



## i-Tree Field Work Training

# Kit List

## i-Tree Eco Kit List

### Per Team

- DBH Tape
- Clinometer, Laser ace or Similar (For height and crown spread measurements)
- 50m Surveyors Tape
- Compass
- Flagging Tape
- Pin Flags
- Weatherwriter Clipboard, data sheets, pens and pencils
- Area Maps
- Chalk (to marks trees as measured)
- Plastic Bags (to collect unknown plant samples for ID)
- Surveyors Bag

### Optional

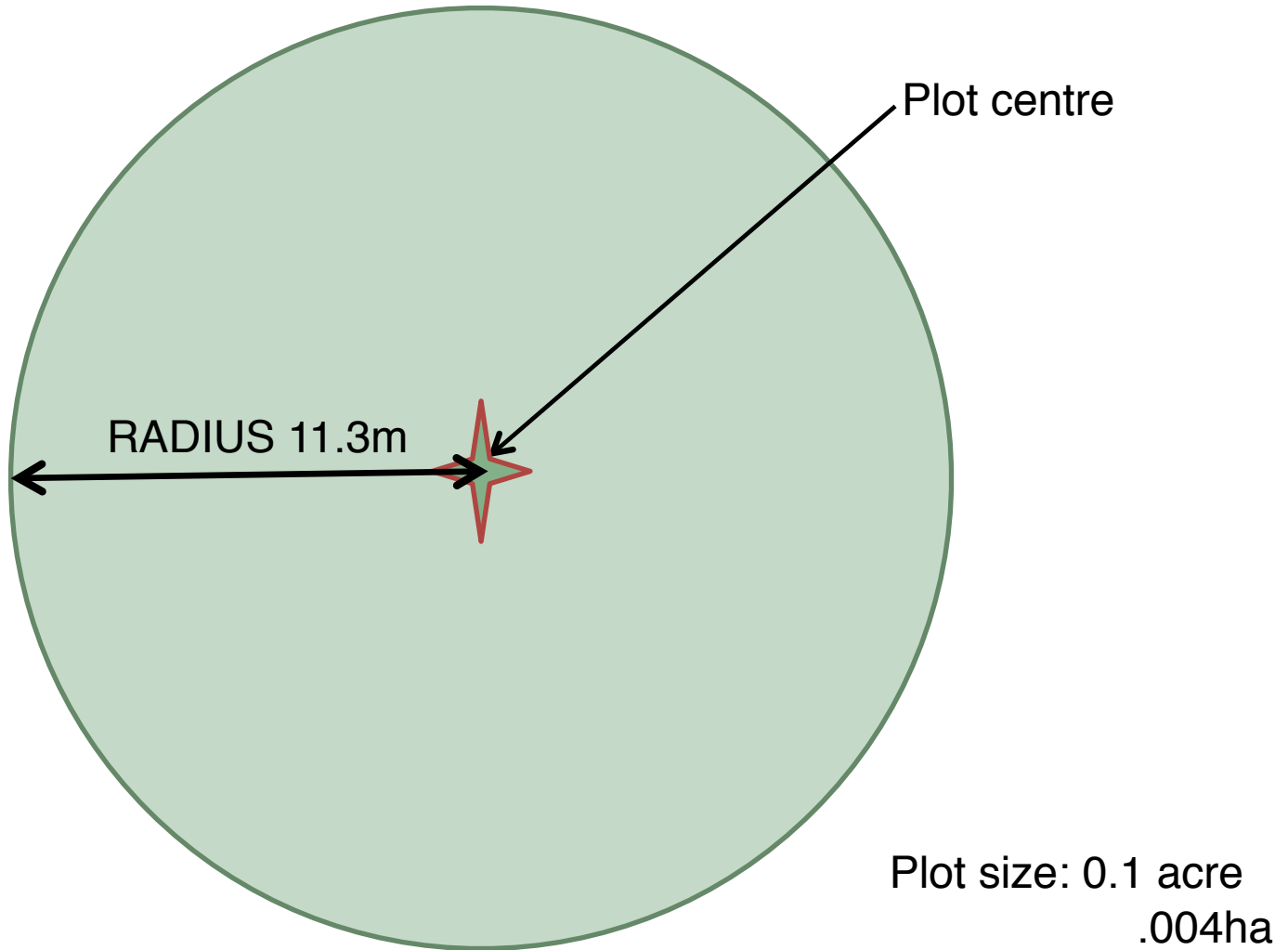
- GPS Unit
- Binoculars
- Tree Tags (for tree ID)
- Camera

