

PART II Division 1A Regulatory Requirements

1. Conservation Of Trees / Single-Stem Palms Within Development Site

(only applicable if the development is within the gazetted Tree Conservation Area or on vacant land)

Under the Parks & Trees Act S14, a person must obtain written approval from the Commissioner of Parks & Recreation to remove or cut any tree with a girth exceeding 1m growing on any vacant land or on the Gazetted Tree Conservation Areas (TCA), unless it is :

- i. for the prevention of imminent danger; or
- ii in compliance with any obligation imposed by any written law; or
- iii an expendable species listed in Annex 5.

NParks' decision on whether a tree can be removed is final.

2. Tree Protection Zone (TPZ) For Retained Tree / Single-Stem Palm

		Layout Plan	Cross Sectional Drawing
2.1	The minimum protection zone from centre of tree / single-stem palm to be provided in accordance to the table below :	Indicate	

Table 2.1 –Minimum Protection Zone

Girth(m)	Minimum Protection Zone
≤ 1.0m	2.0m
1.0m but ≤1.5m	3.0m
>1.5m but ≤2.0m	4.0m
>2.0m	5.0m

*Depends on the root spread, especially for tree with girth more than 2.0m, larger tree protection zone will be determined at site on case by case basis.

		Layout Plan	Cross Sectional Drawing
2.2	Hoarding is to be provided along the limits of the protection zone around the tree. There must be no excavation, raise/lower of soil level, compaction and any form of construction including temporary works within the hoarded area	Indicate and Endorse	

3. Planting Provision Within A Development Site (Green Buffer & 2m Peripheral Planting Verges)

		Layout Plan	Cross Sectional Drawing
3.1	The requisite Green buffers are provided according to URA Road Buffer Standards.	Indicate	
3.2	A minimum 2m wide planting verge is to be provided for boundaries not abutting any existing or proposed road..	Indicate	
3.3	All proposed green buffers and 2m wide planting verges should generally be flat (gradient 1:40). Proposed slope, if any, should not be steeper than 1:2.5.	Indicate and Endorse	

4. Proposed Boundary/Retaining Wall

		Layout Plan	Cross Sectional Drawing
4.1	These structures should not encroach into green buffers, peripheral planting verges and planting verges beside driveways and parking areas.	Indicate and endorse	
4.2	Footing of the wall (e.g. retaining wall, boundary wall) should be recessed at least 2.0m below the proposed planting level if it encroaches more than 0.5m into a planting verge.		Indicate

5. Retention Of Roadside Trees / Palms

Proposed roadside elements should be constructed at minimum clearance away from the centre of an existing roadside tree / palm, as shown in the following table and illustration. If there are constraints on design that require roadside trees / palms to be felled, approval must be obtained from NParks.

Table 5 -Minimum clearance requirements from proposed roadside elements to the centre of an existing roadside tree or palm

Clause	Proposed roadside elements	Required minimum clearance of element from the centre of an existing :		
		Palm	Small to medium size tree	Large tree
5.1	Splay corner of : entrance culvert, bin centre driveway, substation driveway, MDF room driveway	1.0m	1.5m	2.5m
5.2	Cement crossing (e.g. pushcart ramp for bin centre)	2.0m		

