
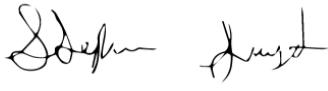
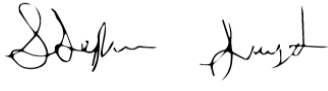




**Storage, Handling &  
Recovery/Disposal of Sludge & Waste  
Standard Operating Procedure  
QEHS P 023 (V2)**

The signatures below certify that this Quality Manual has been reviewed and accepted and demonstrates that the signatories are aware of all the requirements contained herein and are committed to ensuring their provision.

	Signature	Position	Date
Prepared by		EHS Manager	07/06/2022
Reviewed by		Director	21/06/2022
Approved by		Director	21/06/2022

### COMPANY PROPRIETARY INFORMATION

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Date	Version	Context	Initial
24-05-2021	1	Procedure implemented into Management System	KR
07-06-2022	2	Cover page changed and ISO logos added. Some changes to wording and format	BG

**P 023 Storage, Handling, Recovery, Disposal of Sludges & Waste SOP**

Quality, Environment, Health & Safety

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## 1.0 Introduction/Purpose

This standard operating procedure has been prepared by Evergreen Fields Ltd. for the purposes of procedural guidance for the storage, handling, treatment/recovery and final onward movement of sludge and waste.

## 2.0 Scope/Application

This procedure involves only the acceptance, storage, treatment/disposal of sludges and waste in approved facilities and is designed to work in line with the other method statements/standard operating procedures as prepared by Evergreen Fields Ltd. for collection, vacuum extraction and transportation of liquid sludge and sludge cake from septic tanks, waste water treatment plants and/or water treatment plants, grit and screenings for onward transport and delivery to an appointed sludge recovery/disposal facility.

## 3.0 Reference Documentation

Reference	Document Title	version
	Safety Statement	2
P 024	Liquid Sludge Procedure	2
P 025	Cake Sludge Procedure	2
P 029	Sludge Alkalinity Stabilization & Testing Procedure	2

The Evergreen Fields facilities are equipped with an Evergreen Fields Site Folder which contains the following:

- Copy of the Certificate of Registration for the facility.
- Site Rules.
- Safety Statement including Risk Assessments and Control Measures implemented at the site.
- Site specific safety procedures.
- Emergency procedures.
- Accident & Incident reporting procedures and log.
- Communication log.

## 4.0 Terms and Definitions

Term	Definition
Document	Information & supporting medium
Procedure	Specified way to carry out an activity or process
Quality manual	Document specifying the QEHS management system
Record	Document stating results or data relating to activities performed
Specification	Document stating requirements

## 5.0 Responsibility

The management representative will establish and review this procedure. Evergreen Fields Ltd. senior management will work with the management representative to implement it. All personnel working for/on behalf of Evergreen Fields Ltd. at the facility must familiarise themselves with the contents of the relevant Site Folder and follow all safety procedures and instructions issued by Evergreen Fields Ltd.

## 6.0 Process

### 6.1 Sludge Delivery, Storage & Treatment

- Only hauliers with current Waste Collection Permits with the appropriate EWC codes are permitted to transport sludge and waste materials.
- All sludge and waste must be transported by a closed tanker or covered skip/trailer.
- Dedicated containers/hoses etc. must be used for the transport of sludges, biosolids and wastes (e.g., separate dedicated trailer/skip for WWTP sludge and WTP sludge). No mixing of sludges, biosolids and wastes is allowed.
- All containers used must be marked with the relevant EWC code (e.g., WWTP Sludge 19 08 05)
- All drivers must complete a Collection Docket at the relevant WWTP/WTP. This docket must be signed by the Plant representative before leaving the collection plant and contain the following information.
  - Date & Time
  - WWTP/WTP
  - Material Type
  - Container type and size
  - Unit of measurement
  - Weight/volume
  - Destination
  - This is then signed by the driver and the plant representative.

