SCAN | POLE

Scanpole White Paper

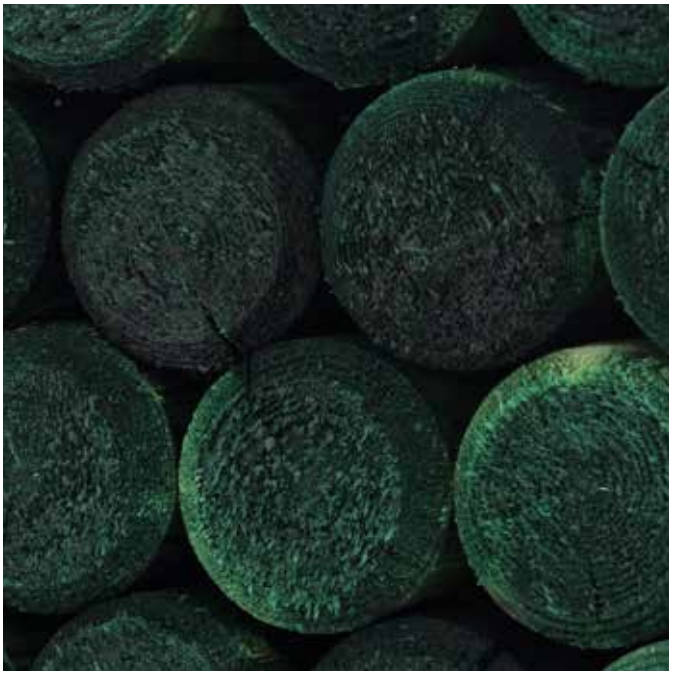
What makes wooden fence posts good?

Timber fence posts are expected to provide decades of service in demanding outdoor conditions. Their service life is influenced by several factors, including the timber species, wood preservative, treatment method, installation conditions, and exposure to moisture and biological decay.

Scanpole fence products are manufactured using the same industrial treatment principles as utility poles for electricity and telecommunications networks. The objective is to maximise product durability and ensure predictable, long-term performance throughout the product's service life.

This white paper examines the key factors affecting the durability of fence posts and compares the wood preservation systems most commonly used in the UK fencing market.

Creosote



Pole+

Wood preservation technologies

Scanpole fence products are treated using either:

- Creosote
- A copper-oil preservative, used for Pole+ products

Both systems are designed to protect timber against decay fungi and other forms of biological deterioration, although they differ in their composition, regulatory status and intended applications.

Creosote

Creosote has been used for wood preservation for more than 150 years and remains one of the most extensively studied wood preservatives in the world.

In April 2026, the UK Health and Safety Executive (HSE) confirmed that creosote-treated fencing products may continue to be supplied for safety-critical applications as defined by Service Factor D requirements defined in BS 8417. The current approval remains valid until 31 March 2033.

Scanpole's creosote-treated fencing products have always been manufactured to meet these standards, and as such the HSE decision does not require any changes to our manufacturing process or product specifications.

Copper-oil-treated Pole+ products

In addition to creosote-treated products, Scanpole offers Pole+ fencing products treated with a copper-oil preservative.

The Pole+ preservation system combines copper compounds, organic biocides and carrier oils specifically developed to provide long-term protection for timber.

Unlike creosote-treated products, copper-oil-treated fence posts can be used in a wider range of environments, including residential, agricultural and public settings where the use of creosote-treated products may not be appropriate.

Independent durability assessments have demonstrated that correctly specified and installed Pole+ products have an expected service life comparable to that of traditional creosote-treated fence posts.