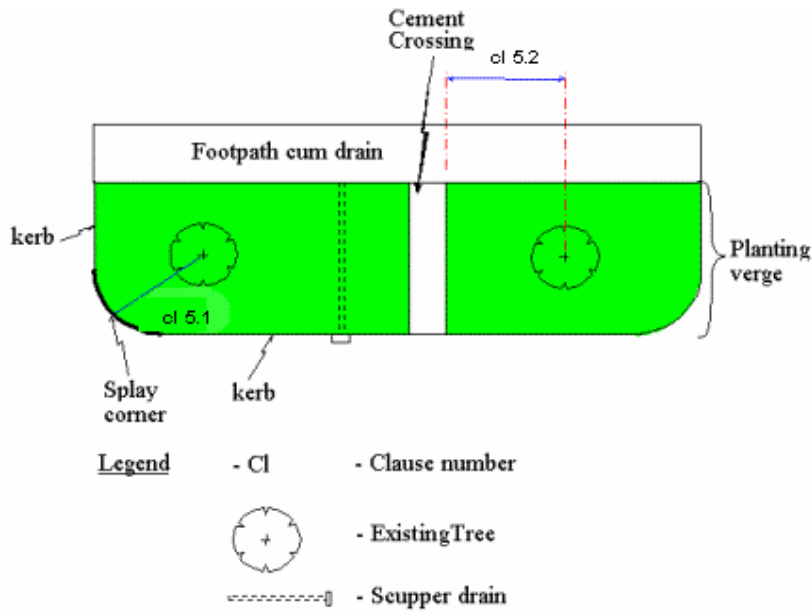


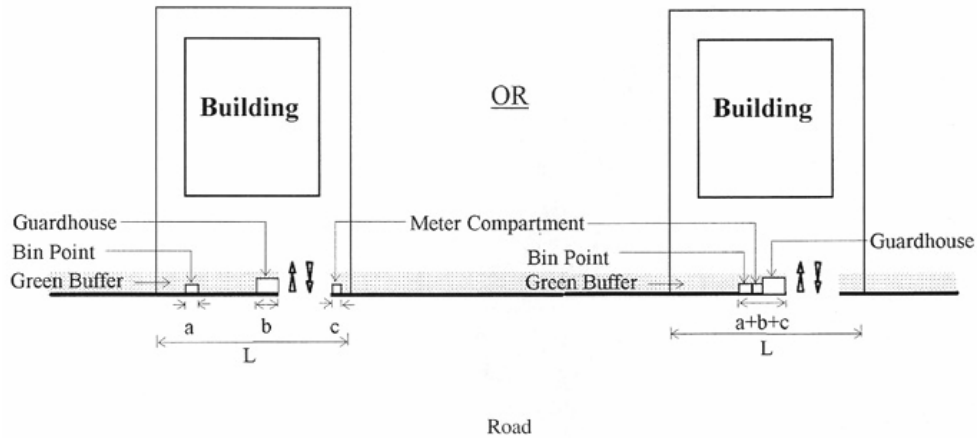
Figure 5 - Minimum clearance requirements from proposed roadside elements to an existing roadside tree or palm

6. Ancillary Structures Within The Green Buffer and 2m Peripheral Planting Verges

(Applicant can choose to either apply the prescriptive guidelines or the objective base guidelines)

6.1 Prescriptive Guidelines

		Layout Plan	Cross Sectional Drawing
(a)	All green buffers and the 2m peripheral tree planting verges are free from any encroachment, except for approved ancillary structures as listed in Annex 10.	Indicate and Endorse	
(b)	Height and width of all proposed ancillary items are indicated clearly on plan.	Indicate	
(c)	The total width of the structures allowable within the green buffer must not exceed 3.0m or 25% of the available road frontage, whichever is greater.	Indicate and Endorse	



Note : $a+b+c$ should not exceed 3m or 25% of the road frontage available (L), whichever is greater

Figure 6c – Illustration Of Prescriptive Guidelines

6.2 Objective-Based Guidelines

		Layout Plan	Cross Sectional Drawing
(a)	Proper annotated Landscape Plan and the justification in line with the objectives are submitted.	Indicate	
(b)	Landscape Plan to include all information as stated in the objective-based guidelines available in http://www.nparks.gov.sg/development/dev-gui_che.shtml	Indicate	

7. Planting Provision for Driveways

(only applicable to Public Building Developments)

		Layout Plan	Cross Sectional Drawing
7.1	A minimum 2.0m wide tree planting verge is to be provided on at least one side of the proposed internal driveway if the driveway does not abut the green buffer or any of the peripheral tree planting verges.	Indicate	
7.2	This 2.0m wide tree planting verge must be free from encroachment, above and below the planting level.	Indicate and Endorse	
7.3	This 2.0m wide tree planting verge should generally be flat (gradient not steeper than 1:40). Proposed slope, if any, should not be steeper than 1:2.5.	Indicate	

8. Planting Provision For At-Grade Open Surface Vehicular Parking Area

		Layout Plan	Cross Sectional Drawing
8.1	A minimum 2.0m wide tree planting verge is to be provided beside parking lots, if the parking area does not abut the green buffer or any of the 2m wide peripheral tree planting verges. (Tree planting verge is not required for lorry/bus parking lots within car parking area for industrial developments)	Indicate	
8.2	A minimum 4.0m wide tree planting verge (centre divider) is to be provided between two rows of parking lots as illustrated in Figure 8.	Indicate	
8.3	A minimum 4.0m wide tree planting verge (centre divider) is to be provided between a building and parking lots as illustrated in Figure 8 (except for industrial developments).	Indicate	
8.4	All proposed tree planting verges are generally flat (gradient not steeper than 1:40). Proposed slope, if any, is not steeper than 1:2.5.	Indicate	indicate
8.5	All tree planting verges that abut parking lots are free from any encroachment above and below planting level.	Endorse	

