

Introduction

Trees are an important part of the Barrow Borough landscape. Trees provide habitat for plants and animals, and make our landscape, towns, villages and gardens more green and appealing. When we consider a planning application we have to take account of any trees on (or near) the site, which might be affected. In some cases we may condition that existing trees are preserved, or that new trees are planted. We can also serve tree preservation orders (TPOs) if necessary.

In order to properly consider a proposal we must have enough information to understand its impact on trees. Sometimes this will mean we need information about trees before we will validate a planning application.

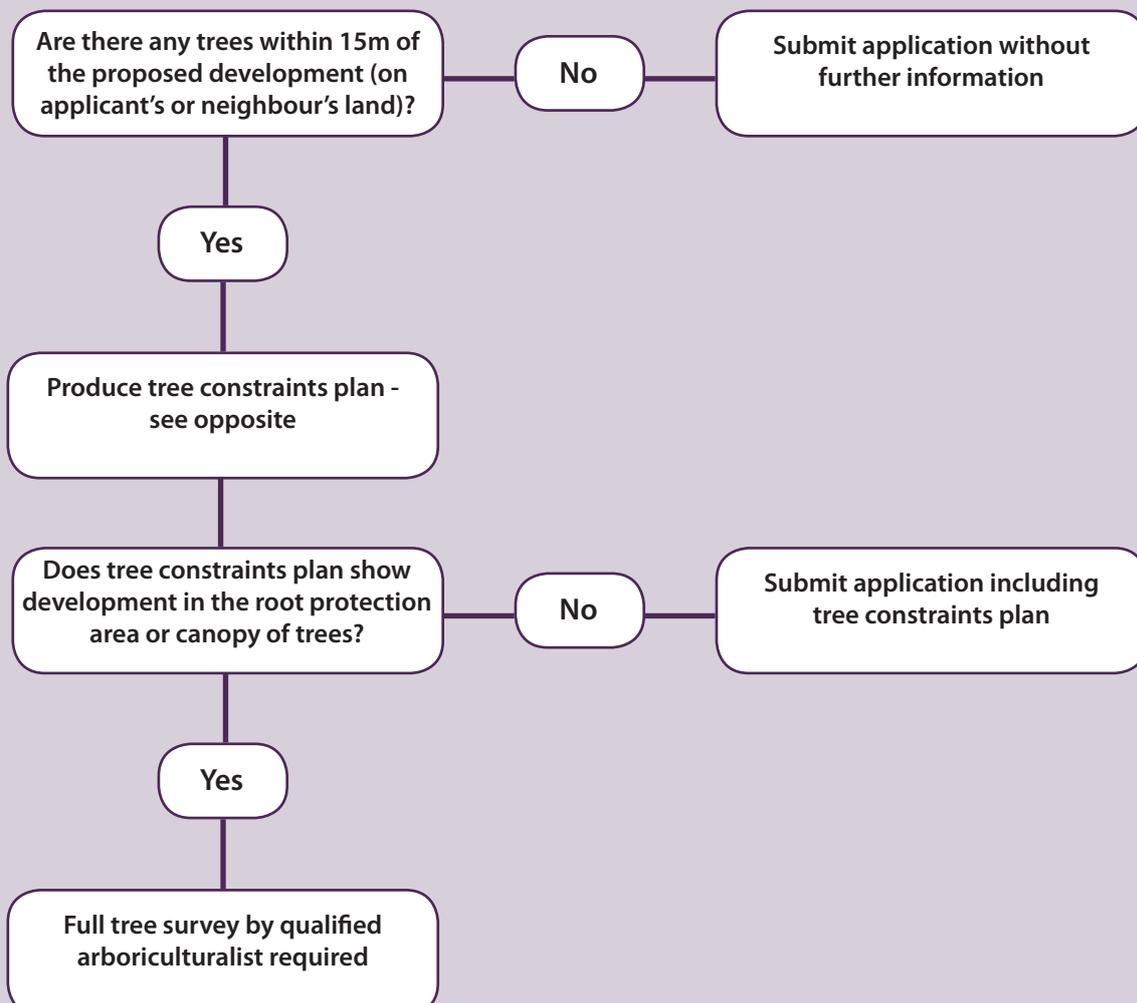
What information do I need to provide?

To ensure we meet our obligations, where trees could be affected we will need information to help us understand what impacts a scheme will have.

Box 1 below shows what information about trees we will expect **before** we validate any application for:

- Householder Planning Permission
- Full Planning Permission
- Outline Planning Permission
- Reserved Matters Consent
- Conservation Area Consent
- Minor Material Amendments

Box 1: Tree information requirements flow chart



Can I do a full Tree Survey myself?

