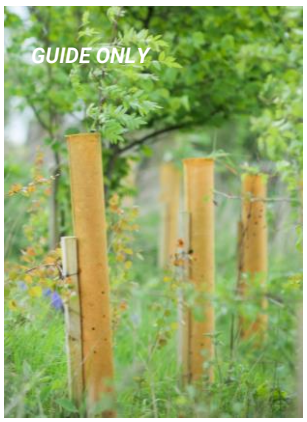
NexGen Tree Shelter Introduction

Stake and plant sold separately



100% biodegradable protection for young trees, nurturing healthy growth, leaving only a positive environmental legacy.

NexGen tree shelters can help you replace the use of plastic tree shelters and nylon cable ties with a viable, environmentally friendly alternative.

The man behind the innovation is Gary Hurlstone, whose father Graham invented the Tubex Tree Shelter in the mid 1980's. Gary took his father's 35 year old design and set out to deliver a range of protection that performs at least as well, whilst being environmentally friendly and cost effective.

The tree shelters are made from a special mix of British wool, a biodegradable polyol (made from ethically sourced cashew nutshell liquid and castor oil), and an innovative biodegradable custom polymer.

At its heart is a simple concept that has taken four years of extensive research and development, working with foresters, landowners and industry experts, to deliver the next generation in tree shelters.

Scientifically proven as 100% biodegradable this is a tree shelter that delivers the perfect environment for young tree plants to thrive in, without harming the environment.

Benefits

- Protects from browsing animals and creates a microclimate to promote healthy growth
- Easy installation – with pre-fitted releasable metal ties
- 100% biodegradable – no need for collection & recycling

Installation

Plant bare root or cell grown plant and insert stake next to plant. Install tube over plant, gently pushing into ground and tighten pre-fitted metal tie(s) around stake. See installation diagrams (pg 4) for more information.

Specifications:

Dimensions	NexGen Biodegradable Tree Shelter				
Height m	0.6	0.75	1.2	1.5	1.8
Diameter mm	70-110	70-110	70-110	70-110	70-110
Number of metal ties	1	2	2	2	2
Type of ties	Releasable	Releasable	Releasable	Releasable	Releasable
Length of metal tie mm (inch)	tbc	tbc	tbc	tbc	tbc
Height of top tie from ground mm	tbc	tbc	tbc	tbc	tbc
Height of bottom tie from ground mm	tbc	tbc	tbc	tbc	tbc
Average weight/tube g	tbc	tbc	tbc	tbc	tbc

Packaging	NexGen Biodegradable Tree Shelter				
Nest	5	5	5	5	5
Bundle	50	50	50	50	50
Bag or strap banded	Recyclable strap(s) & compostable bag	Recyclable strap(s) & compostable bag	Recyclable strap(s) & compostable bag	Recyclable strap(s) & compostable bag	Recyclable strap(s) & compostable bag

Material	For All Sizes
Tube	British wool + biodegradable polyols
Tie	Metal
Tube colour	Natural
Service life	Minimum 5 years
Biodegradable	Yes
End of life	Leave tube and tie in situ
Recycling options	Recyclable strapping (cardboard) Compostable outer bag
Recommended support	Stake
Recommended tools	Mallet (for knocking in stakes) Ratchet twist tying tool (for tying metal ties) *For beating up:* Peg puller or screwdriver (to undo and re twist metal tie)

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NexGen Tree Shelter Features & Benefits

Plant Welfare

Animal protection
Protects young plants from bark-stripping and browsing animals.

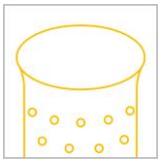
Micro-environment
Ideal light transparency and spectrum to support photosynthesis and photomorphogenesis (plant form).

Wind protection
Delivers wind break effect, protecting plants on exposed sites.

Reduced abrasion^
Flared rim minimises stem abrasion.

^ Compared to no flare.

Herbicide protection
Ties are 40cm from the bottom of the tube to prevent herbicides and pesticides getting inside the shelter.



Tree acclimatisation
Carefully positioned holes help the young tree acclimatise and allow air to circulate.

Auto tree release
The shelter biodegrades to allow the tree to break free, avoiding strangulation.

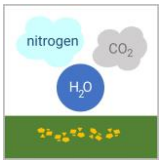
Lifespan

5 years protection
Confirmed by independent weathering certification* (depending on location, tree canopy, soil & microbes).

Smooth surface deters rubbing
Animals can damage shelters when used as a rubbing post.

Natural colour
The colour changes over time blending into the natural environment with no loss of performance.

Supports biodiversity
Over time, mosses and lichens grow on the shelters, supporting a rich biodiversity.



No impact on environment
Breaks down as H2O, CO2 and nitrogen, becoming a form of 'bug food'.

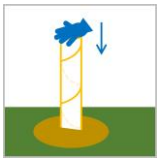
pH and ecotoxity neutral
Does not change soil pH levels when breaking down.

100% biodegradable
Because of the materials used, the NexGen range is 100% biodegradable.