### Per Project

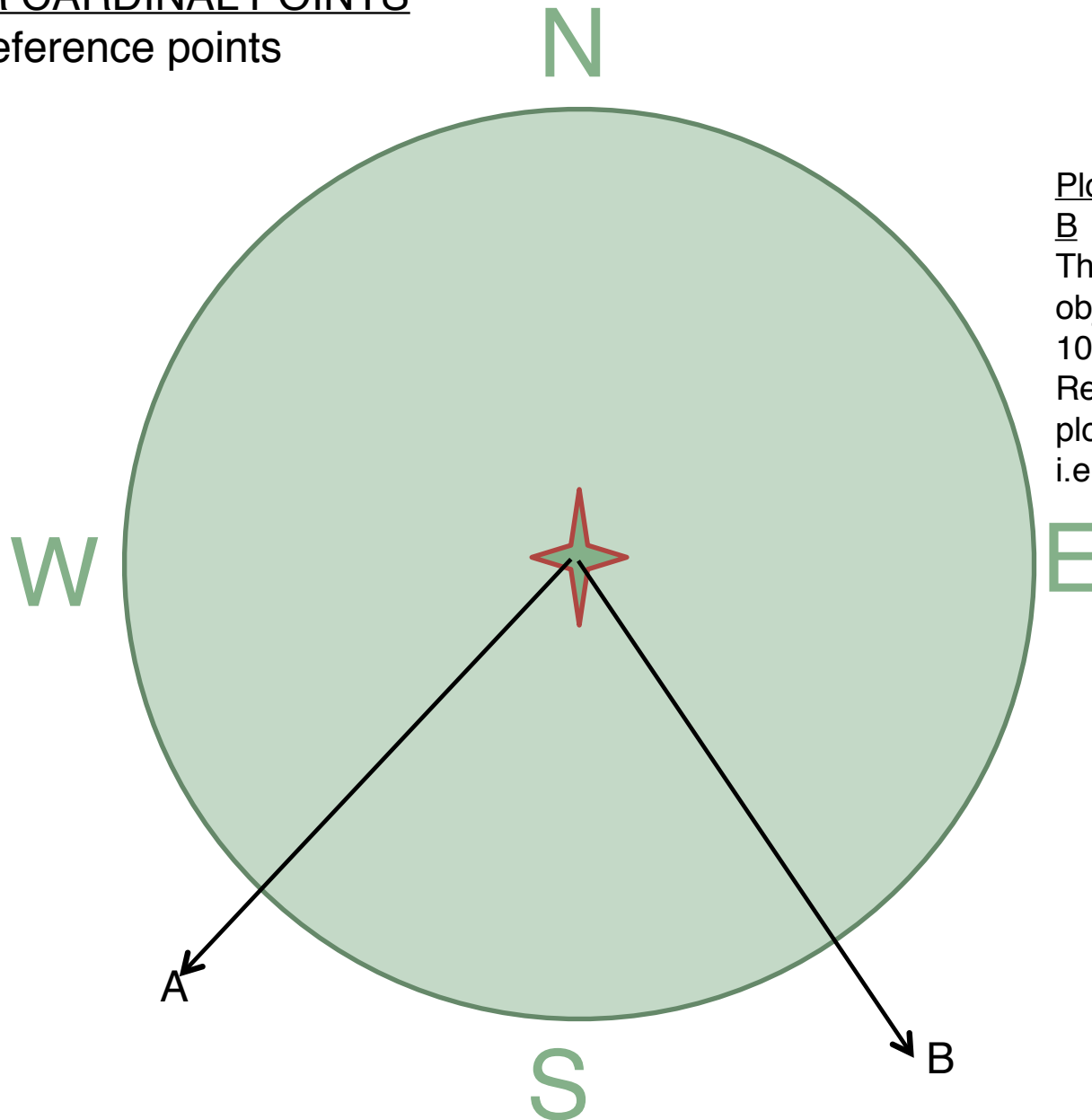
- Collins Tree species ID guide



# STANDARD I-TREE ECO PLOT



## FOUR CARDINAL POINTS – Plot reference points



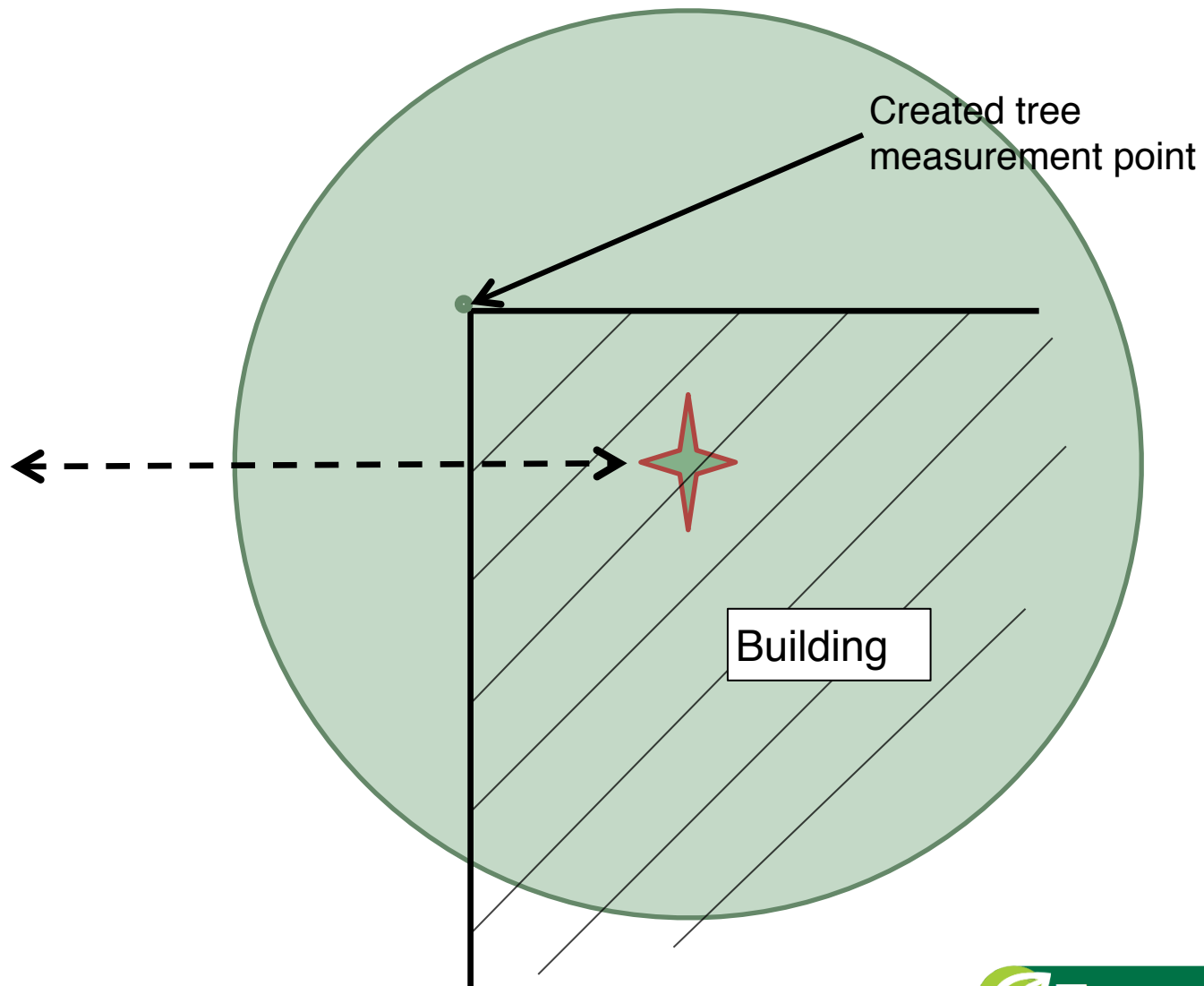
### Plot Reference Points A & B

These are permanent objects likely to be present 10-15 years

Record distance from the plot centre and direction i.e. 15m - 360 °



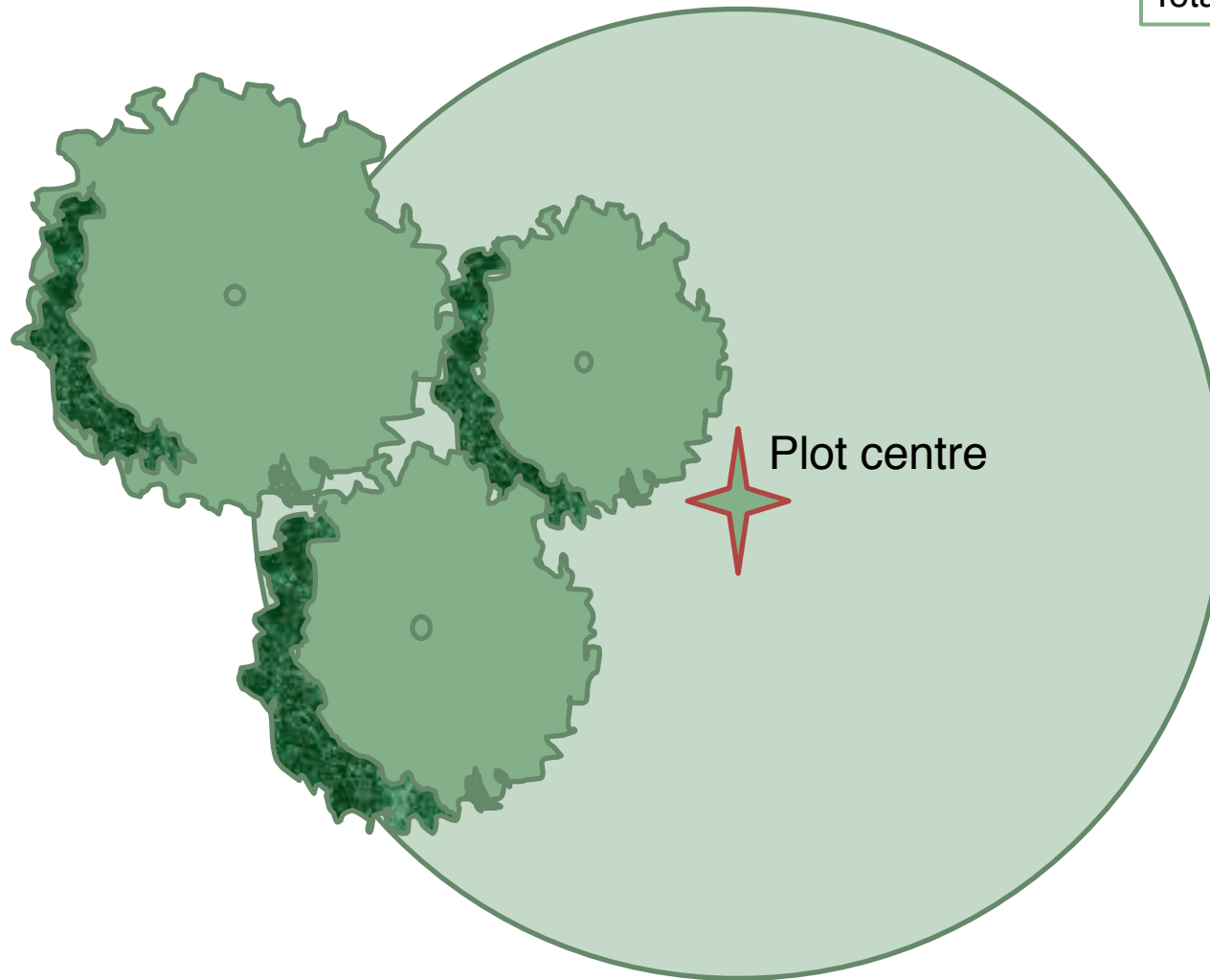
## INACCESSIBLE PLOT CENTRE



PERCENTAGE PLOT COVERED BY TREE CANOPY  
→ PERCENTAGE PLANTABLE

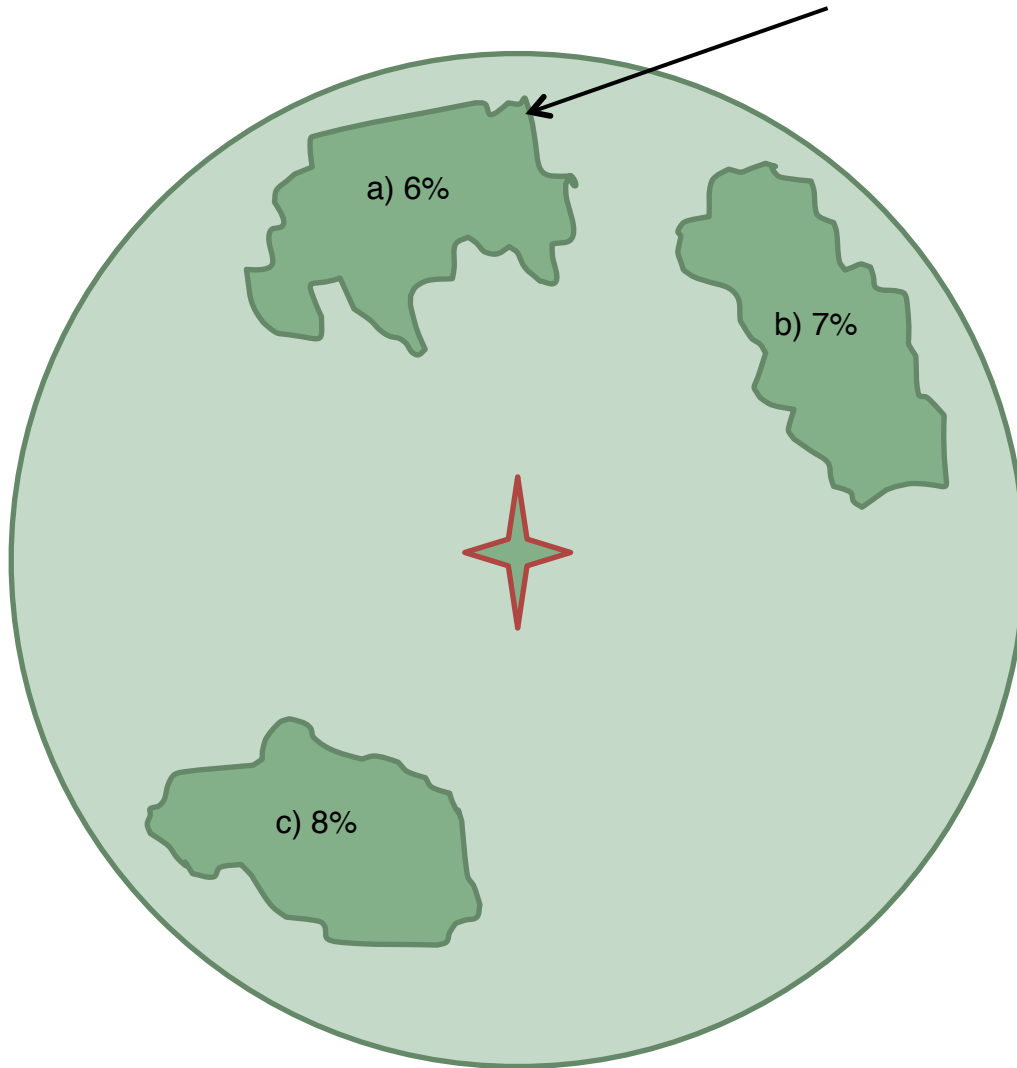
**% Plot area occupied by  
tree canopy**