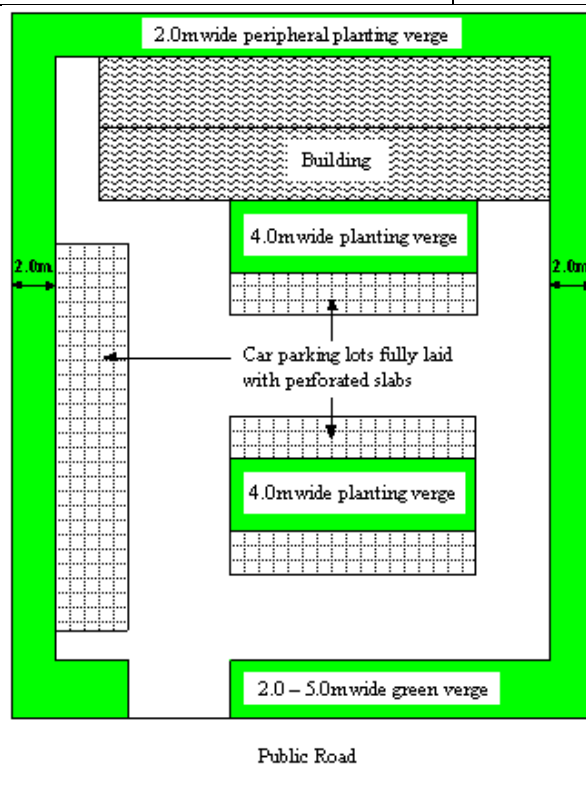


Figure 8 – Provision of planting verges between two rows of parking lots and between a building and parking lots.

		Layout Plan	Cross Sectional Drawing
8.6	All car parking lots are to be fully laid with aeration slabs. Each piece of slab should have 35% aeration area with all the void areas turfed.	Endorse	
8.7	For covered car parks, a minimum 2.0m wide tree planting verge is to be provided for car parks along the peripheral (aeration slabs is not required if a car park is three-quartered or more covered)	Indicate	

9. Hedge Planting Around Proposed Bin Centre and Substation

(only applicable to Public Building Developments)

		Layout Plan	Cross Sectional Drawing
	A minimum 1.0m wide hedge planting verge is to be provided around bin centre and substation as illustrated in Figure 9 below.	Indicate	

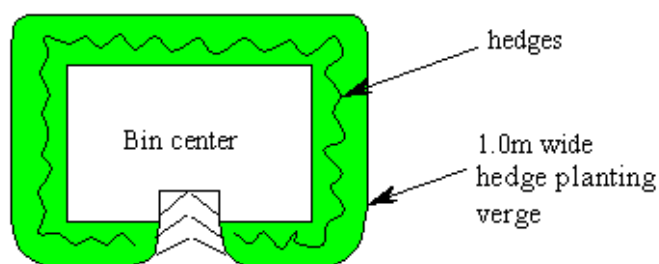


Figure 9 – Hedge planting verge

10. Proposed SWA Section 18 Roads

		Layout Plan	Cross Sectional Drawing
10.1	The length of a planting island should be at least 6.0m long. If it is less than 6.0m long, it should be indicated.	Indicate	
10.2	The width of roadside verges (roadside tree planting verge and service verge) are provided in accordance with LTA standard road cross section.	Indicate	
10.3	No underground services are allowed to be laid within the roadside planting verges. Services that are required to transverse through a planting verge into a building plot are to be laid at least 2.0m away from the centre of a tree / palm.	Indicate	

Annex 3 Existing Roadside Trees / Palms / Shrubs

Abutting The Development Boundary And Up To A Distance Of 10m On Both Sides of Boundary

Serial No.	Tree / No.	Botanical Name of Trees / Single Stem Palms	Girth Size (m)		Trees proposed to remove		Trees proposed to retain		*Reasons for removal / retention
			=< 1.0m (a)	> 1.0m (b)	DC (c)	BP (d)	DC (e)	BP (f)	
Total Nos. of Trees / Single Stem Palms									

Serial No.	Palm / Shrub	Botanical Name of Cluster Palms and Shrubs	Height (m)	Nos	Trees proposed to remove		Trees proposed to retain		*Reasons for removal / retention
					DC (c)	BP (d)	DC (e)	BP (f)	
Total Nos. of Cluster Palms / Shrubs									

