

C1 -How will the installation operate?

General process description:

Chemical Delivery.

Concentrated chemical is delivered to the site in either IBC's or bulk tanker. Transfer of concentrate to storage tank is via sealed piping system. The entire process is performed within the bunded area.

The chemical delivery process is outlined in detail by the Operating Manual for the site, which specifically outlines the best practices for this:

- ◆ Smoking and naked lights are forbidden during unloading.
- ◆ Spilling and splashing (including splash loading into tanks) must be avoided as far as possible. Any staff engaged in the handling of preservative solutions should wear suitable protective clothing such as overalls, gloves and boots (plus goggles where there is any risk of splashing).
- ◆ Tank filling points must be within a bunded or contained area. Where sites have dedicated tanker off loading areas, these must be used. No preservative must be lost into surface drains or foul sewer. Reasonable access must be provided on site for the unloading tanker. An effort should be made to minimise the length of tanker hose necessary for unloading. Following discharge residual dripping from the hose should be collected and contained.
- ◆ First aid materials suited to the potential emergencies should be readily available nearby.
- ◆ Bulk storage vessels should be fitted with a high level alarm and be tested prior to discharge, and the fill line valve closed after discharge.
- ◆ A product label should be displayed next to the tanker filling point.
- ◆ Should the high level alarm be activated, the level switch should be removed and cleaned as soon as the fluid level has dropped sufficiently. This is to ensure any residue from the preservative does not prevent it functioning next time. Suitable protective clothing must be worn when carrying this out.

Chemical Mixing.

Chemical is mixed with water using a fully closed, automated water dosing system. This system has multiple failsafe mechanisms built in to ensure that no chemical can be drawn back into the water supply. The mixed chemical is stored in a sealed tank within the bunded area.

Treatment Plant Operation.

Operation Synopsis:

Timber is loaded onto a bogey system using a forklift truck. The bogey is then pulled into the pressure vessel using a winch system. The treatment process is fully automated by process computer, using a closed system of pipes, valves and pumps. Once the treatment process

*has been finished, all chemical is extracted from the pressure vessel into a storage tank.
The entire treatment process is performed within the bunded area.
This area can be seen on the associated document reference 1.0, as the area enclosed by the red line.*

Glenavon Timber Treatment operates in line with the Wood Preservation Association (WPA) Code Of Practice:

The WPA Code of Practice

The Treatment Plant

New treatment plants are designed by Osmose in accordance with the Wood Protection Association (WPA, a division of the BWPDA) Code of Practice for the Safe Design and Operation of Timber Treatment Plant. This code has been developed in consultation with the enforcing authorities, such as the Environment Agency (SEPA in Scotland) and the Health & Safety Executive. It gives practical guidance on the safety, health and environmental protection aspects of plant equipment, its operation and treatment site design. A copy of this Code can be obtained from Osmose.

Perhaps the main safety design requirement for the operator is the provision of adequate door safety devices. If any of these devices are damaged or cease to work you have a duty to report this to your employer. (Older plants may require modification to bring them in line with current standards).

Vessel doors should include safety devices which:

- ◆ Prevent the treatment cycle from starting until they are fully and securely closed.
- ◆ Prevent the door from opening until the vessel is empty. Test cock should be present to check for the presence of fluid in the vessel.
- ◆ Prevent the door from bursting forwards should it be unlocked with preservative still in the vessel.

The Treatment Site

Again, the WPA Code of Practice sets out detailed requirements for the layout of the treatment plant foundations and the surrounding site. New plant sites must meet these requirements before treatment starts whilst older sites must be improved, as necessary, within a reasonable period.

The main requirements for a safe site are as follows:

- ◆ The plant and chemical storage tanks should be completely contained by bunding. This bunding should be completely sealed, resistant to the treatment products used and be capable of holding at least 110% of the capacity of the storage tanks. It should be constructed so as to catch a spillage from the vessel door.
- ◆ A dripping area for freshly treated timber should be provided. This area must not discharge into surface water drains and should be covered. In any case uncontaminated water should be diverted away from the treatment area and any contaminated water contained and disposed of in a safe manner.