Total: 25%



## SHRUB LAYER

Identify shrub species



### % Plot area occupied by shrub area

- a) 7%
- b) 6%
- c) 8%

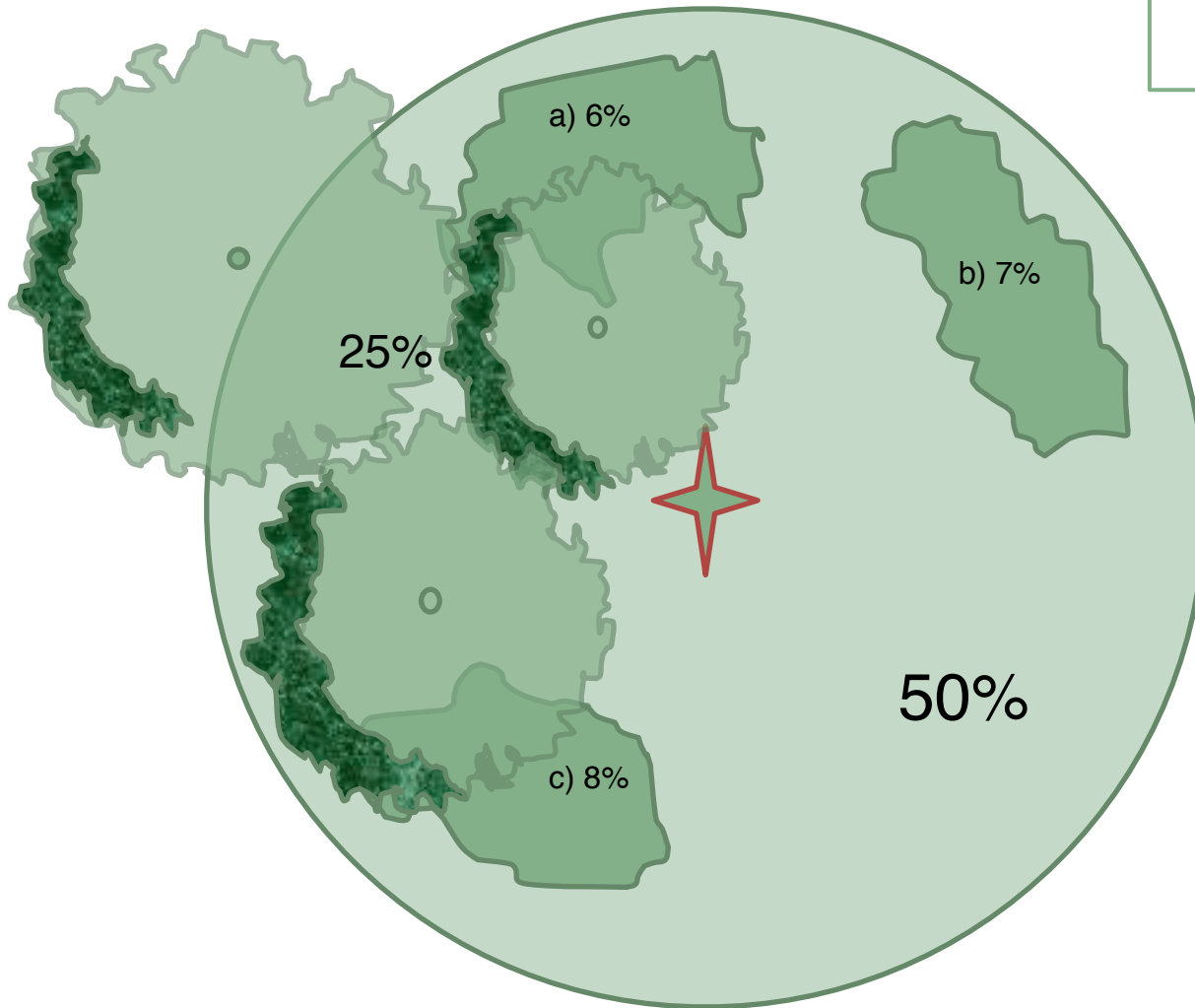
Total: 21%

## PLOT NOTIONAL PLANTABLE SPACE %

Plot Shrub Cover: 21%

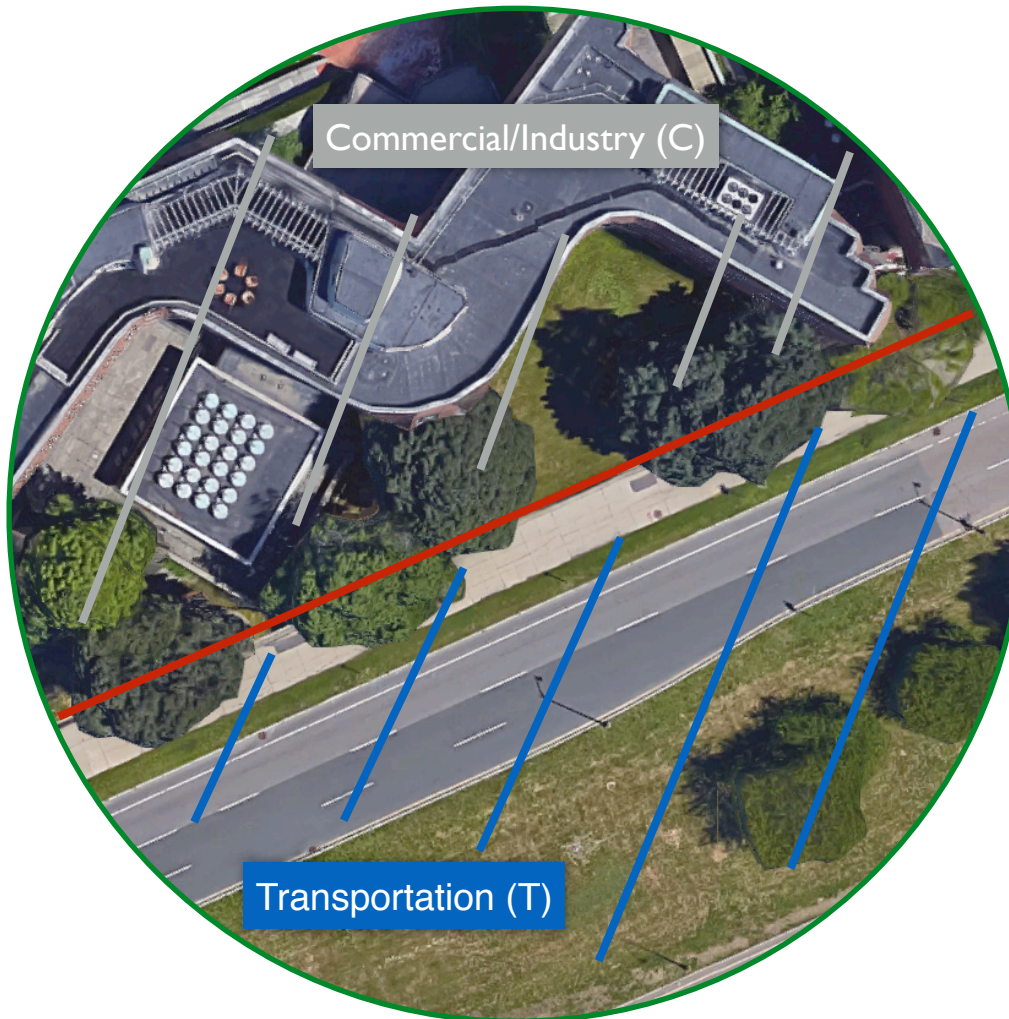
Plot Tree Cover: 25%

**Plot Notional Plantable Space =**  
(Maintained + Unmaintained Grass)  
- (Shrub Cover + Tree Cover)  
and Hard surfaces





## LAND USE CATEGORY – % OF ACUTAL PLOT



### % Land Use within Plot

Commercial/Industry (C): 50%  
Transportation (T): 50%

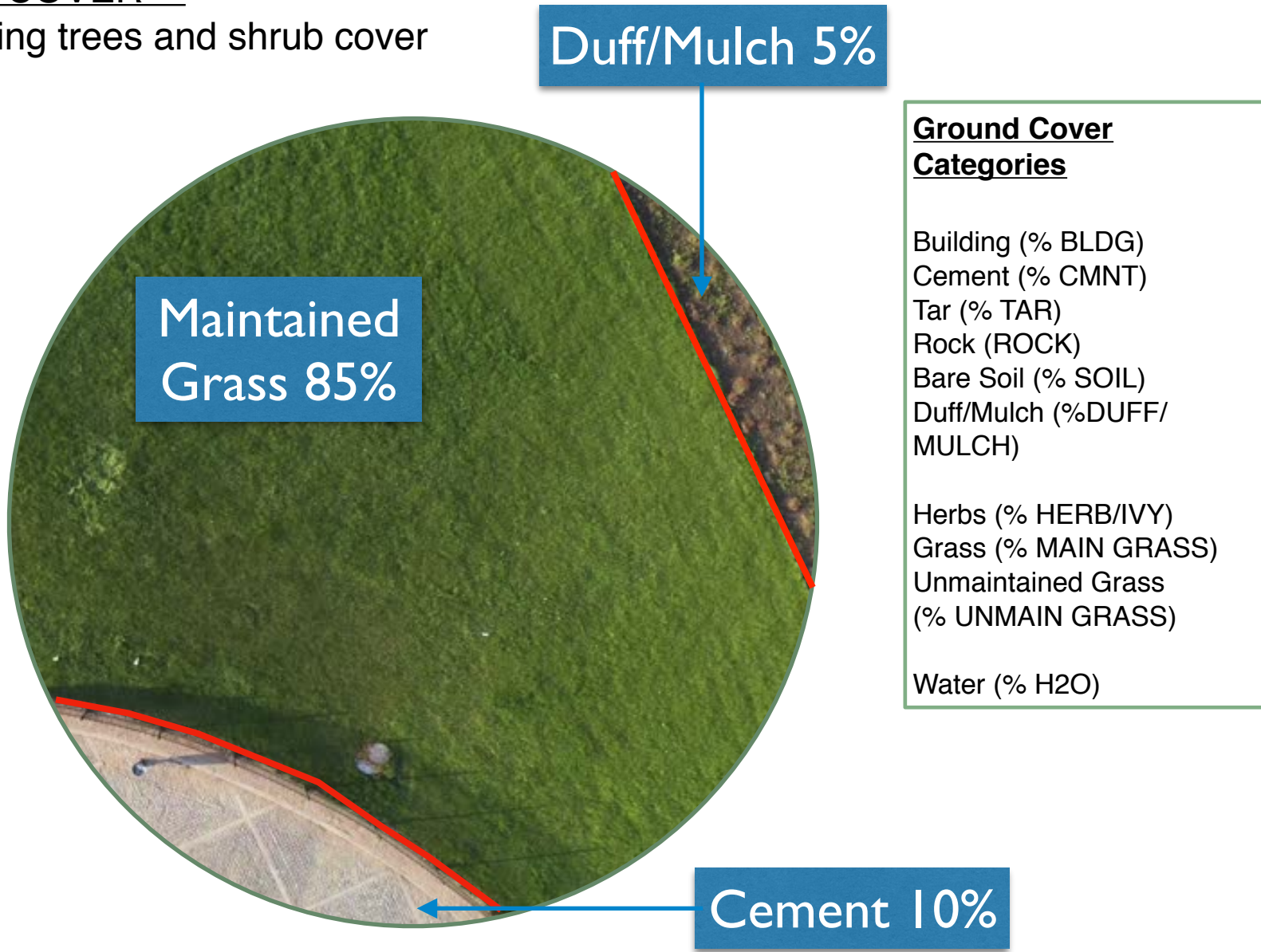
Total: 100%

### Land Use Types

Residential (R)  
Multi family Residential (M)  
Commercial Industry (C)  
Park (P)  
Cemetery (E)  
Golf Course (G)  
Agriculture (A)  
Vacant (V)  
Institutional (I)  
Utility (U)  
Water/Wetland (W)  
Transportation (T)  
Other (O)

