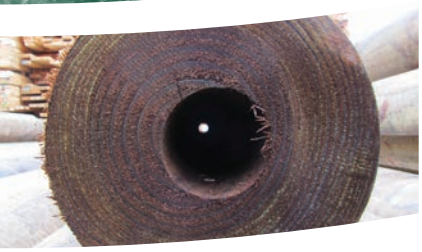

TTTPoles

SED • UGLIES • UNILOG • MULTIPOLE • TTTESTED

TTT Products – solid wood experts

Who we are

You'll find that poles from TTT Products will be the best quality you can get. That's the result of 150+ years of combined experience in civil/structural engineering, construction, and manufacturing. We have been involved in the wood industry for a long time and our reputation is second to none – just ask the engineers, specifiers, and customers who depend on our products, services and advice.

Our experience encompasses a whole range of skills from designing innovative roundwood solutions, to specialised processes such as pole proof-testing and export certification, to building with poles and timber, to presenting papers at conferences. All these skills have honed our knowledge so that we are not just manufacturers but solid wood experts.

What we do

TTT Products manufacture poles and specialist solid wood products from start to finish:

- We source Radiata Pine from sustainable forests using responsible logging contractors.
- We process the logs on site in our modern manufacturing facility – peeling, steam-drying, CCA preservative treating and fixation.
- We complete the processing with specialised services such as TTTested Pole Proof-Testing; Phytosanitary treatment and inspection.
- We deliver the completed products – either by our own fleet of trucks or a cartage contractor; or we can pack product for export whether containerised or break bulk.
- We advise, consult, and liaise with specifiers, engineers, and customers.

With everything handled on site we have the ability to effectively and efficiently manage any request from our customer and provide a solution that satisfies.

What makes a good TTT Pole?

Source material

TTT sources NZ Radiata Pine logs from sustainably managed forests using responsible logging contractors.

Radiata Pine is an exotic species which makes up 90% of NZ's commercial plantation forests. It is a renewable resource. Radiata Pine is also very durable and likely to be the world's most treatable wood species due to superior timber preservative penetration and uptake.

Logs are supplied in accordance with TTT's stringent Log Supply Specification which covers such things as the form (roundness) of the log, knot sizes, sweep (straightness), taper, and the requirement to be free of decay or insect attack.

Processing

Poles are either debarked, machine-peeled, or rounded, then graded to ensure compliance with NZS3605:2001 Timber Piles and Poles for Use in Building.

All TTT poles are steamed (to release the moisture from the wood cells in order for the timber preservative to penetrate) then treated to Hazard Class H5 as per NZS3640:2003 Chemical Preservation of Round and Sawn Timber to provide protection against fungal and insect attack in an in-ground, critical use situation.

After treatment the timber preservative is 'fixed' into the wood using our effective fixation process to minimise leaching of any surface preservative from the poles.

TTT is a registered CCA Oxide Timber Preservative Treatment Plant and are independently audited on a regular basis.

All poles are tagged with SED/diameter, length, Hazard Class and Preservative Code recorded. Each pole is also tagged with a steam charge and treatment charge number.

Export certification

TTT Products Ltd is a Ministry of Primary Industries (MPI) approved organisation authorised to carry out:

- Phytosanitary Inspection
- Phytosanitary Heat Treatment (saturated steam)
- Phytosanitary Timber Preservative Treatment (CCA Oxide treatment)

We can pack your order for export whether it be sawn timber or TTT Poles, either break bulk or containerised. Packaging can be ISPM 15 compliant with or without wrap and/or stencilling. We can organise delivery of product to port location.

Sawn timber ready for export.

CCA Oxide Hazard Classes guide as per NZS 3640:2003

H3.2

For moderate decay situations where timber is exposed to the weather but is not in contact with the ground. Timber used outdoors above ground, exposed to weather or protected from the weather but with a risk of water entrapment; i.e. decking, fencing and pergolas.

H4

Used in high decay areas such as ground contact or fresh water. Generally used for fence posts and landscaping timbers.and pergolas.

