



Celtic Technologies Limited

**Llanwern Surface Water Treatment, Glan
Llyn, Llanwern, Newport NP19 4TZ**

Site Waste Management Plan

Issue 1 - October 2020

Remediation Works Site Waste Management Plan – Rev 1

Document Control

Revision No.	Date	Author	Comments on Revisions
Rev. 0	October 2020	TD	First Issue
Rev. 1	October 2020	TD	JT comments amendment

1.0 Introduction

Celtic were appointed by St Modwen (Client), to design, install and commission a water treatment system to treat surface water exiting the Glan Llyn development site, Queen's Way, Llanwern, NP19 4TZ. The contract award was based on subsequent operation and maintenance of the water treatment system for a period of one year following the D&B contract completion.

This Site Waste Management Plan (SWMP) describes the procedures by which waste will be managed by Celtic, the Principal Contractor, during the lifetime of this project. The document will also act as a guide to project personnel on how to manage all types of waste, in accordance with statutory and best practice requirements. This SWMP should be read in conjunction with Celtic's Design and Execution Report, Report No. R1815/20/5025, dated October 2020.

1.1 Scope of Works

As described in the Celtic's Design and Execution Report, Report No. R1815/20/5025, the works for site comprises the following key elements:

- Mobilisation and site establishment;
- Installation of three no. parallel treatment systems, referred to as the Main, Standby and Metals treatment systems;
- Commissioning of the aforementioned systems;
- Operation and maintenance of the systems.

2.0 Project Waste Responsibilities

It is vital, for the SWMP to be successfully implemented, that key roles and responsibilities for waste management be clearly defined, documented and communicated. The roles and responsibilities with regards to the SWMP during the remediation project are shown in the table below.

Name	Organisation	Contact Details	Role/Responsibility
Jack Thomas (D&B contract)	Celtic Columbus House Green Meadow Springs	Jack Thomas : t – 07969690666 e – jack.thomas@celtic-ltd.com	Project Manager - Ensures that the works specification is followed and care is taken/ legislation is followed by the site team.
Andrew Taylor (O&M Contract)	Tongwynlais Cardiff, CF15 7NE	Andrew Taylor: t – 07985836246 e – andrew.taylor@celtic-ltd.com	
Chris Roberts	Celtic Columbus House Green Meadow Springs Tongwynlais Cardiff, CF15 7NE	m – 07385379880 e – Christopher.roberts@celtic-ltd.com	Site Manager - Manages the site, ensuring all material movements are recorded. Ensures works specification is followed. Implements the SWMP to all relevant works on site. Supervises / carries out sampling / testing of samples and site

Name	Organisation	Contact Details	Role/Responsibility
			conditions through the pumping works. Responsible for site monitoring.

3.0 Waste Identification

During the planning stage of the project Celtic have investigated all likely waste streams to be generated along with approximate volumes of material. Waste targets have been set and these have been used to define re-use targets for the project.

The waste targets are summarised in Table 1 below, with a detailed breakdown of the proposed estimated waste volumes from the following waste streams which will be generated as part of the works

- General Waste;
- Spent zeolite
- Spent Activated Carbon; and
- Waste Sludge.

Table 1 – Waste Targets

Waste Description	Estimated Volume (per year)	% Target (Re-use, Recycle, Treatment, Disposal)
Spent Activated Carbon	6-12m ³	100% off-site for recycling.
Spent zeolite	3-6 m ³	Off-site disposal to landfill for recycling, where possible.
Sludge	0-5 m ³	Off-site disposal to waste recycling facility.
General Site Waste Materials (PPE etc)	1 x 8cu yard Skip	Off-site disposal to landfill or for recycling, where possible.
Waste pipe (system)	TBC	100% recycled for use on future projects.

4.0 Waste Management Implementation

Celtic will ensure that the principles of the waste hierarchy (eliminate, reduce, re-use, recycle, disposal) are applied during the implementation of this SWMP throughout the remediation project. The SWMP will evolve over the project with regular monitoring to ensure continual improvement, best practice and cost-effective solutions are in place.

Throughout the duration of the remediation scheme Celtic will endeavour to minimise the volume of waste generated by implementing the SWMP in the following ways:

- Where possible, imported materials will be selected on their recyclable and sustainable properties;
- General waste will be collected within a single, covered and locked skip, with materials sorted into their relevant waste streams off site by the waste management service provider;
- As much of the required materials and equipment will be sourced from local suppliers as possible in order to minimise transportation mileage;
- Strict stock control will be undertaken for site consumables to ensure excess materials are not present on site at the end of the works;
- This recycling/reduction strategy will be implemented prior to works commencing;
- Where waste materials have to be removed off-site then all waste disposal options will be explored to ensure as little as possible is sent to landfill;
- All waste will be removed from site by registered waste hauliers under appropriate duty of care. Consignment notes will be generated if any hazardous waste materials are disposed of off-site.
- Hauliers of hazardous waste from the site will be required to produce evidence of certification and compliance with the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR 2011).
- Disposal routes and destinations will be audited during the project to ensure Duty of Care is being fully implemented with regards to waste;
- All waste returns will be maintained on site and a waste register will be developed in order to document the type and quantity of waste being removed from site;
- Appropriate environmental permits and consents will be in place for the works. These will include a mobile treatment license and potentially a bespoke environmental permit should works progress beyond a year.

5.0 Communication of the SWMP

To ensure successful implementation of the SWMP for the works, the requirements of SWMP will be communicated to all project staff during the site induction. The roles and responsibilities of all parties will be communicated during the project Kick off meeting. Additional toolbox talks and briefings may be required on waste management issues following review of the SWMP during the works.

The SWMP and the waste management procedures detailed within will be monitored throughout the project. Record forms such as the waste disposal log will be used to track and manage the materials on site and any subsequent waste generated. Electronic copies of all waste records and documents will be available for review on site.

The re-use, recycling and disposal volumes of all waste materials will be reviewed against the waste targets and project targets. Where issues are identified, such as additional waste streams being identified or potential exceedences of waste targets, these will be discussed with the project team during progress meetings to agree on appropriate and practical solutions.

Waste quantities will be recorded and monitored using the project performance report which is submitted on a monthly basis and form a key part of monitoring project progress. Waste management issues will also be recorded in the daily site diary completed by the site manager.

Regular site audits, both internal and external, will be carried out and, as a part of these audits, waste management procedures will be checked and monitored. The site manager will ensure that waste management procedures are being followed and relevant documentation is in place.

6.0 SWMP Review and Document Control

The SWMP will be reviewed, at a minimum, on a quarterly basis during the project and any changes will be recorded and a new issue of the report will be created in the event of such changes. A review will take place prior to any significant changes in method statement that may have impact on the SWMP. Changes will also be communicated to the project staff through toolbox talks / site briefings.

Reviews of the SWMP will look at any changes to the project that may affect the plan, any additional waste streams that have been identified, any changes to the way in which waste streams/materials are managed on site and changes in roles and responsibilities.

Within three months of completion of the project the SWMP will be reviewed by Celtic to identify lessons learnt that could be taken forward to future projects and to ascertain any cost savings that were made from the