Environmental Management System (EMS) for Prichard Remediation Ltd.

Document Control	
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Document Template Revision Log		
Revision Number:	Date:	Description of Changes:
1.0	20/12/2021	implementation of EMS
1.1	08/02/2022	Amendment to section 2.3
1.2	17/02/2022	Site specific amendments for the Virginia Park deployment.
1.3	14/04/2022	Amendments to permitted EWC codes and Schedule 5 (14/4/2022)
1.4	18/10/2025	Updates for Phase 2
1.5	07/02/2026	Updates following deployment review

Contents

1.0. Introduction

This EMS is produced for Prichard Remediation Ltd and designed for use with mobile plant permit EPR/BB3498HA at the Virginia Park site, Caerphilly. The site works are intended to be undertaken during the Spring / Summer / Autumn months to maximise the dryest operating conditions to facilitate the earthworks and remediation methodology.

The standards outlined within the following documents submitted will be adhered to throughout site operations:

How to Comply, SGN5.06, H1 guidance, and H4 guidance

The site is registered at:
Ex Virginia Park Golf Club
Heol Bro Wen,
Caerphilly,
CF83 3SW

The site operator is:
Prichard Remediation Ltd
Earthmovers House, Unit 16,
Llantrisant Business Park,
Llantrisant,
Pontyclun,
CF72 8LF.

1.1. Site TCM

The TCM for this permit and the deployments to Virginia Park, herein referred to as 'the site', will be George Harvey, he has successfully completed the WAMITAB Level 4 MR0C13 Medium Risk Operator Competence for Land Remediation. WAMITAB certificate number is 5191165. He also holds LROC2: Low Risk Operator Competence for Non-Hazardous Treatment to Produce Soil. The WAMITAB certificate number is 5193371.

1.2. Site Plans

The extent and layout of the permitted operations are detailed in document VP_P2_SP_V1.0. The maps identify the following:

- Operating boundary
- Security and access arrangements
- Areas of waste soils and contaminated material, substances or products for remediation by the mobile plant.
- Location/siting of principal plant and equipment
- Process, treatment, storage, and quarantine areas
- Drainage systems
- Location of boundary monitoring points and pollution control units
- Potential receptors (i.e. Housing, watercourses etc.)
- Protected sites (if applicable i.e. SAC, SPA, Ramsar or SSSI within 1 km)

Should it not be feasible to show any of the above for example due to the particular method of treatment, site specifics or nature of waste to be treated then this will be covered by confirmation in each deployment.

1.3. Site Security

The site will be fenced in its entirety with the addition of the following infrastructure:

- Offices and stores;
- Diesel tanks (including secondary containment);
- Drainage holding pit;
- Electricity supply;
- External yard lighting;
- CCTV cameras (where possible); and
- Water Storage Tanks / bins as a waste management area

A review of the area will be undertaken prior to works and boundaries inspected daily.

1.4. Site Identification Board

A site identification board will be displayed if required and maintained at the site entrance and display the following information:

- Site name and address;
- Permit holder's name;
- Permit number;
- Emergency contact details including telephone number;
- Statement that the site is licensed by the NRW;
- Natural Resources Wales contact numbers including incident hotline number 0300 807060; and
- Days and hours site is open.

The sign will be maintained in a legible condition and updated as necessary.

2.0. Mobile Plant Treatment Procedures

2.1. Treatment Procedures

Materials prior to treatment have been pre-classified and the relevant EWC has been assigned and checked as being within the list of wastes appropriate to the scope of the permit and as agreed within the deployment for Virginia Park.

Authorised treatment technology / technologies

Under our bespoke permit we are permitted to use the treatment technology(ies) listed below:

- Air sparging
- Bioremediation – insitu and exsitu (windrows, biopiles, in-vessel bioreactors)
- Biosparging
- Bioventing
- Chemical Treatment (including oxidation, dehalogenation)
- Ex-situ treatment of pumped groundwater (chemical treatment, biological treatment, air stripping, filtration, carbon adsorption)
- Soil Vapour Extraction (including dual phase SVE)
- Soil Flushing (including steam injection)
- Soil Washing
- Solidification
- Stabilisation
- Thermal treatment (including thermal desorption and steam injection)
- Treatment plant for sorting and separation, and
- Treatment plant for blending, mixing, bulking, screening, shredding, particle size reduction and / or particle separation in order to facilitate remedial action.

This project will involve the technology - 'Treatment plant for sorting and separation'

The treatment plant proposed here is a mobile screening plant and/or 360 excavators with rake buckets on specifically designed to screen, sort and separate material to facilitate the recovery of soil, soil substitute or aggregate for reuse as per the Remediation Strategy. These treatment plant items will be brought to the material.

In order to ensure that unsuitable wastes are not accepted into the process; the site management team, in conjunction with the site geotechnical engineers, will ensure that the materials identified are suitable to be treated and by the prescribed treatment methodology. The site management will also determine whether the waste is likely to be contaminated and what nature this contamination takes. This assessment will be formulated by a combination of the site investigation works undertaken to date which form part of the remediation strategy, actual visual inspection of the material and will involve the use of laboratory testing, both chemical and composition. If it is deemed that the wastes are not suitable to be recovered on site as a result of these procedures; they will not be accepted into the treatment process and will be removed from site for disposal or recycling at a suitably licensed facility.

All waste to be utilised within the aforementioned treatment process will be present on site and generally have the following information assigned to them:

- How the waste was derived including any variability within the process.
- The EWC code assigned for the waste.
- Chemical analysis and composition of the waste.
- Contingency plans for non-conforming waste should the need arise.