H5

Used for severe decay hazard risks such as ground contact where conditions of severe or continuous wetting may occur. End uses for this hazard class are house piles and poles, retaining walls, crib walling and horticultural supports.

H6

This hazard class is for marine use. Wharf piles and fenders, marine and jetty components regularly immersed in seawater or estuarine ground.

Which TTT Pole?

SEDPoles

TTT SED Poles are naturally tapered (6mm/m), machine-peeled poles. Minimal wood is removed so the pole retains its strength. SED refers to Small End Diameter and this is how all poles are measured and graded. TTT SED Poles are typically used in construction, retaining walls, foundations, and piling and can be installed via pile driving, drilling and concreting, or vibration.

Range

SED	150–500mm
Length	1.8–18.0m
Hazard Class	H5

TTT SED Poles used to construct the retaining wall.

TTT Products Ltd stock a wide range of SED poles.

TTT 350 SED Poles (8.0m above ground) used as part of a storage shed.

Uglies

TTT Uglies are naturally tapered (8mm/m), debarked poles. Debarking results in a pole about 6% stronger than a TTT SED Pole – due to less removal of the cambium layer. The rougher finish of TTT Uglies results in greater skin friction when installing. TTT Uglies are an economical option and typically used for foundations and in situations where they are unseen and can be installed via pile driving, drilling and concreting, or vibration.

Range

SED	150–500mm
Length	1.8–18.0m
Hazard Class	H5

12.0m H5 TTT Uglies being pile driven as part of a foundation system for a commercial project.

These TTT Uglies were joined during installation to reach a depth of 21.0m.

UniLog

UniLog is an innovative range of machined, uniform diameter poles manufactured exclusively by TTT Products. Each UniLog is passed through a rounding machine to remove the natural taper. Only minimal wood is removed during this process. The end result is a consistent building product with the same diameter throughout the length of the pole. UniLogs are used for structural building components, retaining walls, residential, industrial, and public space applications. UniLogs can be installed via pile driving, drilling and concreting, or vibration.

Range

Diameter	160–300mm
Length	1.8–12.0m
Hazard Class	H5

UniLogs used in an industrial shed.

Interior view of dwelling designed by Tetrad Group Ltd architects using pre-scalloped and pre-drilled UniLogs.

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MultiPole

The TTT MultiPole is an incredibly versatile pole due to its unique hollow core. TTT MultiPoles can be manufactured from TTT SED, Uglie, or UniLogs. Most of the heartwood core is removed via a special process developed by TTT Products – a first for NZ and possibly the world! This leaves a centre hole that runs the full length of the pole. Removing only the heartwood does not weaken the strength of the TTT MultiPole as the strength is retained in the outer sapwood layers. The heartwood removal results in greatly reduced pole checking and splitting as the pole dries out. Further processing or preservative treatment is then carried out. Full penetration of the preservative can be achieved as the preservative is able to be impregnated from both the internal and external faces.

Refer TTT MultiPole Brochure for more information.

TTT Uglie MultiPoles have greater skin friction which is beneficial when used as foundation piles.

TTTested

TTTested Poles are High Strength poles. We call them High Strength because their strength has been verified on our purpose-built Certified Pole Testing rig. TTT Poles such as SED, Uglies, or MultiPoles can be proof-tested.

Proof-testing is carried out at the very beginning of the manufacturing process, with no damage to the pole, and immediate results available. Proof-testing involves loading a pole into the pole testing rig, applying a proof force by way of an hydraulic ram to achieve the required force in 3-30 seconds, and maintaining the proof force for at least 15 seconds with the pole showing no signs of distress. Modification factors to account for characteristic stresses are applied in accordance with NZS3603:1993 Timber Structures Standard. Refer to TTTested page at www.unilog.co.nz.

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2

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1 Pole testing hydraulic ram.
2 TTTested pole being proof-tested at the groundline point.
3 TTTested high strength pole tag.

TTT Products

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SED Poles, Uglies, MultiPoles, Proof-Tested Poles

Uniform diameter machined poles

Revolutionary timber pole solutions