

Technical Note

Project: Llanwern WTS, Glan Llyn, Newport

Subject: Surface Water Treatment System Decommissioning

Client:	St Modwen Developments Ltd./Revantage Real Estate (SMD/RRE)	Version:	1-RevisionA
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Introduction

Biogenie Remediation Ltd. has been instructed by Cumming Group that water treatment activities at the Glan Llyn development site are to cease, on a date to be agreed, following receipt of notice of termination from Revantage Real Estate.

This document summarises the activities to be undertaken to decommission the water treatment system and its removal from site prior to final site hand over. Appropriate risk assessments and method statements will be provided before any works commence.

Phase 1

Phase 1 of the decommissioning activities will see the lagoon water levels reduced to as low as reasonably practicable i.e. pump inlet level with pumps lowered to the maximum depth achievable with current infrastructure. Following reduction of the water levels the lagoon transfer pumps will be isolated from their electrical supply and disconnected from the system. This will allow for removal of the pumps and their support ramps from the lagoon.

Whilst Biogenie will lower the water level within the lagoon, it is anticipated that approximately 0.5-1m of water and sludge will remain within the lagoon. Biogenie will not remove or dispose of this residual water and sludge.

Upon cessation of pumping all filter media vessels will be drained of water to allow removal of their contents by vacuum tanker. As part of the waste removal process, residual stock of Ferric Chloride and Hydrochloric Acid will be removed by vacuum tanker, and the storage tanks flushed to allow their safe removal from site. Chemical delivery pipework will also be flushed during this process to allow for

disposal. Upon completion of removal of chemicals and waste from site, the emergency shower will be isolated and disconnected from its electrical and water supply.

All waste will be removed by an appropriately licensed contractor, with and disposed under a duty of care waste transfer note or hazardous waste consignment note.

Full electrical isolation of system control panels will be made to allow removal of transfer pumps and other small electrical items. These items will be removed from the system for transport within the site storage units.

All connections between the system pipework headers and vessels and tanks will be removed at this point to allow for removal of equipment from site.

Initial transport movements will be carried out during Phase 1 to remove the 20ft storage container and 16ft drying room. This will provide space for a temporary welfare unit and additional working area within the site compound.

Phase 2

During Phase 2 a mobile crane will be employed to lift tanks and vessels from the water treatment system compound for transport. Due to the changes made to the wider site during redevelopment works, it is no longer possible to use lorry mounted cranes to remove the equipment. It is envisaged that the lifting operations will take place within the site parking area, however lorry loading may need to be carried out in the access road area. A full lift plan will be carried out by an Appointed Person prior to any lifting operations taking place.

The existing site office will also be removed during Phase 2. This will provide an additional lay-down area within the site compound if required for storage of equipment prior to transport.

Phase 3

Initial work in Phase 3 will comprise final electrical disconnection of equipment (excluding CCTV and lighting) and delivery of waste skips.

Remaining pipework headers will be dismantled and waste segregated into appropriate streams. This includes the removal of feed and return pipework within the lagoon area, chemical delivery pipes, discharge pipework and pneumatic control pipes. Plastic tanks which are to be disposed of will also be placed within these waste streams. Wastes will be disposed of by a licensed waste carrier under the appropriate duty of care transfer notes.

Power and control cables are to be removed along with supporting cable tray and upstands secured to the bund walls, with wastes to be segregated prior to disposal.

Upon completion of the work to dismantle remaining infrastructure, the CCTV and lighting tower will be disconnected and removed. The CCTV provides a feed to Collard Security which will be lost upon removal of this equipment.

The final works within Phase 3 will be the removal of Biogenie's temporary fencing and pedestrian barriers from the site compound and uplift of the remaining 10ft storage/control containers and any associated equipment.

Prior to hand over to SMD/RRE, the waste skips and temporary welfare cabin will be removed from site.

Final Site Condition

Decommissioning work by Biogenie will include the removal of electrical and control cables, pipework, treatment tanks and vessels, welfare and storage cabins, and temporary fencing. The site water supply will be disconnected and isolated at the site boundary.

The site will be returned to SMD/RRE with the concrete bund and palisade fencing remaining. Also remaining will be three Biogenie installed cable ducts within the site compound, and two winch support posts at the lagoon area. Two large ducts crossing the access road will remain in place, however all Biogenie installed infrastructure will be removed from these.

The main electrical supply (third party) and meter cabinet (owned by SMD/RRE) will remain on site however outgoing cables will be isolated and disconnected.

The lagoon area will be handed back with residual water and sludges remaining, and Biogenie owned fencing removed.

Permit Surrender

Upon completion of decommissioning and demobilisation from site, Biogenie will apply to Natural Resources Wales to surrender the Bespoke Environmental Permit (reference EPR/CB3491HU/V002) held for the operation of the water treatment system.

Ongoing permit charges may apply until the permit surrender is complete.