

11.0 Relevant Adjacent Stands (RAS)

Contents

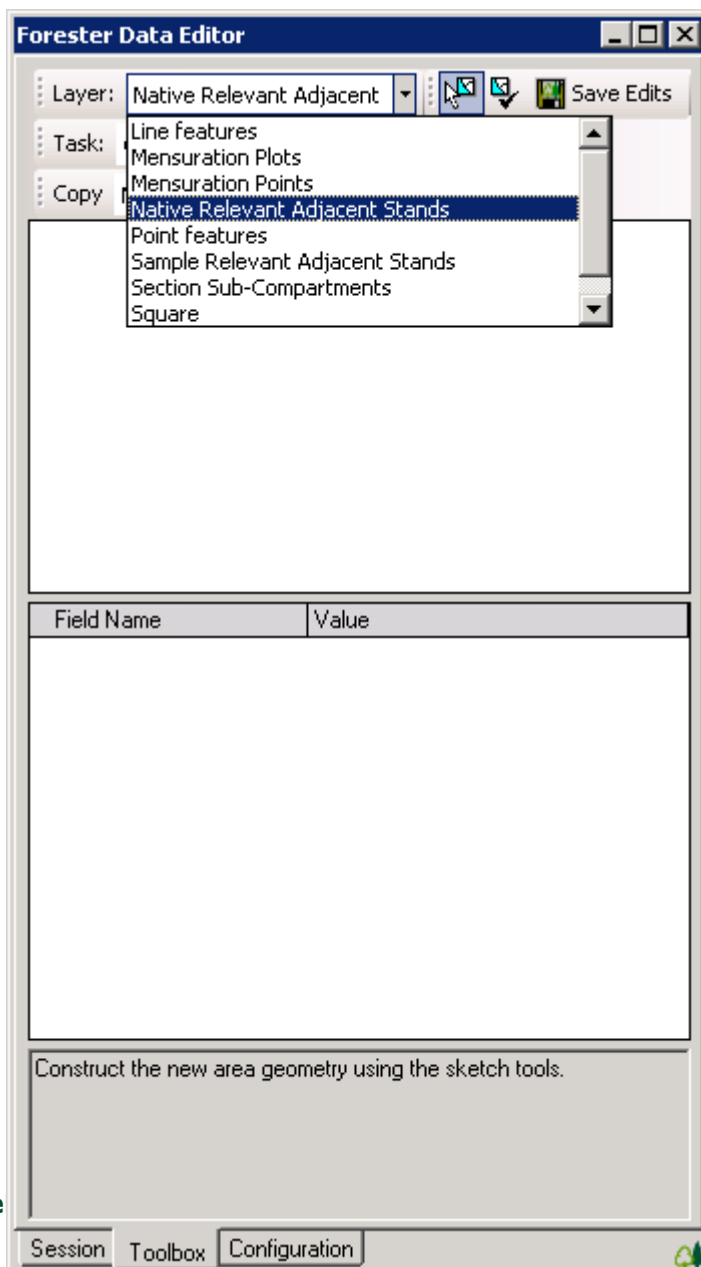
Contents	1
11.0 Relevant Adjacent Stands (RAS)	2
11.1 Native Relevant Adjacent Stand.	2
11.1.1 NFI definition of Native Woodland	3
11.1.2 Mapping of Native Relevant Adjacent Stands	3
11.1.3 How to assess whether a Section/Component Group is native	5
11.1.3.1 Canopy cover.....	5
11.1.3.2 Basal Area or Stems per Hectare.....	5
11.2 Sample Relevant Adjacent Stand.....	7
11.3 Create Relevant Adjacent Stands.....	8
11.4 For a re-measure square	9

11.0 Relevant Adjacent Stands (RAS)

Relevant Adjacent Stands (RAS) are areas of NFI tree cover outside the sample squares, which cross the squares boundary and are used:

- To define areas of native woodland (see 11.1) - Native Relevant Adjacent Stand
- To covert whole section plots to circular plots (see 11.2) - Sample Relevant Adjacent Stand

When a surveyor is about to create a RAS the correct Layer within the Data Editor box should be chosen:



- Native Relevant Adjacent Stand
- Sample Relevant Adjacent Stand

11.1 Native Relevant Adjacent Stand.

Relative adjacent stands need to be assessed to enable the differentiation of native stands those greater than half a hectare size and those less than half a hectare in size. This assessment is necessary where the native stand question spans the square boundary.

