



JAPANESE KNOTWEED AND DENDRO-SCOTT ROOT BARRIER

The presence of Japanese Knotweed (*Fallopia Japonica*) on a development site can have huge financial implications.

Under the provisions made within the Wildlife and Countryside Act 1981, it is an offence to spread Japanese Knotweed. This means, for developers, contaminated soil has to be transported in closed vehicles to a licensed tip, with costs that could be in excess of £100 per cubic metre.

Where it is proposed to create a roadway, car park or building over an area contaminated with Japanese Knotweed, a very expensive problem exists. Once construction has been completed, it becomes impossible to prevent penetration of the knotweed by chemical control. In the past, the only alternative is removal of the contaminated soil to a licensed tip.

The cost implications of removal of contaminated soil from underneath of, say, a car park 50m x 50m would be a minimum of £625,000, excluding any costs involved in re-importing stone and uncontaminated soil. Peter Scott Tree Care offers a solution to this problem at a fraction of the cost.

The Dendro-Scott root barrier, in tests and general use, has a provenance of over a quarter of a century, in which time there has not been one reported incidence of tree roots penetrating the material. The manufacturers have stated, subject to the ground not being contaminated with specific chemicals (see Peter Scott Tree Care brochure) the effective life expectancy of the material in the ground is well in excess of 50 years (the highest classification possible).

As it is considered that Japanese Knotweed extends to a depth of 2m or more (dependent on the soil profile), the technique used to install the Dendro-Scott root barrier vertically to a depth of at least 3m around the whole contaminated area or construction footprint. A horizontal section (which can be supplied as a single sheet) is then laid over the contaminated area, glue and sealed to the already installed vertical sections, thus completely sealing in the Knotweed, if required. The structure is then built over this sealed area.

In 1995 Japanese Knotweed contamination existed where it was proposed to construct a series of all-weather pitches. The Dendro-Scott root barrier was installed, as above, with the horizontal section being over 6,000 square metres (which was supplied as a single sheet). Since installation there have been no problems with the Japanese Knotweed.

In the past, the Dendro-Scott root barrier has also been successfully installed underneath buildings, car parks and roads, prior to their construction.

After many years of experience in installing root barriers, a number of a very important criteria have emerged, one of which is the need for the root barrier membrane to be totally flexible.

Flexibility of root barrier

In installing the root barrier, a trench is dug and the side of the trench nearest to the tree is lined with the barrier. Long-term experiments carried out in the late 1970s and early 1980s show that when roots reach a root barrier, they tend to mass along its whole length and, unless there is a good interface between the barrier and the side of the trench, they will develop downwards.

On trenches deeper than 1m it is impossible to create a completely flat surface on the trench wall. To overcome this problem, the root barrier should be so flexible that it has the ability to stretch and mould itself to the uneven face of the trench.

A root barrier that does not have these qualities creates the unacceptable risk that water and/or topsoil will percolate down its whole face, creating the perfect medium for the massed roots to develop to a depth where they will go underneath the barrier, thus defeating the object of the barrier's installation.

Frequently, the position of the root barrier will dissect existing underground services. These services tend to be at a depth where the majority of the roots are naturally developing and it is vital that the barrier can be cut and effectively re-sealed to fit around these underground services.

With such a flexible root barrier membrane, in certain situations, it is necessary during installation, to install a 3-ply or chipboard on the side of the barrier facing into the trench, to prevent damage and drag-down during backfilling. These boards, however, rapidly collapse and decay allowing the barrier to mould it into the face of the trench.

Another important reason why the material for a root barrier should be very flexible is that installing a barrier vertically may not be the most effective solution. For example, 'boxing in' an underground service allows a larger area for the root plate of newly planted trees to develop.

As each site tends to have its own problems, it is important that a qualified Arboriculturalist, who specialises in root barriers, is consulted to advice on the correct depth and length of the barrier and how it should be installed.

The Dendro-Scott root barrier meets all the criteria listed above. For further information please contact:

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