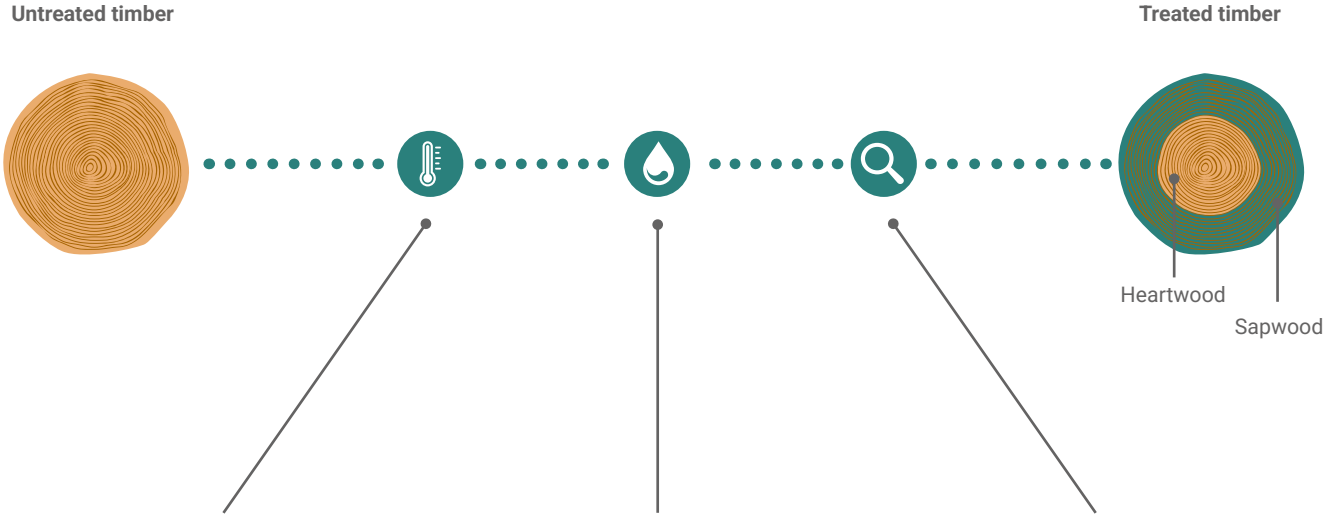
Further information on testing is provided on the final page.

The treatment process

Although creosote and copper-oil-based wood preservatives differ chemically, the industrial treatment process is largely the same.

The objective is to achieve full penetration of the treatable sapwood and ensure that the preservative is distributed evenly throughout the treated wood.

Scanpole uses the Rüping pressure-treatment process, which has been successfully used for decades in the treatment of electricity and telecommunications poles.



Pre-heating (Pole+ products)

- The moisture content of the fence posts is checked to determine which pre-heating programme should be used.
- The posts are pre-heated
- Their moisture content is checked again before treatment.

Treatment process

- The initial pressure stage opens the pores within the wood cells.
- During the filling stage, air pressure is maintained in the treatment vessel while the vessel is filled with preservative.
- During the pressure stage, the pressure inside the vessel is increased for at least 30 minutes to achieve full penetration of the sapwood.
- During the vacuum stage, a vacuum is created inside the treatment vessel to remove excess surface oil from the fence posts.

Inspection

- After treatment, the posts are inspected and samples are taken and analysed to confirm penetration of the sapwood.
- The samples are also tested to verify compliance with the applicable preservative content requirements.

Research, testing and regulatory approval of wood preservatives

The creosote and Tanasote® S40 copper-oil preservative used in Scanpole fencing products are approved as wood preservatives under the EU Biocidal Products Regulation, BPR, for applications in Use Classes UC3 and UC4. In these applications, timber is exposed to weathering, moisture and biological deterioration.

The approved treatment processes and preservative quality requirements are based on the European standards EN 351 and EN 13991.

Further information on the Biocidal Products Regulation is available from the European Chemicals Agency's chemicals database (***chem.echa.europa.eu/)***.

The suitability of the preservatives for demanding UC3 and UC4 conditions has been evaluated through standardised laboratory and field tests conducted in accordance with European standards. These assessments cover resistance to wood-decaying fungi, soft-rot fungi, wood-destroying insects and termites.

Scanpole's treated fence posts also meet the requirements of the NTR A classification. NTR A corresponds to Use Class UC4 under EN 335 and is intended specifically for treated timber products used in ground contact, such as fence posts.

The NTR system also includes independent production quality control.

Production quality management is further supported by a certified quality management system that complies with ISO 9001:2015. Together, BPR approval, NTR requirements and standardised quality management procedures provide the basis for the documented and controlled preservation of Scanpole fencing products.