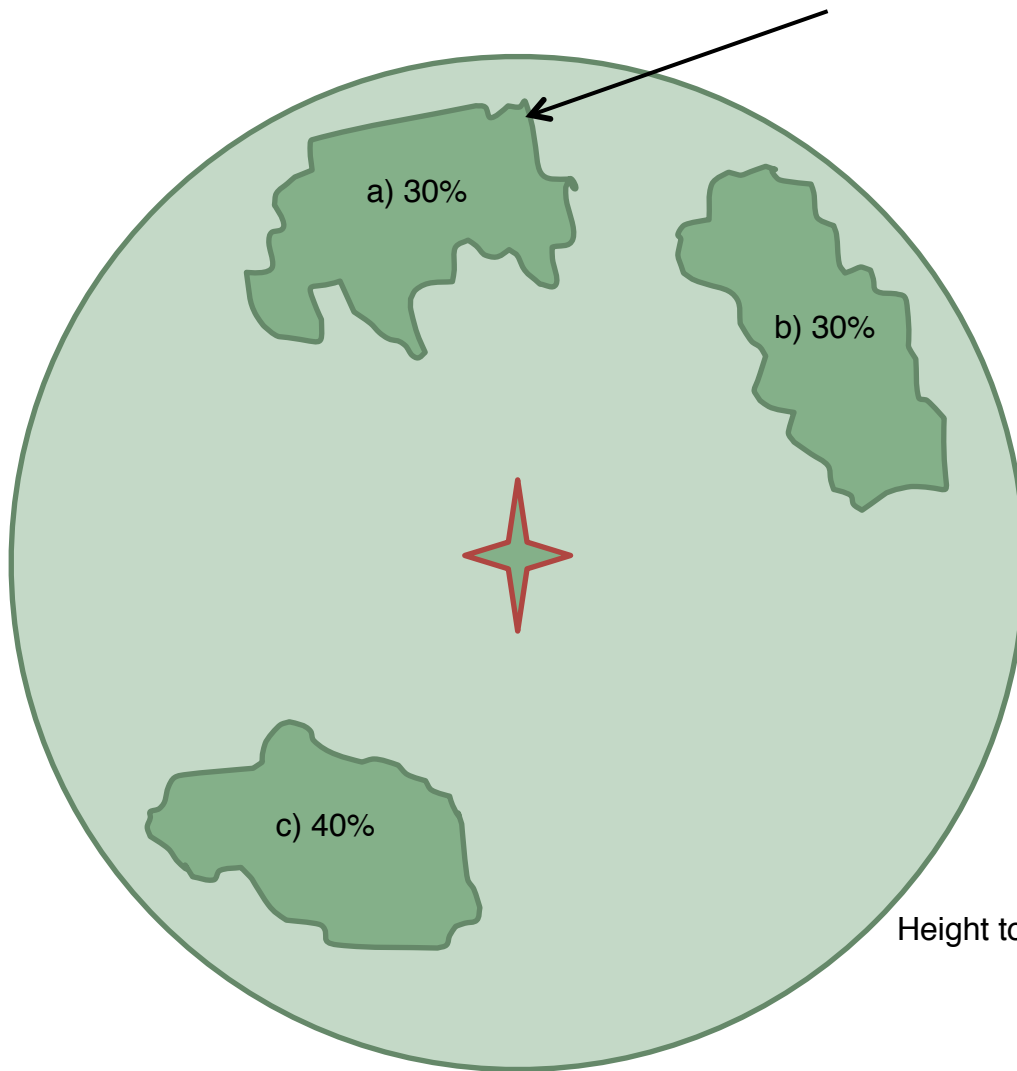
## GROUND COVER –

Not including trees and shrub cover



# SHRUB LAYER

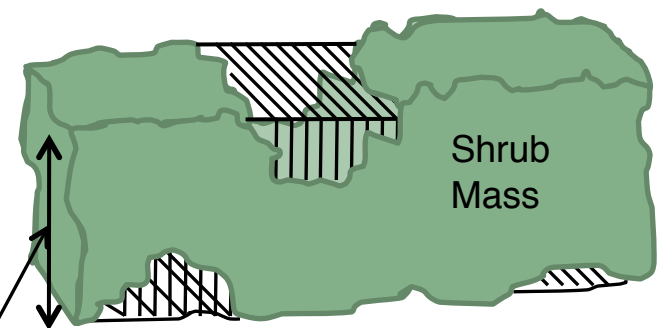
Identify shrub species



## % Plot shrub Mass (of 21%)


- a) 30%
- b) 30%
- c) 40%

Total: 100%



Height to the nearest .1cm

## Key

 % of shrub missing

## TREE INFORMATION REQUIRED 360°

### Measurements -

\* Start with farthest North Tree First

\*\* Record all trees with a DBH  $\geq$  7cm if at least half trunk is within the plot area

270° W

Plot centre

S  
180°

Direction from the plot centre  
i.e. 45°

E 90°

Distance to plot centre

#### Other observations

Land Use of the area  
the tree is situated

Genus

Species



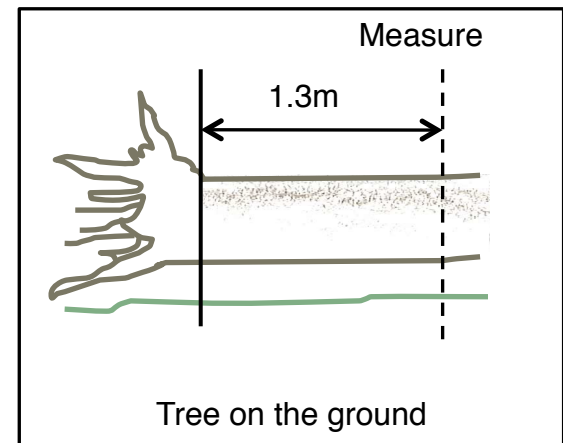
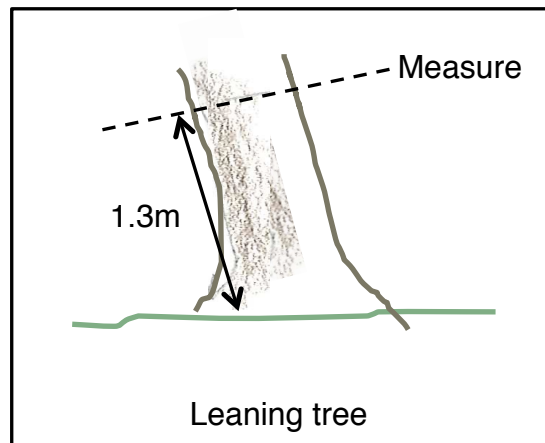
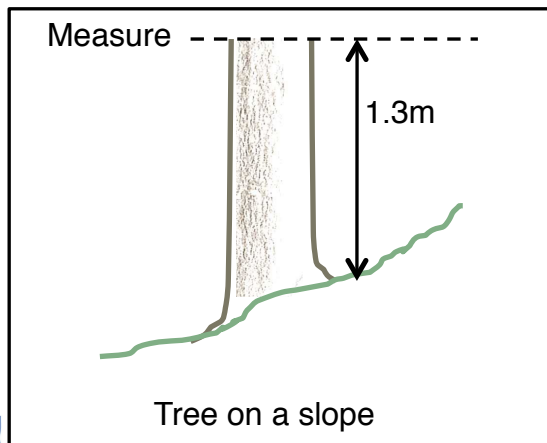
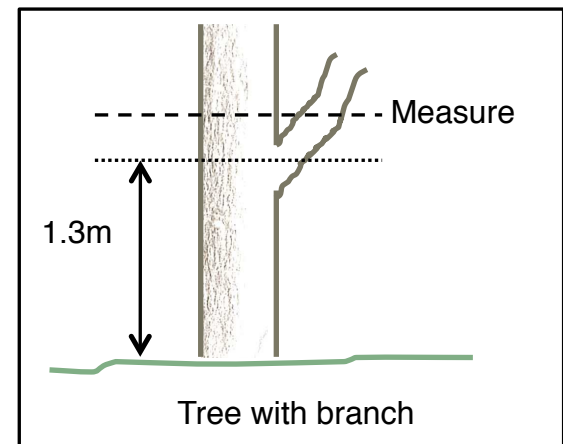
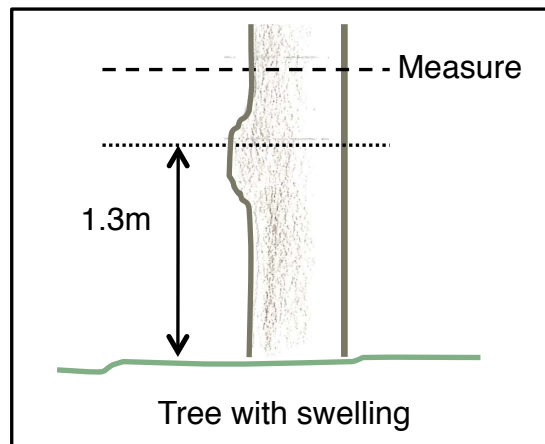
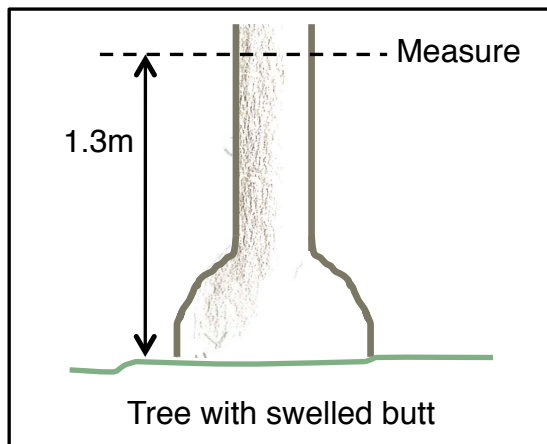
# Diameter at Breast Height (DBH)