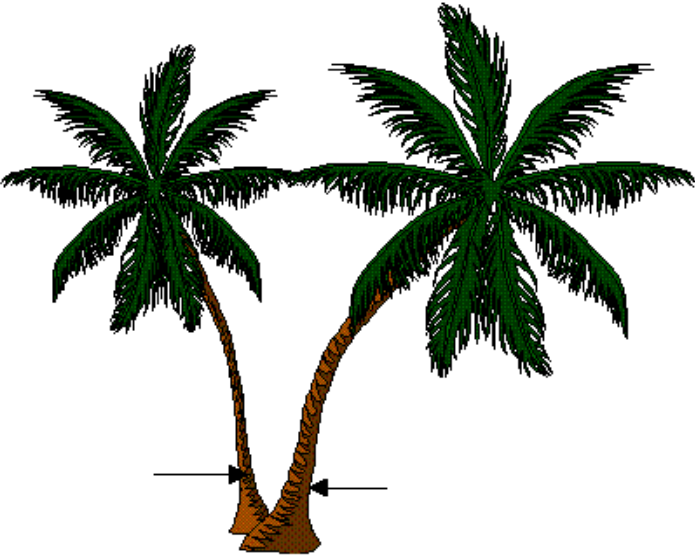
* Please refer to [Annex 3-1](#) for list of reasons

Annex 3-1 Reasons For Removal / Retention

Reasons for Removal		Reasons for Retention
main covered structure (ms)		good/rare species (gs) within the buffer zone (bz) uncovered structures (us) within road widening plot (wp)
Ancillary buildings		
e.g substation guard house bin centre	ss	
Outdoor recreational facilities		
e.g swimming pool tennis courts playground car park	ou	
Vehicular access		
driveway, fire engine access access to bin centre, substation footpath fire hardstanding area (fa)	va	
Other construction activities		
roadside drain, surface drain (dn) boundary wall (bw) retaining wall (rw) basement encroachment into green verges (bv) basement outside green verges (bo) construction (temp) activities (ca) sewer line & manhole (sw) soil profile change in height (sc)		
Health of tree		
strike by lightning, wind throw (sl) unhealthy (decay, rot) (uh) poor form (pf) hazard (hz)		

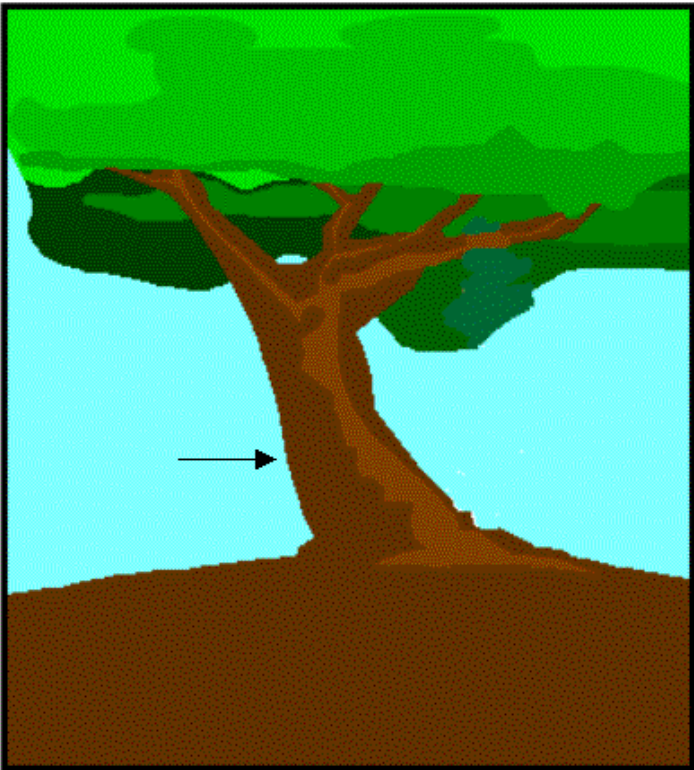
Annex 4-1 Girth Measurement For Multi-leader Tree (leaders sprout from collar)

For this type of multi-leader tree where the leaders sprout from the collar, measure the girth of each individual stem, and treat each stem as a separate tree. (arrowed)