Comparison of wood preservation systems

	Scanpole Fencing		Any
Feature	**Scanpole Creosote**	**Scanpole Pole+**	**Green Treated / UC4 Copper Salt**
Hot-oil treatment	✓	✓	✗
Eight-hour treatment process	✓	✓	Depends
High-pressure treatment	✓	✓	Depends
40-year service life	✓	✓	✗
Nordic pine	✓	✓	Depends
Unrestricted use	✗	✓	✓
Easy disposal at the end of fife	✗	✓	✓
Compliant with BS 8417 requirements for security fencing	✓	✓	✓
PPE required	Essential	Advised	Advised
Incised required	Not necessary	Not necessary	Required if not pine

Why does the timber species matter?

The choice of timber species has a significant effect on both treatment performance and the long-term durability of the finished product.

Scanpole primarily uses Nordic pine (Pinus sylvestris) **for its fencing products.**

Excellent treatability

The European standard EN 350 classifies the treatability characteristics of different timber species.

Pine sapwood is highly permeable and readily absorbs wood preservatives. During pressure treatment, the preservative penetrates deep into the sapwood, allowing a high preservative loading to be achieved and providing reliable protection against decay.

Because of this characteristic, pine is one of the most commonly used timber species for utility poles, railway sleepers and demanding structures in ground contact.

Consistent quality

The Nordic climate produces slow-growing forests with a relatively short growing season. As a result:

- Growth rings are generally denser.
- The properties of the timber are more consistent.
- Strength properties are predictable.

These characteristics are particularly beneficial in structural fence posts that are exposed to long-term loads and demanding environmental conditions.

A proven solution

Nordic pine has been successfully used in utility poles and fencing structures throughout Northern Europe and the United Kingdom for decades.

Its combination of excellent treatability, strength and availability makes it one of the most suitable timber species for treated fencing products.

Why Nordic pine?

The quality of a timber product begins with the raw material. The Scots pine *(Pinus sylvestris)* used in Scanpole products is sourced primarily from the Nordic countries, where the relatively short growing season results in slow tree growth and closely spaced annual rings. This gives Nordic pine a dense and consistent structure and makes it well suited to applications where strength, durability and predictable performance are required.

Central European pine (left) vs Nordic Pine

The environmental characteristics of timber are equally important. As trees grow, they absorb carbon dioxide from the atmosphere and store carbon in the wood. A timber product continues to act as a carbon store during its service life. According to our Sustainability Report 2025 (*www.scanpole.com/about-us/downloads/*), one cubic metre of the pine used for Scanpole poles and blocks contains approximately 878 kg of biogenic CO_2. The report also states that wood products retain this carbon for as long as the wood remains in use or storage. In contrast, products made from materials such as steel do not provide a comparable biogenic carbon store.

In 2025, Scanpole products contained approximately 115,500 tonnes of biogenic CO_2, compared with total reported fossil emissions of approximately 25,400 tonnes CO_2e for the Scanpole Group. In other words, the quantity of biogenic CO_2 stored in the products was more than four times the Group's reported fossil emissions that year.

Nordic forestry also provides a strong basis for a renewable raw-material supply. In Finland, the annual increment of stemwood is approximately 103 million m³. In 2025, 74.3 million m³ of stemwood was harvested for use, while total drain, including harvested wood and naturally dead stemwood, was 90.2 million m³. Consequently, the growing stock increased by approximately 13 million m³ during the year. *(Source: Luke - Natural Resources Institute Finland)*

The same principle can be seen in Norway. The Norwegian National Forest Inventory reports an annual forest increment of approximately 25.1 million m³ for 2025. Statistics Norway reports approximately 12.8 million m³ of industrial roundwood removals in the same year. These figures are not directly equivalent measures, as the increment covers total forest growth while the removals figure refers to commercial industrial roundwood, but they demonstrate that annual forest growth substantially exceeds industrial harvesting. *(Source: SSB - Statistics Norway)*

Combined with responsible sourcing, this makes Nordic pine a particularly suitable raw material for long-life timber products.

Sustainability Report 2025 (*www.scanpole.com/about-us/downloads/*) states that the Group's timber is PEFC-certified and that 95% of the wood it purchases is sourced close to its production facilities, helping to keep raw-material transport distances short.

95% of the wood we source comes from areas close of our plants. This allows us to keep the transport distances of raw materials as short as possible and also support local forest owners.