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NFI Survey Manual Chapter 11: Relevant Adjacent Stands (RAS)

11.1.1 NFI definition of Native Woodland

Definition for reporting purposes:

An area of woodland $\geq 0.5\text{Ha}$ in extent composed of $\geq 20\%$ canopy cover of site-native species in the uppermost canopy.

NB: Where canopy cover cannot be used basal area or stems per hectare (in that order) can be substituted.

The woodland may be derived from natural regeneration, coppicing or planting. **Note that:**

- Scots pine is regarded as native in Lots 85 – 108.
- Beech is regarded, for NFI purposes, as native throughout GB
- Sycamore is regarded, for NFI purposes, as native throughout GB

11.1.2 Mapping of **Native** Relevant Adjacent Stands

Map a Native RAS:

LOTS 1-84

- If the Section/CG within the square (up to the square boundary) is native **AND**
- The area outside the square and adjacent to the native Section/CG is also native (NB: if does not have to be identical in nature, just native by definition) **AND**
- The adjacent area is **NOT** one of the following IFT's (see Chapter 4 for IFT descriptions). Note that the IFT on the ground can be different from the map IFT. If this is the case then the IFT on the ground takes precedence:
 - Broadleaved
 - Mixed mainly broadleaved
 - Felled
 - Ground prep
 - Coppice
 - Coppice with standards
 - Young trees

NFI Survey Manual Chapter 11: Relevant Adjacent Stands (RAS)

LOTS 85-108

- If the Section/CG within the square (up to the square boundary) is native **AND**
- The area outside the square and adjacent to the native Section/CG is also native (NB: if does not have to be identical in nature, just native by definition) **AND**
- The adjacent area is **NOT** one of the following IFT's (see Chapter 4 for IFT descriptions). Note that the IFT on the ground can be different from the map IFT. If this is the case then the IFT on the ground takes precedence:
 - Broadleaved
 - Mixed mainly broadleaved
 - Felled
 - Ground prep
 - Coppice
 - Coppice with standards
 - Young trees
- Where the NFI map shows a conifer IFT adjacent to a native Section/CG a Native RAS is to be drawn if the conifer area is $\geq 20\%$ Scots pine.

Where the IFT in the table above in the NFI map is incorrect (and adjacent to a native Section/CG) email a note to Mark Lawrence with SQUID and note of which IFT is incorrect.

Mapping can be carried out via field surveys (surveyors are not expected to walk more than 50m from the Square boundary) and/or desk-based aerial photo interpretation. If the square lies at the edge of the Lot, surveyors are **not** required to get hold of, and load up, the aerial photography for the adjacent Lot. Where possible the entire area of the RAS should be mapped but where this is not possible then the minimum allowable area of RAS to be mapped is that which, when combined with the native Section/CG, indicates that the native area within and without the square is ≥ 0.5 ha when combined.

NFI Survey Manual Chapter 11: Relevant Adjacent Stands (RAS)

11.1.3 How to assess whether a Section/Component Group is native

11.1.3.1 Canopy cover

Is there $\geq 20\%$ canopy cover of the site-native components open to the sky in the uppermost storey/s across the Section/Component Group (CG)?

- a. Note that this can be different from the %Area field filled in for the component/s.
 - i. E.g. a Section/CG has a single component within the Upper Storey therefore the %Area of this Component is 100%. However the actual canopy cover of the component may be $< 100\%$, a sparse cover of oak for example.
- b. If a Section has multiple Component Groups is the total canopy cover, open to the sky, of the uppermost native components $\geq 20\%$ for the Section?
 - i. A Section has 3 Component Groups: CG1 (50% of the Section) has an Upper storey of oak with a canopy cover of 10% with a Lower storey of spruce, CG2 (20% of the Section) has an uppermost Lower storey of spruce with a canopy cover of 100%, and CG3 (30% of the Section) has an Upper storey of oak and spruce with 50% canopy cover each across the CG.
 - ii. Canopy cover of the oak across the section is therefore: $10\% \text{ of } 50\% + 0\% \text{ of } 20\% + 50\% \text{ of } 30\% = 5\% + 0\% + 15\% = 20\%$ therefore the Section **is** considered native.
- c. Spatially explicit CG's are considered separately from the Section with respect to nativeness where the CG crosses the square boundary. See exception b below.