Measured on the uphill side of tree nearest 0.1 inch/  
cm

Measured at 4.5ft (approx 1.35m) up the stem

Measure all trees with DBH  $\geq 1$  inch

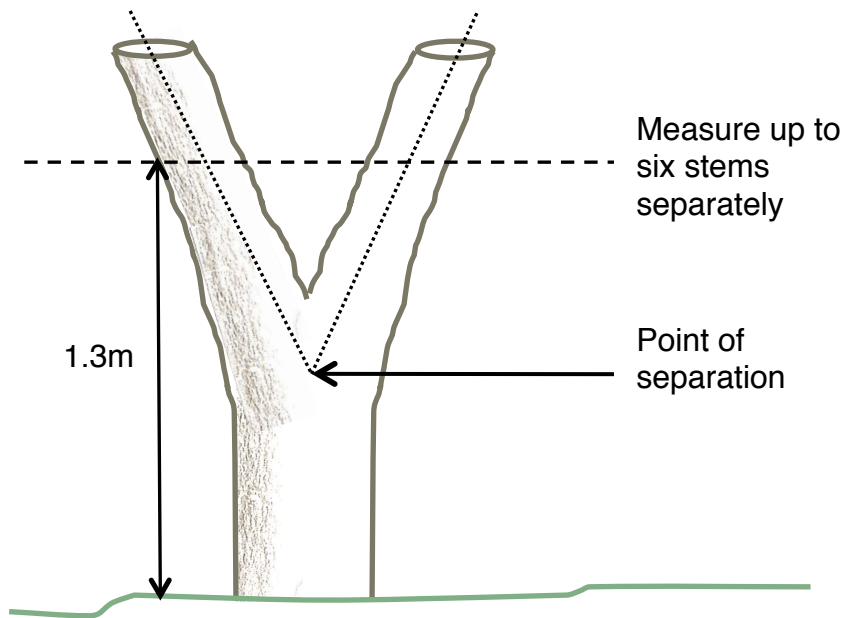
## Irregular DBH's



## Diameter at Breast Height (DBH) continued

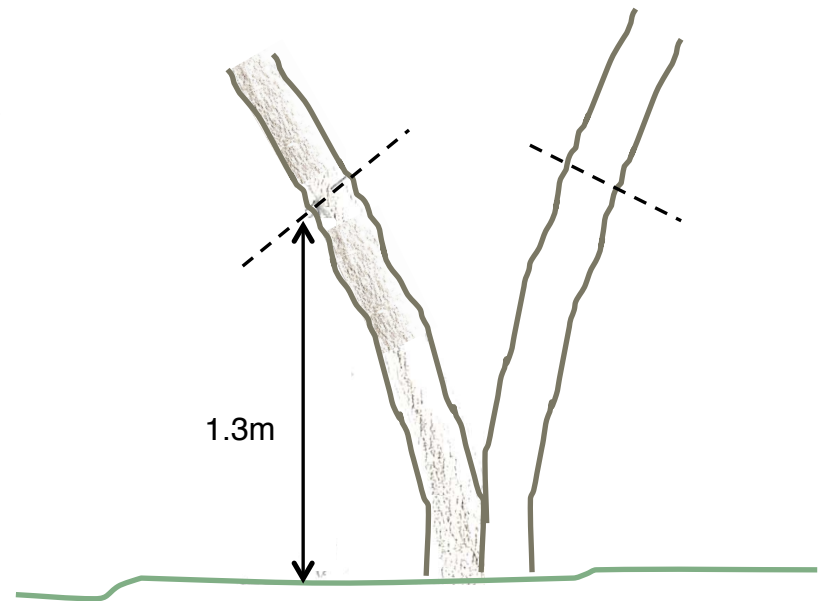
### For forked or multi-stemmed trees

If point of pith separation is above ground it is considered to be one tree



More than six stems lower measurement height to 1ft above ground and record diameter of largest six stems

If point of pith separation is below ground each stem is considered as an individual tree and should be measured



Any root sprouts with DBH  $\geq 7$ cm should be measured as individual trees. Below can be ignored



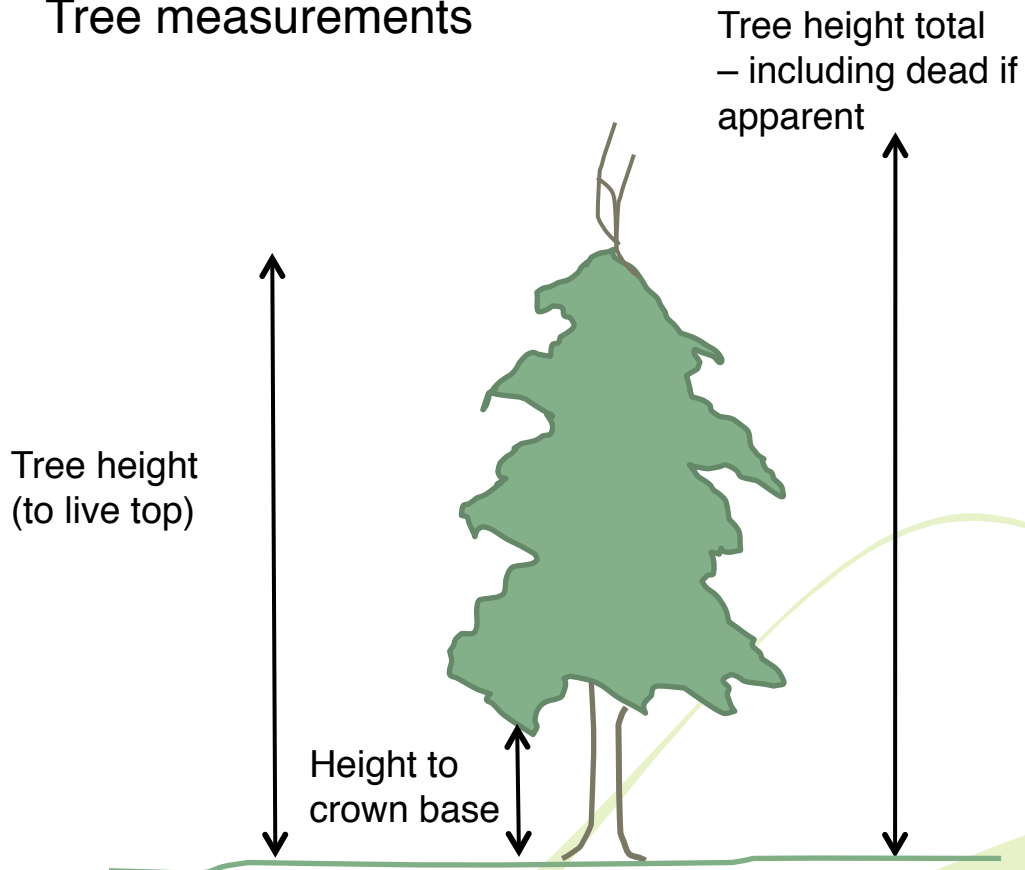


Not All  
Trees  
have read  
the rule  
book!



