



WOOD PRESERVATIVE



Hales (Market Drayton)

Engineering & Technical Services Report

Part A2 Non Technical Summary

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Reg No. 10611



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Timber Treatment installation Non-Technical Summary

General background information

The timber treatment installation is a fully contained system that utilises Tanalith E water based wood preservative, applied by a proven high pressure impregnation process, in order to protect timbers against the threat of wood decay and insect attack and increase the service life of the timbers, that would otherwise fail and be unusable in 18-24 months. Once treated, timbers can last between 15 and 30 years following correct treatment with the Tanalith E product to be used on site.

The facility is fully enclosed within a purpose built and newly erected building designed to meet the very latest environmental standards and also conform to the UK Wood Protection Association code of practice for Timber Treatment installations.

Within the building the treatment plants are sited within a large sealed concrete containment bund which is designed to hold all preservative present on site in the very unlikely event of a containment issue. The timber handling area is also designed with a fall which directs any surplus preservative from the treated timbers whilst they are drying back to the main containment bund for recovery and re-use in any future treatment process.

The treatment facility as planned consists of two industrial timber impregnation plants, one operating on standard Tanalith E preservative solution and the other with the addition of Tanatone brown dye to colour as well as protect the treated timber. Standard Tanalith E treated timber will have a pale green colour immediately after treatment which then will gradually fade on exposure to sunlight to a warm honey brown and eventually to a natural silver grey colour.

Simple Overview of the Wood Treatment Process

- Untreated timbers ready for treatment are delivered to the timber treatment building
- The packs of timber are then placed on to the rail track system used to move the timbers in and out of the treatment vessel and secured in place using straps.
- Once loaded in to the vessel the door of the treatment plant is closed and locked and the wood is then treated to the required specification, for its eventual end use, also known as Use Class.
For more information on the treatment cycle go to <http://www.tanalisedtimber.co.uk/Tanalised-Timber/The-treatment-process>
- Once the treatment cycle has completed and all preservative has been returned to the dedicated product storage tank. The timbers are removed from the treatment vessel and then placed within the fully contained and designated timber handling area to dry.
- Once dry, the treated timbers can be placed at the timber exchange point at the side of the building to be removed for either storage outside or for loading on to a lorry for delivery to the customer.

Basis of Safe Environmental Operation

- **Total Containment**

The entire treatment plant operation is fully bunded and can contain far in excess of the total amount of preservative that will be present on site.

Preservative will be delivered to the treatment facility in specialised bulk road tanker. Once the access door to the side of the building is unlocked and opened the tanker reverses the back of the tanker to the integral discharge point within the contained bunded area before connecting up the discharge hose. The required amount of wood preservative product is discharged to the on site concentrated product storage. The offloading is fully supervised by the fully trained tanker driver and site personnel to ensure a safe and controlled delivery. Once offloaded the system is secured and access door closed and locked to prevent any unauthorised access. Other additives used in the process are delivered in UN approved intermediate bulk containers (IBC) on a just in time basis and stored within the secure treatment plant facility in a purpose built holding area.

The concentrated product is mixed using the timber treatment plant control system provided by Lonza Wood Protection known as Auto-Treater. This accurately mixes the concentrated product with water and doses the other required additives to the correct levels. The ready to use product is typically at either 3% or 5%w/v concentration.

- **Rain water recovery**

To minimise the use of towns water, any rainwater falling on any of the buildings on the site is collected and stored in a 50,000 litre water harvesting system. This water is then pumped to the timber treatment installation for use in the process.

- **Accurately controlled processing**

Different timber commodities require different amounts of preservative to be applied through the high pressure impregnation process depending upon their end use. The Auto-Treater control system closely controls the impregnation process to optimise the amount of product used giving both an economic and environmental benefit.

- **Energy Management**

The control system minimises electricity consumption by only running motors on pumps when necessary. This means when certain process parameters are achieved the pumps are stopped and only restart if the process deviates away from the required set point. This ensures the most energy efficient way of operating the timber treatment plants.

- **Effective preservative**

Tanalith E 8000 is Lonza Wood Protection's latest generation in the Tanalith E range of products that have been in use in the UK for many years and is subject to rigorous testing to demonstrate its effectiveness for the long term protection of timber against the threat of wood decay and insect attack. It also conforms to all the relevant regulatory and health and safety legislation associated with professional, industrial use. From commercial experience and targeted research the amount of preservative product that has to be put in to the wood to be effective is reduced to a minimum level helping to reduce chemical consumption whilst ensuring satisfactory performance of the treated wood in service.

- **Timber handling**

The new installation has a timber exchange area that allows untreated timber to be placed in to the building and also dried treated timber to be removed from the building without the need for the forklift to enter the building. This helps to prevent the possible migration of product from the contained drying area on the wheels of the fork lift truck.

- **Site Operation**

The treatment plants will only be operated by authorised and trained site personnel. The site operates to high operational standards with protection of the environment key to the operations.

A full maintenance programme will be in place to ensure the treatment plants are always being operated in a safe and efficient manner.