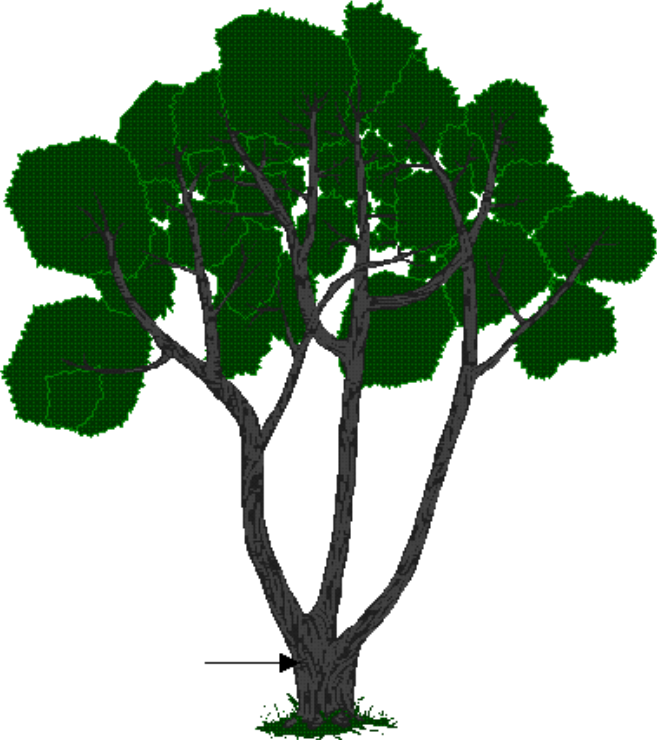
Annex 4-2 Girth Measurement For Buttressed Tree

For this type of buttressed tree, measure the girth at 0.5 metres height above the ground. (arrowed)



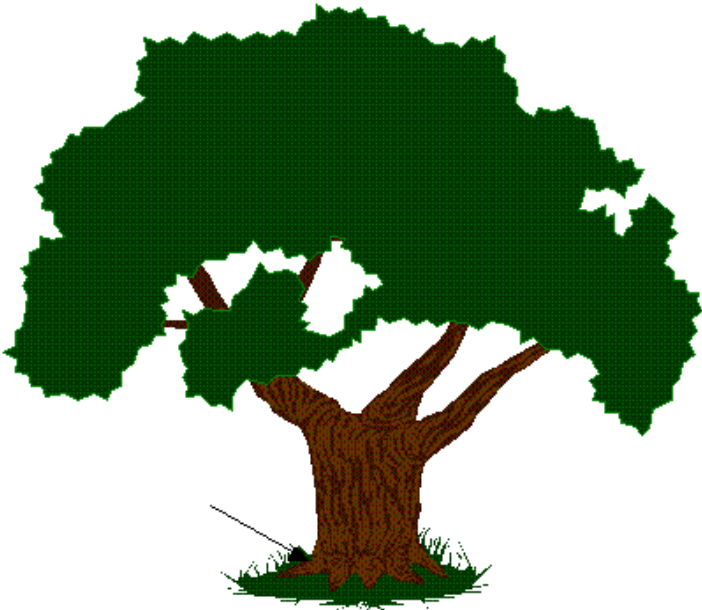
Annex 4-3 Girth Measurement For Multi-leader Tree (at a point between collar)

For this type of multi-leader tree, measure the girth at a point between the collar and 0.5 metres height above the ground. (arrowed)



Annex 4-4 Girth Measurement For Tree Growing On A Mound

For this type of tree growing on a mound, measure the 0.5 metres height above the ground next to the collar (arrowed), and not at the base of the mound.



Annex 5 Expendable Species

Trees	Palms
Albizzia (<i>Albizzia species</i>)	Coconut palms (<i>Cocos nucifera</i>)
African tulips (<i>Spathodea campanulata</i>)	
Brown Heart (<i>Andira inermis</i>)	
Cempedak (<i>Artocarpus integer</i>)	
Jackfruit (<i>Artocarpus heterophyllus</i>)	
Madras thorn (<i>Pithecellobium dulce</i>)	
Pong Pong tree (<i>Cerbera odollam</i>)	
Wattle (<i>Acacia auriculiformis</i>)	

Annex 10 - Structure In Green Buffer & Peripheral Planting Verge

(I) MINOR ANCILLARY STRUCTURES ALLOWED WITHIN GREEN BUFFER & PERIPHERAL PLANTING VERGES

S/N0	Structures	REMARKS
1	Flag poles	
2	Lamp posts and landscape light fittings	
3	Guard house & Bin centre	
4	OG Boxes	
5	Inspection chamber & minor sewer lines	Minor sewer line must be laid at least 2.0m below planting level
6	Water bulk meter	
7	Industrial water pipes	Water pipes must be laid at least 2.0m below planting level
8	Fire hydrant	
9	Entrance gate/post	
10	Metering compartment	
11	Vehicular impact guardrails.	

(II) STRUCTURES NOT ALLOWED WITHIN GREEN BUFFER & PERIPHERAL PLANTING VERGES

S/N0	Structures	REMARKS
1	Fire engine hardstanding areas	
2	Drain and access covers	Except for crossings running perpendicular to planting verge
3	Sign boards	