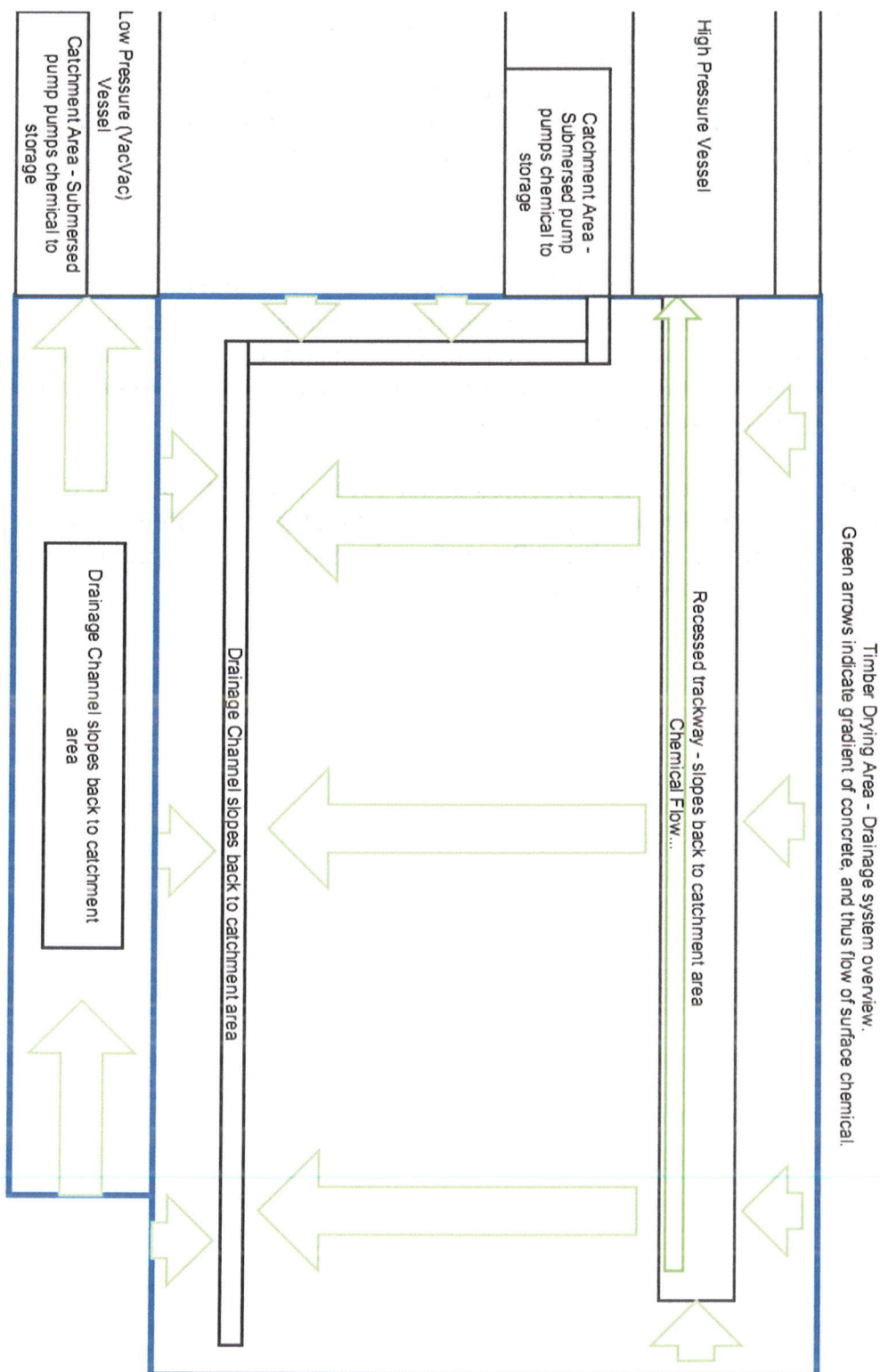
- ◆ The plant should be roofed over both to protect equipment and minimise the build up of contaminated rainwater which may require disposal.
- ◆ The plant and storage tanks should be sited away from features which may create a fire or other hazard. Suitable fire-fighting equipment, must be readily available and staff should be familiar with their use.
- ◆ The Plant Operator should be provided with washing, changing and working facilities within the plant area. Potentially contaminated clothing, including boots, should not be worn in office or rest areas.

Timber Drying.

The treated timber is pulled out from the pressure vessel, and lifted by forklift onto the drying area. All excess chemical drips from the wood onto an impermeable silicone based concrete pad, which channels the dripping liquid back into the storage tanks. Once dry, the timber can be moved to other storage areas in the site before be laded back onto lorries.

The entire drying process is performed under cover, within the bounds of the silicon concrete pad. The drying area can be seen on the associated Document Reference 1.2 "C8 - Site Condition Report", under Site Layout diagram, shown by the area enclosed by the green rectangle.

Diagram: Timber Drying Area Drainage System, showing concrete gradient and chemical flow, drainage channels and pumping/reclamation area.



Timber Pickup

Timber is loaded back on to delivery vehicles by forklift. No timber leaves the yard until dry.

General Workplace Housekeeping.

Glenavon Timber Treatment is dedicated to the professional operation of its treatment facilities. Protection of employees and of the environment are of utmost importance. In accordance with this, and in addition to the more specific operating procedures and civil works engineering solutions in place, a General Workplace Housekeeping protocol is followed, as specified by the Operations Manual:

(xi) General Workplace Housekeeping

- ◆ Preservative contamination in relatively small quantities may not always be visible to the naked eye. Care must be taken not to spread traces of preservative into areas which would otherwise be clean - for example, the Operator's office and control panel, rest and eating rooms, company office, etc. Always remove unnecessary protective clothing to avoid spreading contamination and observe good hygiene procedures.

- ◆ Soak up any slight spillage of preservative with sawdust, industrial absorbent granules or other suitable absorbent material. Collect and store in closed containers prior to disposal in accordance with the requirements of the local waste disposal authority.

- ◆ Any unavoidable dripping must be contained and its spread around yard surfaces prevented.

- ◆ Store any full or empty containers neatly and in accordance with the previous section on handling containers.

- ◆ Keep area dry, do not use the bund for storage of rain water, store in separate tanks.

- ◆ Keep walkways clear. Restrict access of unauthorised people to the plant. Ensure signs are clearly displayed to this effect.