- The dockets are printed in triplicate.
  - Applicant takes the white copy,
  - Contractor keeps the pink copy,
  - Yellow copy must be sent to the Evergreen Fields Ltd. office at the end of each working week by the contractor (or as agreed).
  
- Before arrival at approved recovery/disposal facility the driver/operator must travel to a nominated weighbridge (unless otherwise directed by Evergreen Fields Ltd.) where the laden weight of the truck is taken. Once the load has been delivered to the approved recovery/disposal facility, the driver/operator must return to the nominated weighbridge where they will be issued with a complete weigh docket. The weigh docket for each load must be paired with the Collection Docket.
  
- Upon entry to the approved recovery/disposal facility, the driver must proceed to the required offload area. The driver/operator must stay with their vehicle/equipment at all times while on any site and follow all Site Rules and Safety Procedures (held in the Site Folder).
  
- The skip or trailer must be emptied into the agreed area. If sufficient space is not available within the agreed area, then the driver must contact their supervisor (or Evergreen Fields Ltd.) immediately (contact details are located in the Site Folder).
  
- If a spillage occurs, the driver/operator should follow procedure the ***QEHS P 010 Emergency & Evacuation Response Plan*** or any site-specific emergency plan if present.
  
- Once unloaded, the driver/operator must inspect their vehicle/equipment to ensure that no waste material is present on the exterior. If waste material is observed on the exterior of the vehicle/equipment, then this must be removed prior to leaving the agreed area.
  
- Lime is added to the untreated WWTP sludge in order to treat the sludge to allow the material to reach the necessary standards to be classified as a biosolids. This is achieved by mixing a minimum of 0.3 kg of Lime per DM kg of sludge:
  - raise the pH to greater than 12.0 and to maintain the pH above 12 for 30 minutes and to achieve a temperature  $\geq 70^{\circ}\text{C}$ .

Or

- raise the pH to greater than 12.0 and to maintain the pH above 12 for 72 hours and to achieve a temperature  $\geq 52^{\circ}\text{C}$  for at least 12 hours. At the end of the 72 hour period, air dry to a dry solid content of  $\geq 50\%$ .

These procedures are carried out in accordance with local authority protocols for the use of biosolids in agriculture, to reduce the number of potential pathogenic organisms in the sludge.

The above is conducted using a Keenan Mixer to ensure consistent mixing of the lime and sludge (or by means of agitation).

During the period where land spreading is not allowable, i.e., the closed window, all WWTP sludges are stored within the confines of the approved facility subject to authorisation from the local authority.

## 6.2 Land spreading of Biosolids

Evergreen Fields source suitable landbank for the application and recovery of the biosolids delivered to its sludge facilities. This includes the following activities:

- Sludge testing as per Irish Water requirements. (internal)
- Soil testing of proposed landbank. (internal)
- NMP mapping. (internal)
- NMP preparation. (internal)
- NMP approval from relevant LA (if required).
- Land spreading approval as required by Local Authority.
- Statutory reporting of activities.

Biosolids are only land spread where there is a Nutrient Management Plan in place as per the *Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 & 2001*.

Once approval of the relevant NMP is received, Evergreen Fields Ltd. land spread the biosolids. Evergreen Fields Ltd. issue the approved NMP to the land spreading operator to ensure they are aware of the application quantities and locations.

All vehicles used in the transportation of the biosolids must be covered by a current waste collection permit with the appropriate EWC codes.

The biosolids must load the onto a trailer (or other suitable container) at the sludge facility and transport it directly to the agreed landbank.

Each load should be weighed (unless otherwise agreed with Evergreen Fields Ltd.) at an approved weighbridge and weigh dockets sent to evergreen Fields Ltd. Head Office with the relevant land spreading dockets.

The operator must ensure the application rates for each plot are as per the approved NMP.

The operator must provide a land spreading docket (together with weigh dockets, as necessary) as evidence of compliant land spreading with the approved NMP

## 7.0 Review

This document is to be reviewed by management representative on an annual basis or as required by senior management.