No. A full tree survey will need to be done by a suitably qualified person.

Can I do a Tree Constraints Plan myself?

You might be able to produce the tree constraints plan yourself. If you are employing someone to draw plans for you they will be able to include the necessary information on the site layout plan.

What is a Tree Constraints Plan?

A Tree Constraints Plan is a site layout plan drawn to scale and showing existing buildings, the proposed development, as well as any trees on or adjacent to the site. The tree constraints plan will show the stem, canopy spread, and root protection area of each tree. Two simple examples of tree constraints plans are shown in Box 2 and Box 3 overleaf.

Top tip: A Tree Constraints Plan should be produced at an early stage, and should be used as a design tool. It is much better to consider trees at the start than to have planning permission refused because trees were not properly considered in the design!

What is the Root Protection Area (RPA)?

The root protection area is the minimum area (in square metres) which should be left undisturbed around each retained tree to maintain the tree's viability. In this area the protection of roots and soil structure is treated as a priority. To avoid damage to the roots and rooting environment of trees, development within the root protection area should be avoided where possible.

For single stem trees the Root Protection Area should be calculated as an area equivalent to a circle with a radius 12 times the stem diameter. For trees with more than one stem, one of the two calculation methods below should be used. In all cases, the stem diameter(s) should be measured as shown in Box 4.

a) For trees with two to five stems, the combined stem diameter should be calculated as follows:

$$\sqrt{(\text{stem diameter } 1)^2 + (\text{stem diameter } 2)^2 \dots + (\text{stem diameter } 5)^2}$$

b) For trees with more than five stems, the combined stem diameter should be calculated as follows:

$$\sqrt{(\text{mean stem diameter})^2 \times \text{number of stems}}$$

The RPA for each tree should initially be plotted as a circle centred on the base of the stem. Where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced. Modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution.

Any deviation in the RPA from the original circular plot should take account of the following factors whilst still providing adequate protection for the root system:

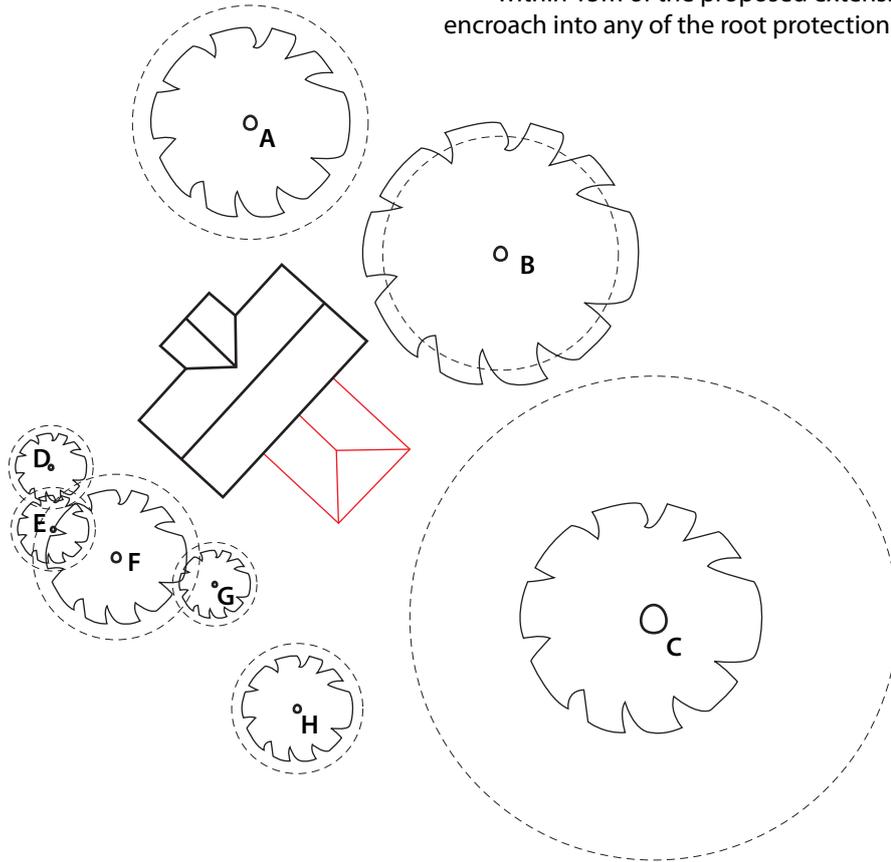
- the morphology and disposition of the roots, when influenced by past or existing site conditions (e.g. the presence of roads, structures and underground apparatus);
- topography and drainage;
- the soil type and structure;
- the likely tolerance of the tree to root disturbance or damage, based on factors such as species, age, condition and past management.