# TREE HEIGHT

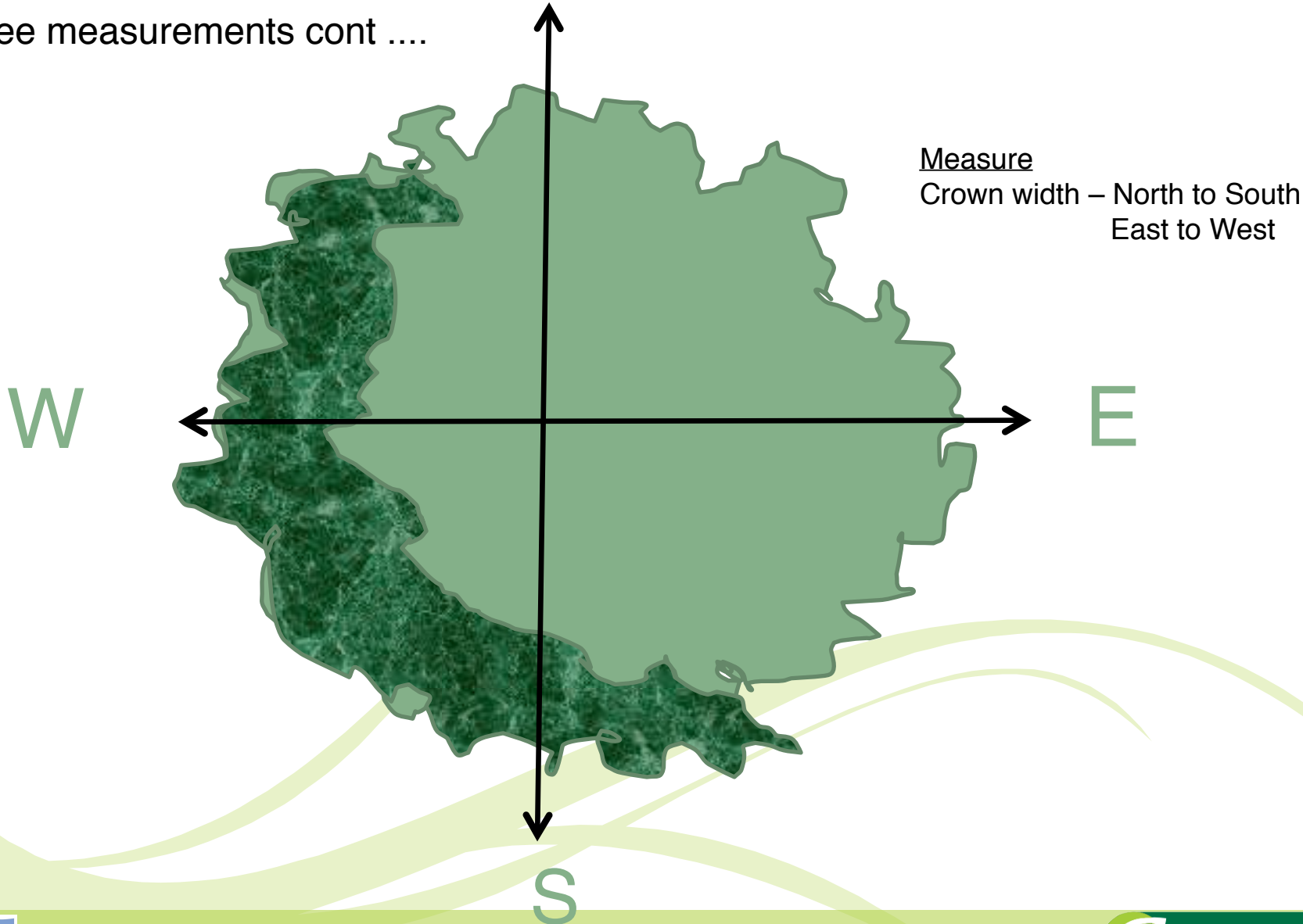
## Tree measurements





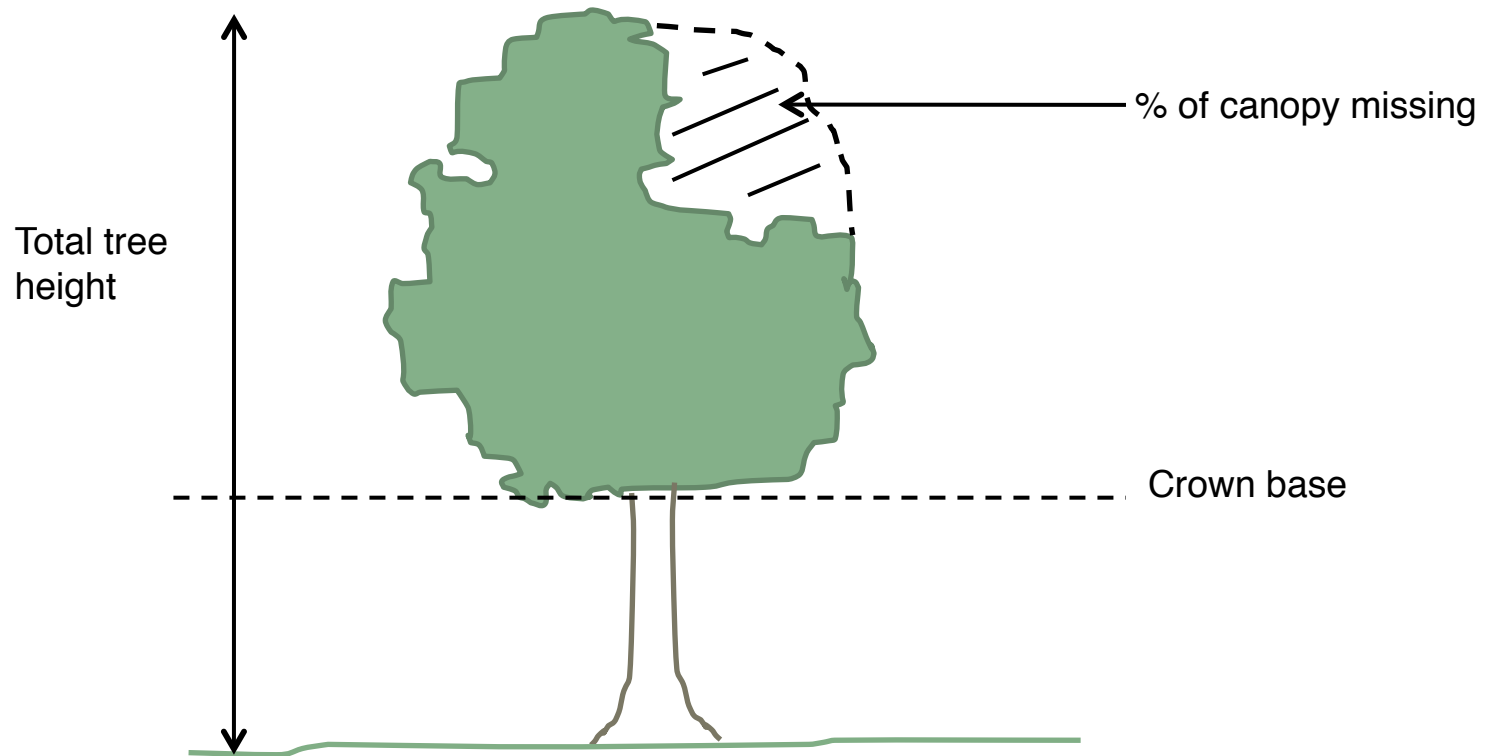
TREE INFORMATION REQUIRED

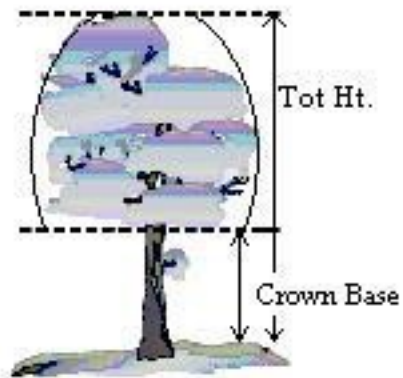
Tree measurements cont ....



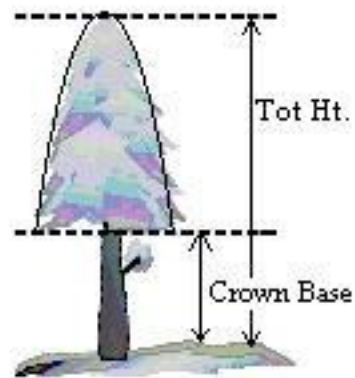
## TREE INFORMATION REQUIRED

Tree measurements cont ....

