Long Term Monitoring Network - vegetation survey (woodland) quick guide
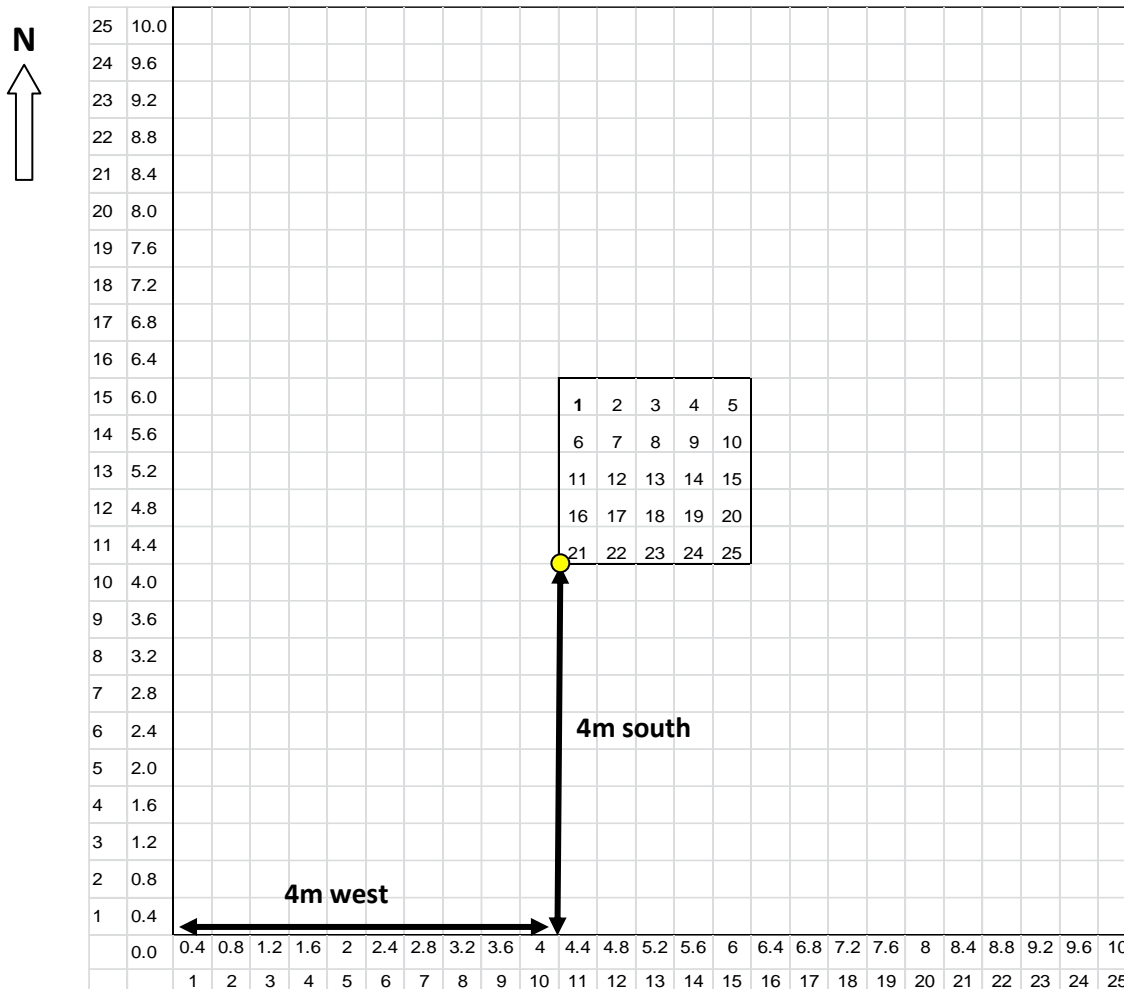
Woodland vegetation recording

A larger 10m x 10m grid is marked around the permanent vegetation plot of 2m x 2m (see overleaf). Tree and shrub species rooted in the 10m x 10m plot will be listed together with their crown class (listed overleaf). A species may be represented in more than one of these categories. Ten cells of 40cm x 40cm are randomly selected within the 10m x 10m grid and the variables listed below are recorded in every cell.

Variable	Method/comments
Species of nearest tree	Record the tree (of >5cm dbh) nearest to the centre points of the ten randomly selected cells.
Diameter at breast height (DBH) of nearest tree	Record the DBH, measured with a tape to the nearest 0.1cm at a height 1.3m above the ground. If the plant is multiple-stemmed, the DBH of the tallest live stem is measured and the number of stems are counted and recorded.
Height of nearest tree	Record tree height to the nearest 0.5m. Using a tape measure and a clinometer measure your distance from the base of the tree, the angle to the top of the tree and your height to eye level (see quick guide to calculating height). If multiple-stemmed, the height of the tallest live stem is measured.
Distance and direction of nearest tree from centre of cell	The distance, at a height of 1.3m, and direction between the approximate centre of the chosen stem and the centre of its associated random cell will be recorded. The measured stems should be marked with paint or a metal tree tag at 1.3m, numbered and re-measured on subsequent occasions. If a stem dies between surveys, a replacement stem is selected from the same randomly selected cell using the procedure outlined above.
Number of seedlings	Record the number of seedlings by species in each 40cm x 40cm cell.

*** A single tree/shrub should only be recorded in association with one of the sub cells. If a single tree is the closest tree to multiple sub cells, then it should be recorded in relation to the first sub cell where it is the closest tree to that sub cell. For subsequent sub cells the next closest tree/shrub should be identified and measured.

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25

4m south

4m west

Ten 40cm x 40cm cells are selected at random from the 10m x 10m woodland recording quadrat, which is located with the permanent 2m x 2m vegetation plot at its centre. Find the point 4m south and 4m west of the permanent marker, and lay out two 10m axes with measuring tapes. Use compass and a further tape to find particular cells.

Tree crown classes

1. Dominant
Trees with crowns extending above the general level of the crown cover and receiving full light from above and partly from the side. Usually larger than the average trees in the stand and with crowns well developed

2. Subdominant
Trees with crowns forming the general level of the crown cover and receiving full light from above but comparatively little from the sides

3. Intermediate
Trees shorter than those in the two preceding classes but with crowns extending into the crown cover formed by dominant and sub-dominant trees; receiving a little direct light from above

4. Suppressed
Trees with crowns entirely below the general level of the crown cover

5. Tree
A woody perennial plant with a diameter at breast height (dbh; 1.3m above the ground) >5cm, typically with a single, well-defined stem carrying a more or less definite crown.

6. Sapling
A young tree; no longer a seedling and growing vigorously; DBH between 0.5cm and 5cm.

7. Seedling
A young tree or shrub grown from seed; from its germination up to the sapling stage, *i.e.* with a dbh <0.5cm.

8. Shrub
A woody perennial plant with persistent and woody stem(s). It differs from a tree or sapling, as defined here, in its lower stature and the general absence of a well-defined main stem