The calculated RPA for each tree should be capped to 707m² in all cases.

Box 2

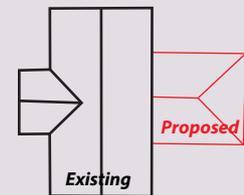
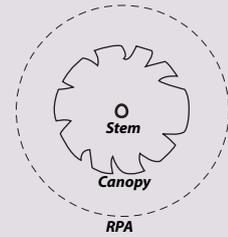
Example 1: Tree Constraints Plan - Full survey not required

In this example a tree constraints plan has been produced because there are trees within 15m of the proposed extension. But the proposed extension does not encroach into any of the root protection areas, so a full arboricultural survey is not required for us to validate an application.



Tree Details

Tree A - stemØ 75cm, rpa radius 900cm
 Tree B - stemØ 75cm, rpa radius 900cm
 Tree C - stemØ 125cm, rpa radius 1500cm
 Tree D - stemØ 27cm, rpa radius 324cm
 Tree E - stemØ 27cm, rpa radius 324cm
 Tree F - stemØ 53cm, rpa radius 636cm
 Tree G - stemØ 36cm, rpa radius 432cm
 Tree H - stemØ 51cm, rpa radius 612cm

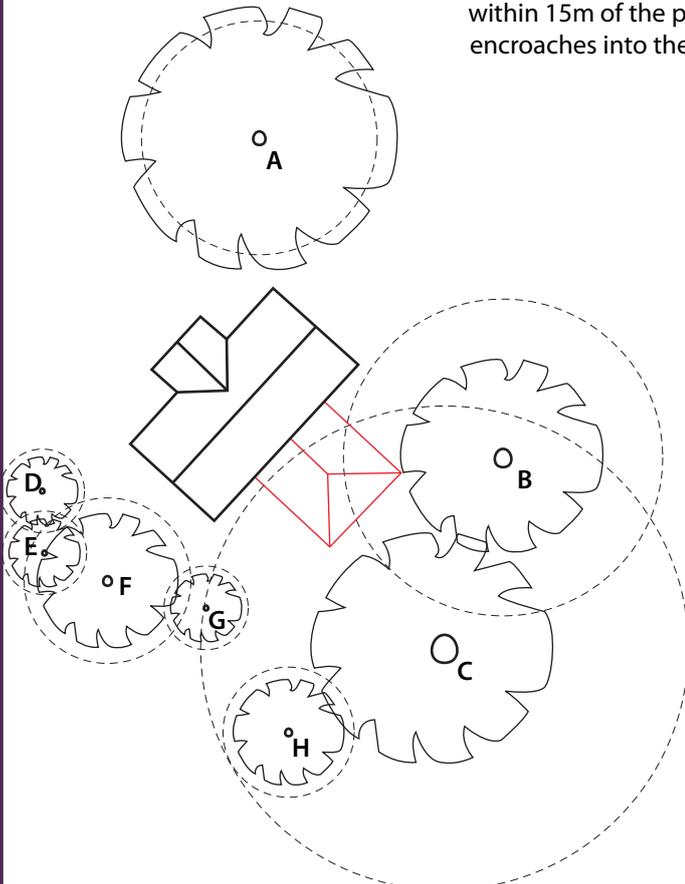


0 5 10 15m

Box 3

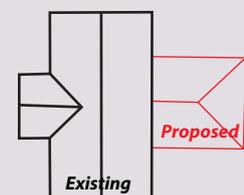
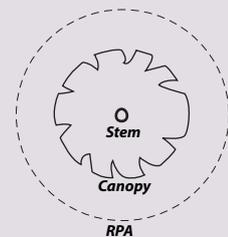
Example 2: Tree Constraints Plan - Full survey required

In this example a tree constraints plan has been produced because there are trees within 15m of the proposed extension. The plan shows that proposed extension encroaches into the root protection areas of trees B and C, so a full arboricultural survey is required before we will validate an application.