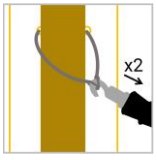
Installation

Strapped and bagged
Bundled using *compostable* bags and *recyclable* strapping, for ease of transport and handling.

Nested
For ease of movement around site.



Corkscrew spine
Delivers strength and longitudinal rigidity, meaning it can be pushed into the soil, discouraging burrowing animals.



Releasable metal tie
Quick fastening with a ratchet tie twister tool, the metal ties will degrade over time and can be untwisted for beating up.

No removal needed
Save money – no collection or recycling needed.

* *"After extensive testing Impact Solutions can confirm that the NexGen unique combination of materials will biodegrade. At around 5 years the tree shelters will start to break down resulting in neutral pH and ecotoxicity, and will become food for micro-organisms."*

Steven Burns
Impact Solutions, Scotland

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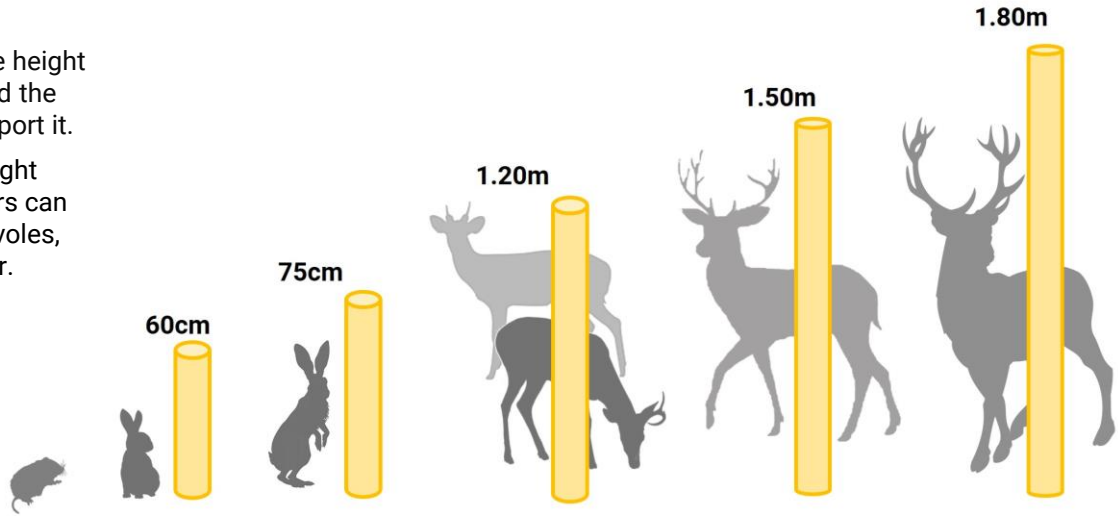
NexGen Tree Shelter Range Choices

Height

Identify which damaging agent (animal) you wish to protect your plants from.

This will influence the height of your protection and the wooden stake to support it.

Depending on the height selected, Tree Shelters can help protect against voles, rabbits, hare and deer.



Protecting against	Vole	Rabbit	Hare	Muntjac / Roe Deer	Fallow Deer	Red Deer
Minimum height of tube for protection	20cm	60cm	75cm	1.20m	1.50m	1.80m
Height of supporting stake*	Not required	75 or 90cm	90cm	1.20m or 1.35m	1.50m	1.80m

** It is advisable to use a longer stake for sandier, lighter soils.*

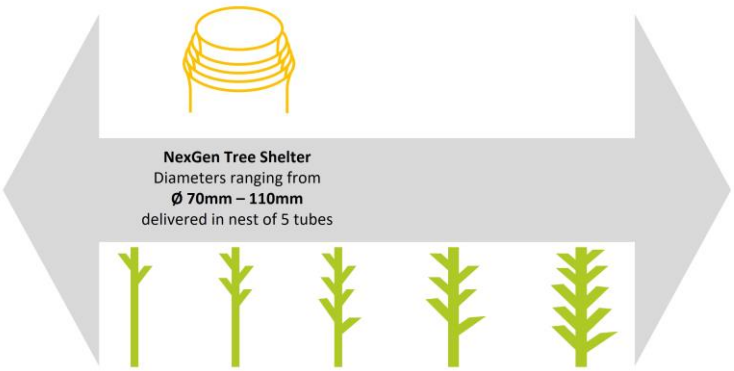
NexGen Tree Shelter Available Sizes

Diameter Types

Tubes are nested (one inside the other), to save space and time when moving plant protection around a site.

Diameters describe the range of diameters you will find in a nest of tubes, from the smallest to the largest.

NexGen Tree Shelter tube diameters range from 70mm up to 110mm in a nest and are suitable for slim to medium plants (ie not shrubs).



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NexGen Tree Shelter Installation

PLANT

Planting bare root or cell grown plants is a straightforward task, however, do not attempt to plant if the ground is frozen or waterlogged. Find a suitable position for your plants, bearing in mind future growth and potential height and spread at maturity.