11.1.3.2 Basal Area or Stems per Hectare

If canopy cover cannot be used then basal area or stems per hectare may be used but consideration must be given to the facts that:

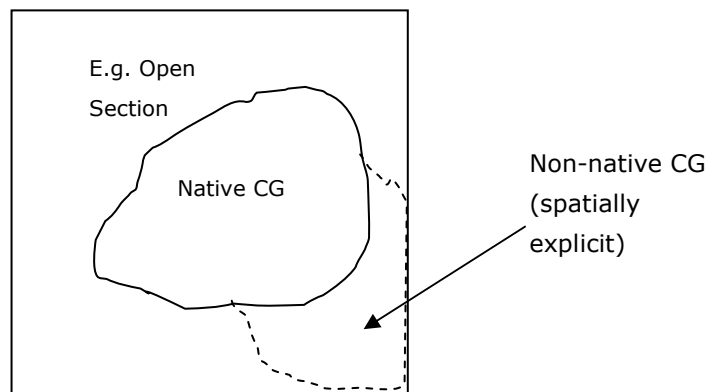
- Seedling and Sapling storeys may have no basal area (i.e. the trees are below 1.3m in height)
- The younger the stand of trees then generally the more stems there are.

NFI Survey Manual Chapter 11: Relevant Adjacent Stands (RAS)

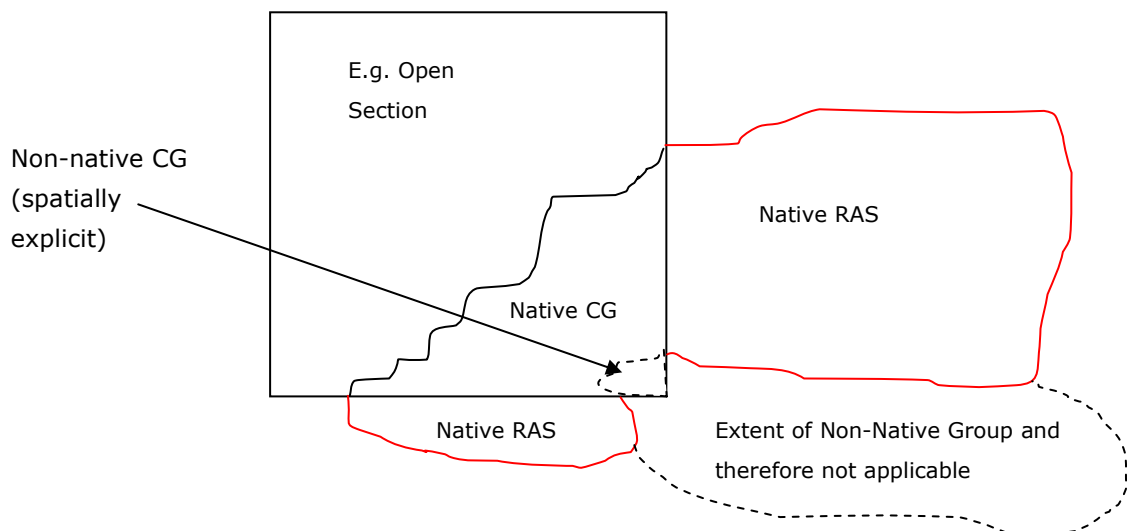
In this case a subjective assessment needs to be considered about the likely basal area/number of stems of any lower storeys were they in the same storey as those above they are being compared to.

Exceptions:

- a. A Section contains a Component Group of native species which is situated wholly within a Square but has a second Component Group of non-native species which crosses the square boundary: the RAS is not created as the only species outwith the square is non-native and therefore does not represent the composition of the native CG of the Section.



- b. A Section contains a native Component Group and a non-native Component Group. The Component Groups are spatially explicit (i.e. not intimately mixed) but one or both Groups were too small to map out as a Section. The RAS should encompass the native woodland outside the Square which is homogenous with the native Component Group but should not include the non-native spatially explicit Group's continuation outside the Square.



NFI Survey Manual Chapter 11: Relevant Adjacent Stands (RAS)

11.2 Sample Relevant Adjacent Stand

New Squares

If a Section (native or non-native) is likely to be Whole Section Plot (i.e. there are < 40 measurable trees in it) then if it continues across the Square boundary a RAS can be mapped and the trees within the RAS are then counted for the purpose of assessing whether the Section has <40 measurable trees in it. This will result in fewer Whole Section plots overall.