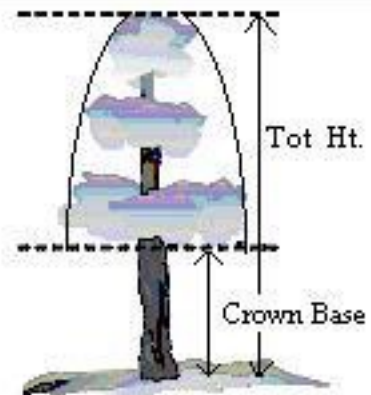




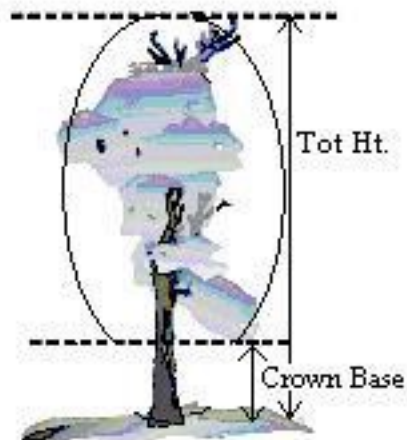
10% Canopy Missing



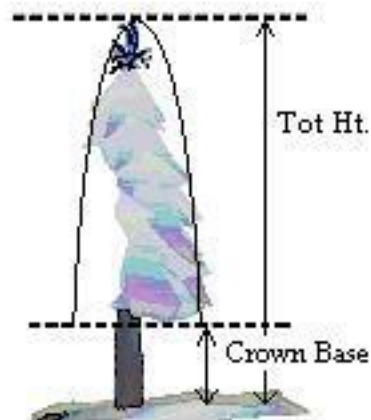
0% Canopy Missing



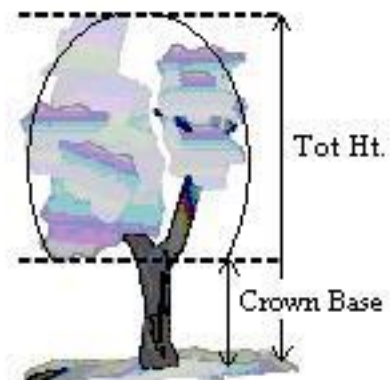
25% Canopy Missing



40% Canopy Missing



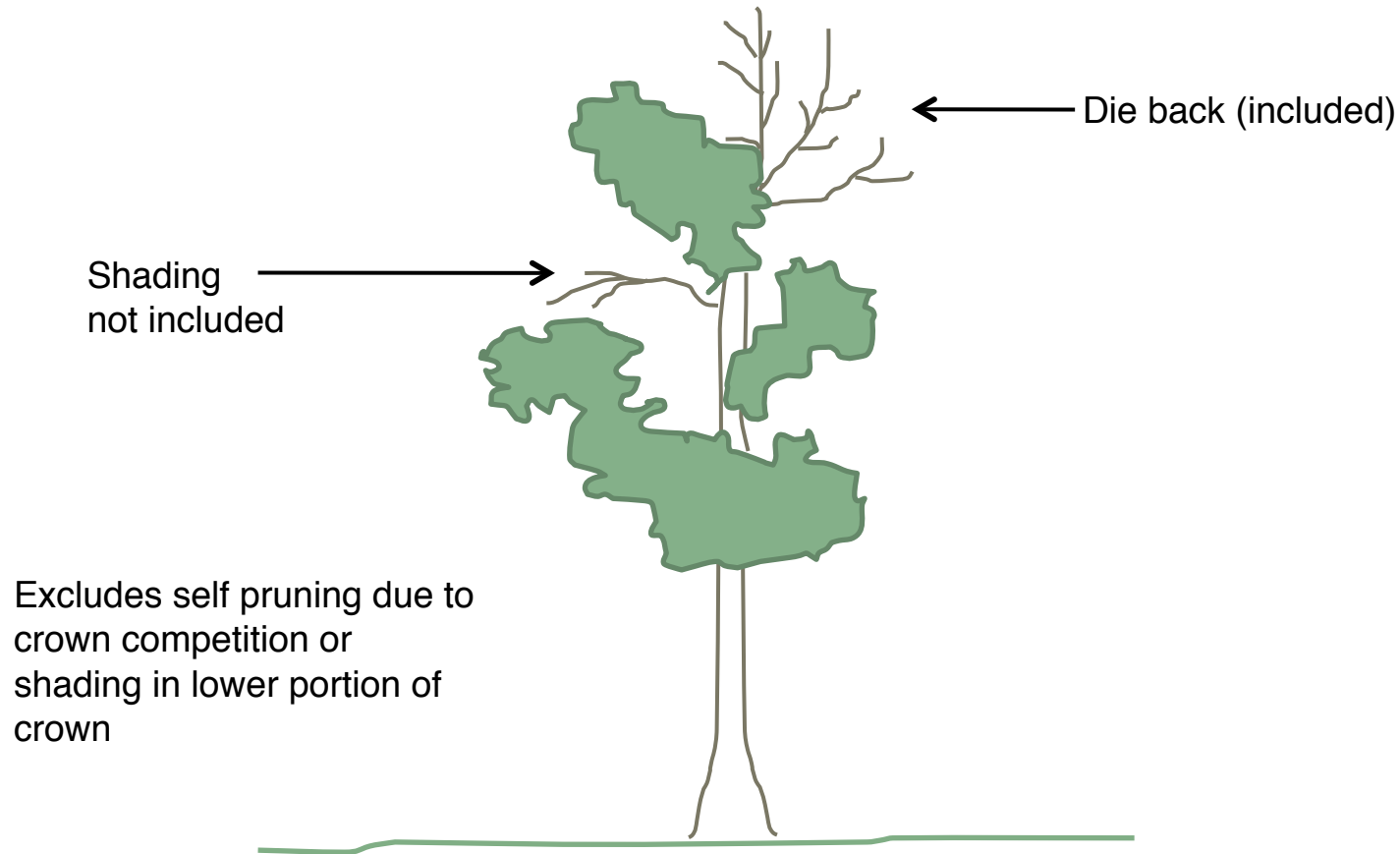
30% Canopy Missing



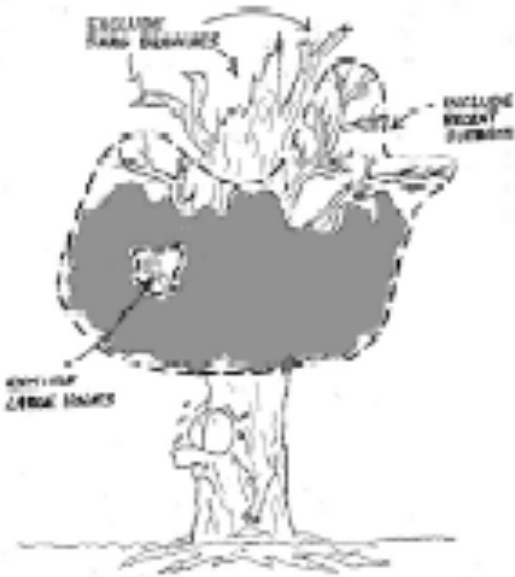
15% Canopy Missing

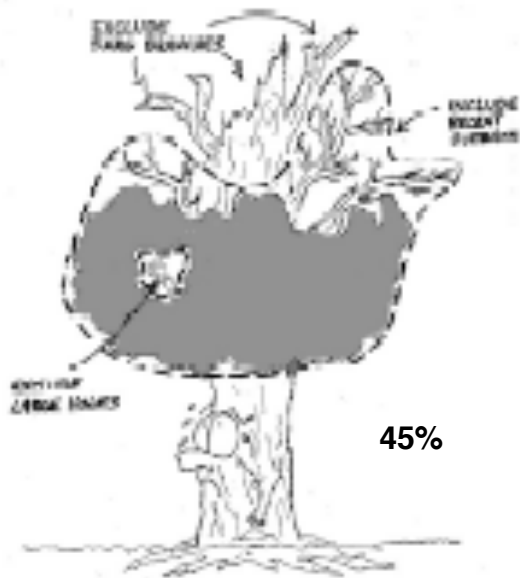
## CROWN CONDITION

Percentage die back in crown area

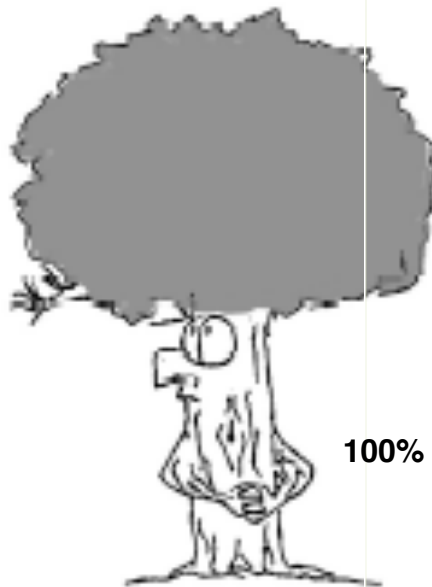








45%



100%



95%



65%



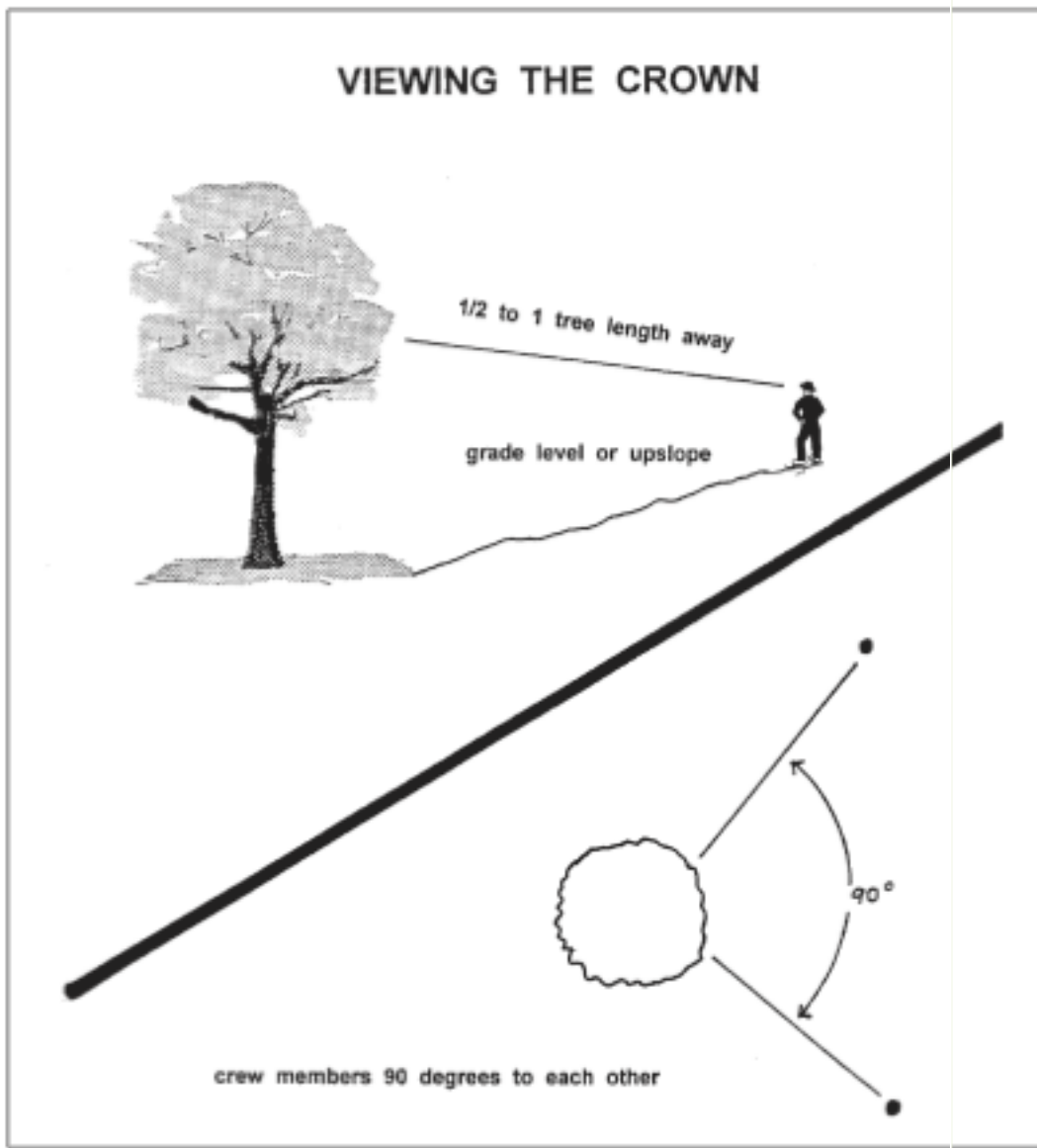
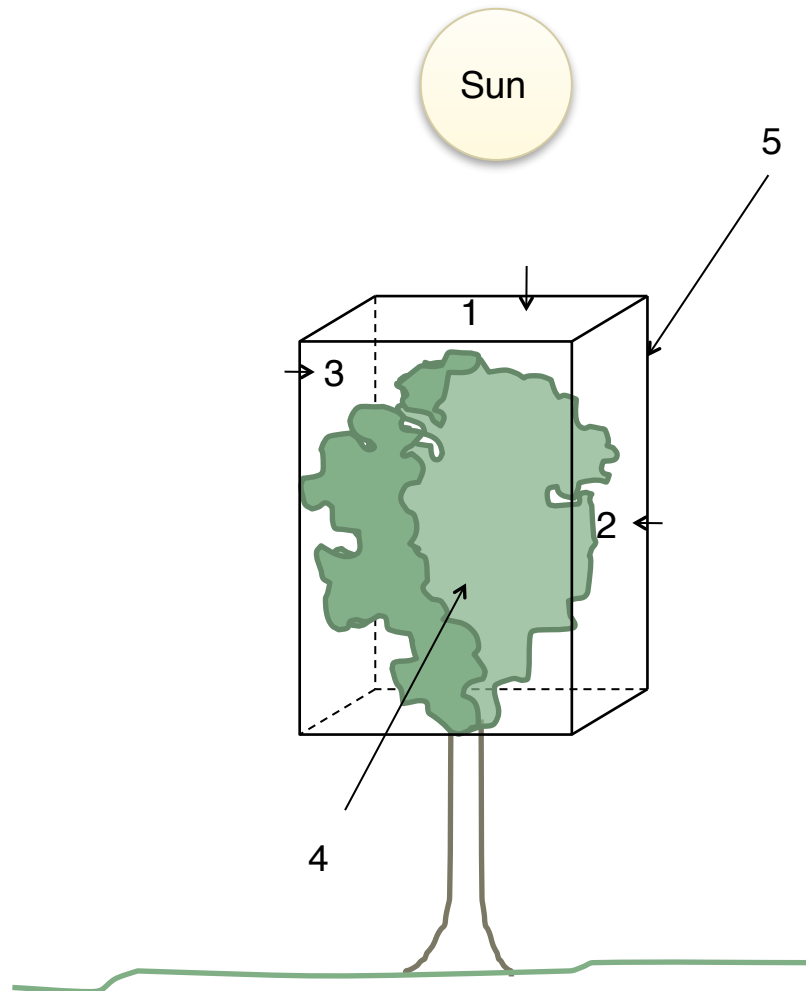


Fig. 3 How to position yourself to measure the crown.