Bare rooted or cell grown plants can be 'notch' planted in 3 steps (Fig A):

1. Begin by inserting the blade of a spade into the ground. Push the spade handle away from you and then bring it back towards you. Once you remove the spade, you will see that you have created a cavity or 'notch' in the ground.
2. **For bare root** - place the plant roots within the cavity and shake to ensure that all of the roots are in the cavity and pointing downwards.
   For cell grown – place the cell gently into the ground. Ensure the top of the plug (the soil surrounding the roots) is positioned at 2 to 4cm below the surface to avoid drying out.
3. Fill the cavity with soil. Use your heel to firm the soil around the plant to remove any air pockets. Once planted, give them a good water if practical to do so.

You are now ready to install your support and protection.

Fig A

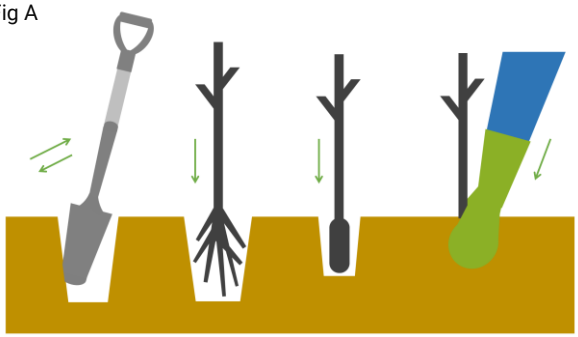
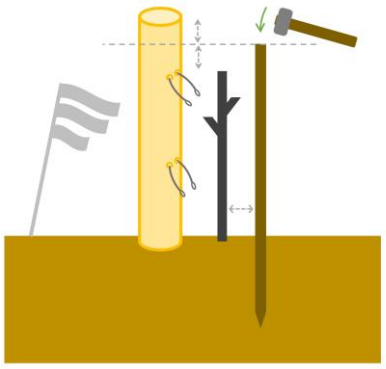


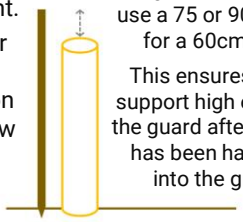
Fig B



Tip: Stand the shelter next to the plant whilst you are knocking in the stake to see how far to insert it.

SUPPORT

1. After planting, position the tube on the windward side if there are strong prevailing winds (Fig B), and the stake between 2cm to 5cm from the base of the plant.
2. Hammer the stake into the ground with a stake driver or mallet (ideally knocking 1/3 of its height into the ground). Ensure it is vertical (particularly important on sloping ground). The top of the stake should be below the top rim of the shelter and above the top tie wrap.



Tip: The supporting stake should be at least 15cm taller than the height of the guard. For example, use a 75 or 90cm stake for a 60cm guard.

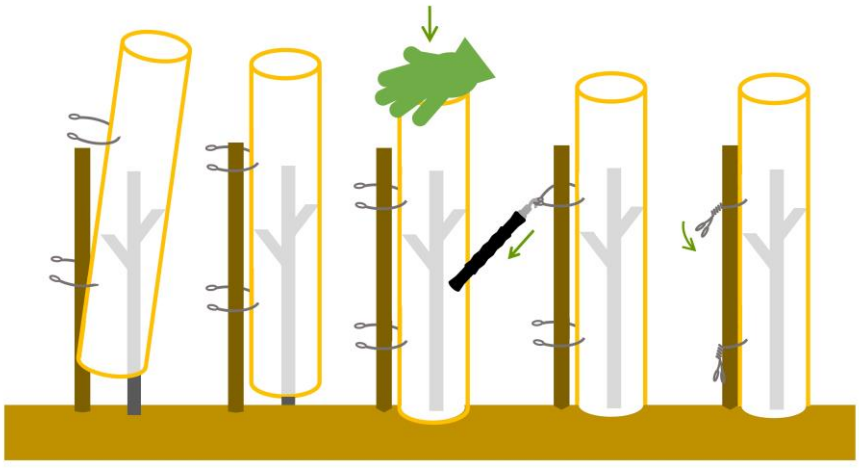
This ensures there is support high enough up the guard after the stake has been hammered into the ground.

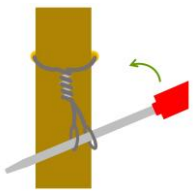
PROTECT

1. Position the shelter over the tree (Fig C), making sure not to damage any lateral branches, positioning the releasable metal ties either side of the stake.
2. Push the shelter into the ground 1cm to 2cm. This forms a safe herbicide barrier and deters vermin from burrowing under the shelter.
3. Use a ratchet tie twister, screwdriver or peg puller tool to twist tie the metal tie around the stake, ensuring the shelter is firmly positioned. *Note – if using a ratchet twist tie tool – the metal tie only requires two short pulls to be tied.*
4. Bend the metal tie downwards for neatness and to deter rubbing by deer or sheep.

Fig C

Tip: Gently gather lateral branches before installing protection to ensure no damage.





Tip: For beating up (checking for & replacing any plants towards the end of the growing season) use a screwdriver or peg pull tool to unwind and rewind the metal tie.

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