- When counting the trees within a RAS, to assess whether the site is a Whole Section plot or not (<40 measurable trees), only count trees up to **21m** from the square boundary as only trees within this distance can be sampled by circular plots – the software will not allocate plot centres further than 15m from the square boundary. Therefore map out to 21m from the Square boundary where possible.

Re-measure Squares

1) Previous survey used circular plots without a RAS:

- a. If there are ≥ 30 measurable trees within the Section keep the circular plots – no Sample RAS required
- b. If there are now <30 measurable stems in the Section change the Section to a Whole Section plot, do not create a Sample RAS. Change any frozen trees to Normal trees

2) Previous survey used circular plots with a RAS

- a. If ≥ 30 measurable trees still in the Section + RAS – retain original circular plots
- b. If ≥ 30 measurable trees within the Section (not including the RAS) – retain original circular plots

NFI Survey Manual Chapter 11: Relevant Adjacent Stands (RAS)

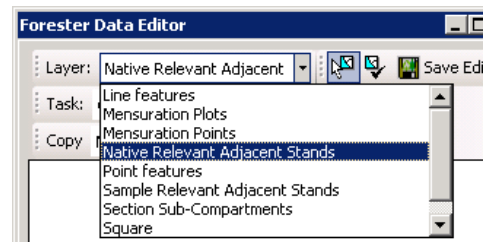
- c. If <30 measurable trees within Section + RAS then change the Section to a Whole Section plot. If any original plots were in the RAS run 'Regenerate plots' to replace plots within the RAS to Points within the Section.

NB: Do not create a RAS to get more stems if the area within the RAS is different from the area within the square.

- o When counting the trees within a RAS, to assess whether the site is a Whole Section plot or not only count trees up to **21m** from the square boundary as only trees within this distance can be sampled by circular plots – the software will not allocate plot centres further than 15m from the square boundary. Therefore map out to 21m from the Square boundary where possible.

11.3 Create Relevant Adjacent Stands

Choose the appropriate Layer within the Data Editor box. The RAS must start and finish by crossing the Square boundary and each RAS relates to a single section only.

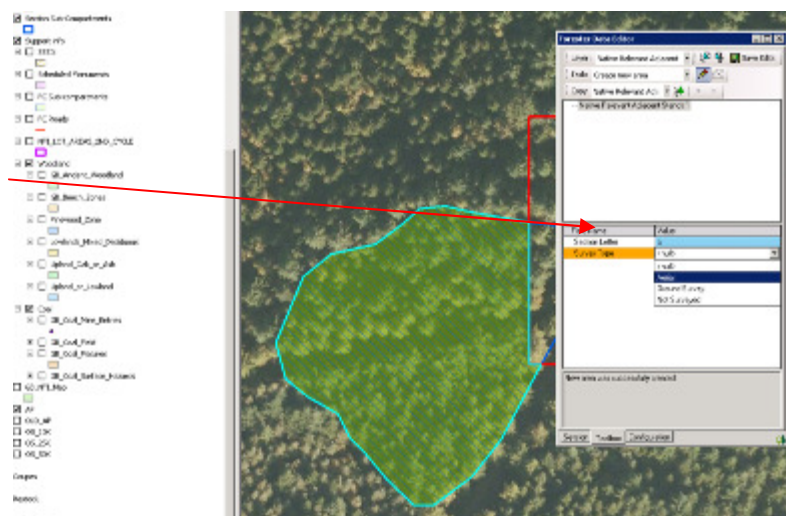


In the Data Editor choose Relevant Adjacent Stands from the Layer drop down menu and then 'Create new area' from the Task menu.

Select the button and click on the screen to highlight the location of the RAS.



Ensure the shape overlaps the Section to be extended so that the software will automatically link the two. Double click (F2) to complete the new area.



NFI Survey Manual Chapter 11: Relevant Adjacent Stands (RAS)

11.4 For a re-measure square

In native sections or CG's at the edge of the square, surveyors should look outside of the section and confirm if the IFT map is correct and reflects whether the RAS is native or not. If it is correct then do nothing. If it is not correct create a RAS to reflect the actual extent of the native RAS. For this purpose assume that relevant IFT's can be native, such as young trees, mixtures, clearfell and assumed woodland (see list in Section 11.1.2).

To help ascertain change since the last survey, copies of the original AP used at the time of last survey will be issued. This will help confirm clearfell etc., but also if the previous surveyor interpreted section boundaries reasonably. If the old AP was offset against your AP, do not change your section boundaries to reflect this, unless they are more than 10m or 10% out.