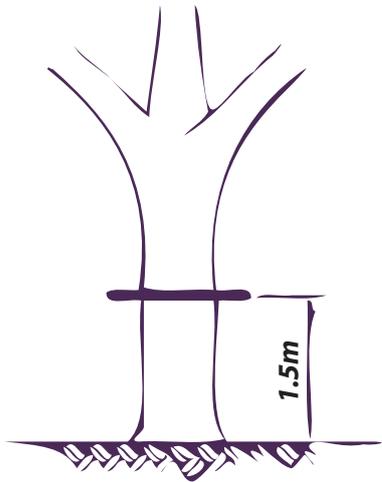
Tree Details

Tree A - stemØ 75cm, rpa radius 900cm
 Tree B - stemØ 103cm, rpa radius 1236cm
 Tree C - stemØ 125cm, rpa radius 1500cm
 Tree D - stemØ 27cm, rpa radius 324cm
 Tree E - stemØ 27cm, rpa radius 324cm
 Tree F - stemØ 53cm, rpa radius 636cm
 Tree G - stemØ 36cm, rpa radius 432cm
 Tree H - stemØ 51cm, rpa radius 612cm

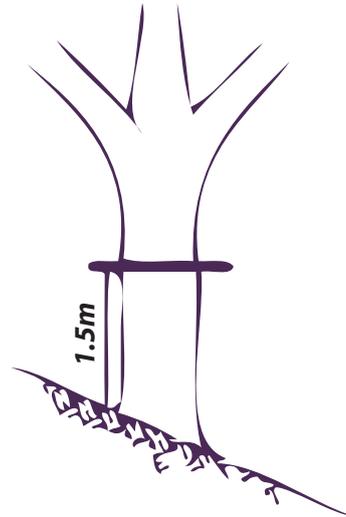


0 5 10 15m

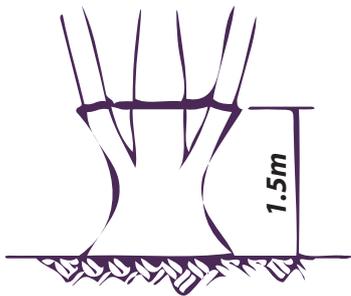
Box 4: Measuring stem diameter



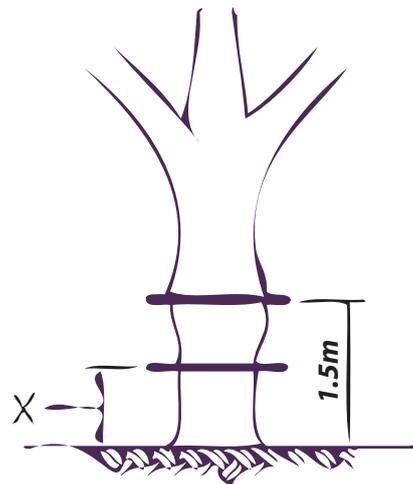
Stem diameter measured at 1.5m above ground level



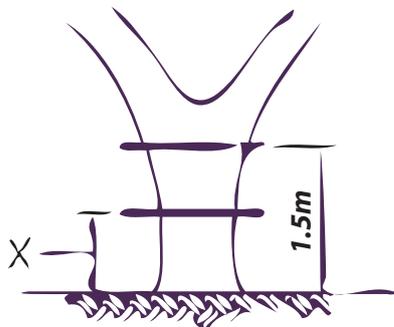
Measurement on sloping ground



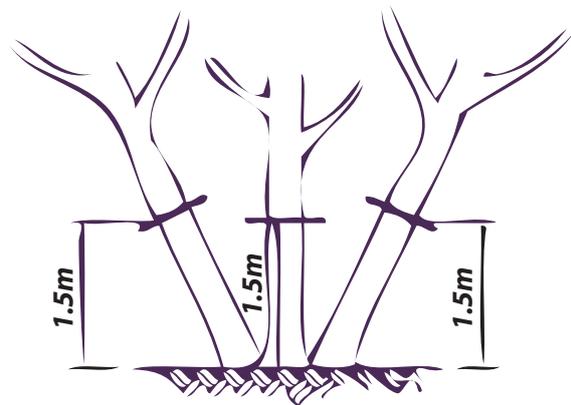
Measurement of a tree with more than one stem at 1.5m above the ground



Measurement of stem with irregular swelling made at the narrowest point below the swelling



Trees with low branching measured at lowest point below the fork



Measurement of multi-stemmed tree

X - height varies

Useful reading:

BS5837: Trees in Relation to Construction

Volume 4: NJUG Guidelines For The Planning, Installation And Maintenance Of Utility Apparatus In Proximity To Trees - available online at www.njug.org.uk

Veteran Trees: A Guide to Good Management -
available online at <http://naturalengland.etraderstores.com/NaturalEnglandShop/IN13>