# CROWN LIGHT EXPOSURE



**The number of sides of the tree receiving sunlight from above.**

**The top of the tree is counted as one side.**

0 – Tree Receives no full light

1 – Tree receives full light from the top or one side

2 – Tree receives full light from the top and one side (two sides without the top)

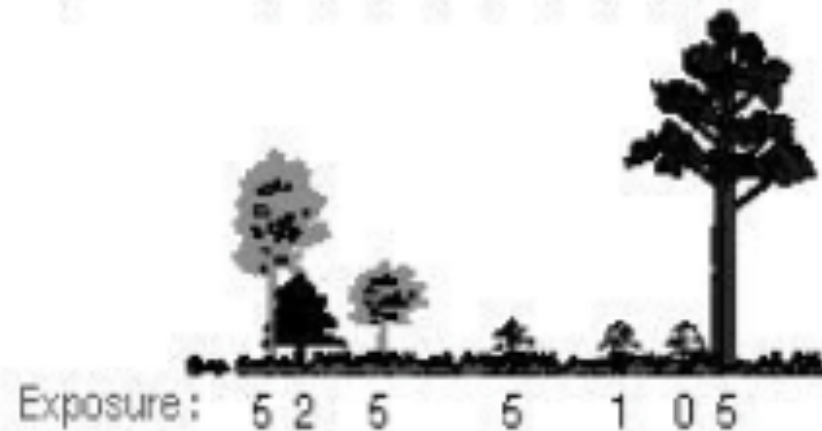
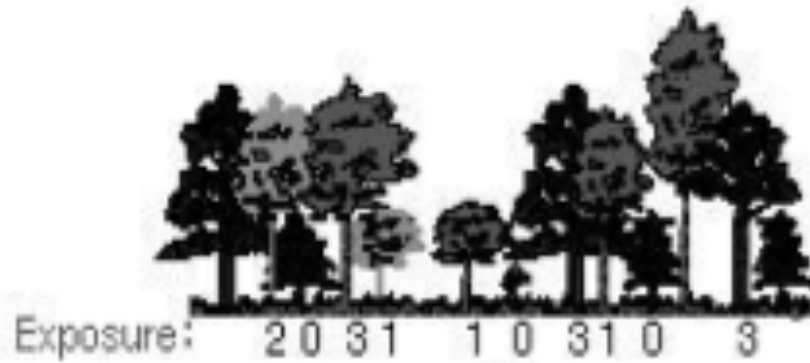
3 – Tree receives full light from the top and two sides (or three sides without top)

4 – Tree receives full light from the top and three sides

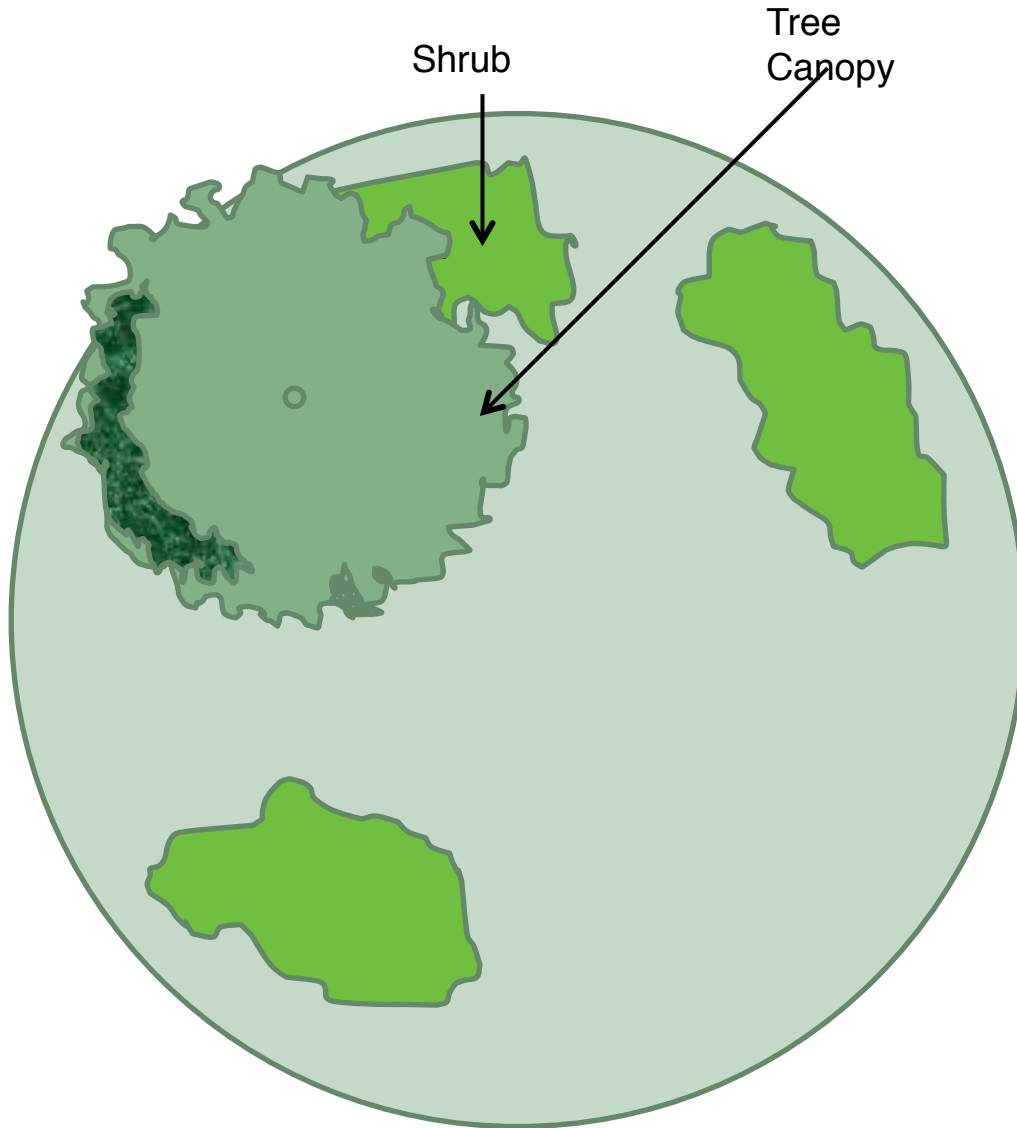
5 – Tree receives full light from the top and four sides



# CROWN LIGHT EXPOSURE

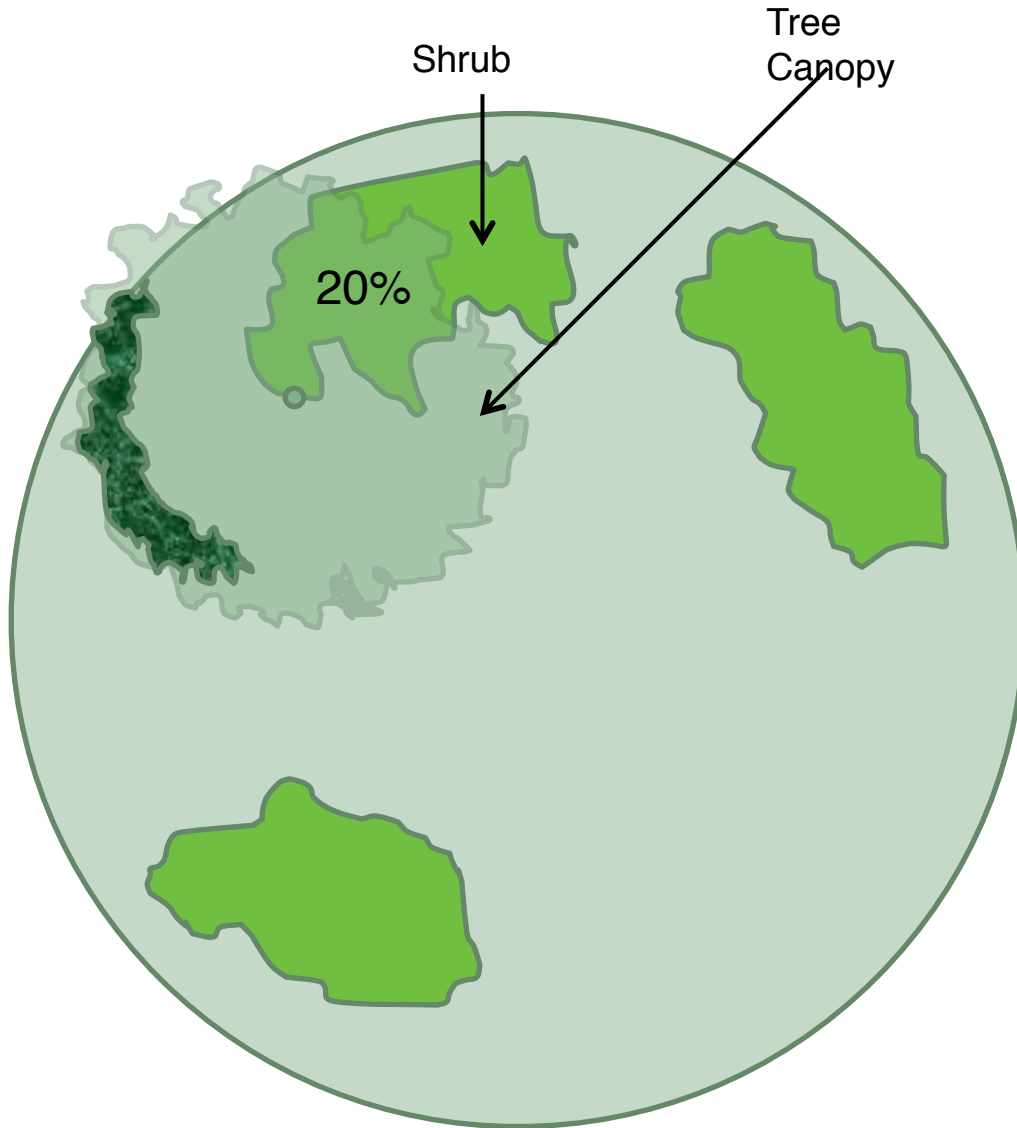


## % SHRUB Under Canopy





## % SHRUB Under Canopy



## Trees and Buildings