All wastes that are treated by Prichard Remediation Ltd at Virginia Park will be both visually and olfactory checked before, during and after treatment on the site of end use (if applicable). They will also be the subject of additional sampling and testing to ensure that they have been treated to the desired specification for the client and for reuse.

In line with the CSM Risk Assessment for the Virginia Park mobile plant treatment, the risks associated with treating this material on site either in exiting phase locations or in current stockpile locations are very low. All areas where material is being stockpiled on or is proposed to be treated will be treated themselves so no undue environmental or human health impact will be sustained by allowing the activity to be undertaken on the ground as is. In addition, it is proposed to move the relevant treatment plant to the material as much as possible to minimize the potential environmental impact and footprint of the works. Requiring a hard standing for each time this happens is simply not practical.

All vehicles that are depositing non-waste materials onto site will be directed to the most appropriate reception area by the foreman for site. When the load is tipped off, the contents are visually checked for non-conformities and to see if the material matches that described and coded on the accompanying transfer note (where applicable).

2.2. Waste Storage Procedures

Waste will be stored on the site waiting for treatment as per the plans within document VP_P2_SP_V1.1. The storage of the waste will not exceed those parameters identified within the permit / deployment form. The wastes will often be bulked up in order to gain enough of a tonnage to make the treatment process effective. The waste may need to be bulked up on site as there may only be a small window of opportunity to treat the waste and reuse the products (as applicable) in periods of dry and suitable weather. All waste that is unsuitable will be stored in designated containers in the waste container storage area as per the plans within document VP_P2_SP_V1.1. for removal from site. Any hazardous waste will be contained within sealed containers, specific to the hazardous nature of the material in question.

The waste will be stored & treated in pre-determined locations as per the plans within document VP_P2_SP_V1.1. that have been appropriately risk assessed to ensure that the environment is protected, in line with the approved risk assessment for each site deployment. In line with the CSM Risk Assessment for the Virginia Park mobile plant treatment, the risks associated with storing this material on site either in exiting phase locations or in current stockpile locations are very low.

2.3. Surface water

The site will manage the surface water encountered within the operational area of the ongoing works utilising a series of lined lagoons for containment and settlement. Please refer to the plans in VP_P2_SP_V1.1, section 5 – Drainage and the Surface Water Management Plan.

A series of catchment grips will be used to direct relevant flows into the holding lagoons to control the water flow. Once contained, the following options regarding disposal will be used:

a) The water will be reused for onsite for dust suppression purposes. Extraction will be via tractor and bowser of suitable site pumps.
b) The water will be discharged via a surface water discharge point as agreed through an appropriate NRW surface water discharge permit (indicative discharge points have been detailed below in Figure 5). It is envisaged that the surface water discharge will provide discharge parameters that are required to be met which will determine if any additional treatment is required. Communication is ongoing with NRW regarding this and any agreements / standards to be met will be included in updated documents.
c) The water will be discharged through an appropriate trade effluent discharge consent as agreed with Dwr Cymru. Communication is ongoing with Dwr Cymru regarding this and any agreements / standards to be met will be included in updated documents
d) In the event that no permits are secured, the water will be tankered off site for disposal to a suitable licensed waste facility. This is the least sustainable option but if required will be done.

The surface water holding lagoons will be constructed and lined to ensure the containment is robust. This will entail either an impermeable membrane or a clay layer being placed on the surface of the lagoon. Levels will be monitored and managed accordingly to ensure they do not overtop and excess water will be managed in line with the above.

The dimensions of the primary lagoon will be circa 25m x 25m x 2m to allow sufficient storage capacity and settlement effectiveness prior to weir into a smaller lagoon of 10m x 10m x 2m for either tankering off site or discharge.

2.4. Records

Batch / material treatment information is to be retained where relevant and used as part of the treatment process and will include all information obtained during pre-acceptance, acceptance, storage, treatment and/or removal off-site.

These records will be kept so that inspection of loads can be simply carried out.

The tracking system should operate as a waste inventory/stock control system and include as a minimum:

- date of production on-site
- Site Investigation analysis results (chemical and visual)
- intended treatment/disposal route

- record accurately the nature and quantity of wastes held on site
- where the waste is physically located in relation to a site plan (See document VPSP_V1.0)

The adoption of such a tracking system will allow for accurate figures with regards current storage and treatment tonnages on site at any one time to be provided.

The treatment methodologies and waste types to be treated under the permit for Prichard Remediation Ltd are detailed within the permit.

2.5. Rejection Procedures

Waste shall only be acceptable for treatment on site if it conforms to the list of permitted wastes, if it conforms to the written description of the waste and if the tonnage limit allows it, all of which are prescribed by the deployment form. Anything that is powder or extremely fine dust will not be accepted for treatment

If, in the unlikely event a waste type is encountered on site that does not comply with the above then the usual site rejection procedures will be enforced:

- The waste will be separated from any other wastes currently on site and will be stored in a dedicated quarantine area.
- The waste will be re-directed from site to another suitably permitted facility (under the control of Prichard Remediation Ltd group if possible).

Unsuitable wastes will be stored within the location as identified within VP_P2_SP_V1.0 to avoid any potential cross contamination. However, there may be temporary areas within specific treatment areas that are used as interim holding areas and these may change from time to time as needs arise.

However, at all times cross contamination will be prevented and the risk to the environment and public health managed in line with the risk assessment for the site.

Quarantined material will not be stored on site for longer than necessary, though this may vary depending on the nature of the material encountered. However, it will generally be no more than 5 working days to reduce the risk of any pollution occurring.

2.6. Permitted Wastes

Table 1: Accepted List of Wastes

EWC Code	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION / INDUSTRIAL WASTE
19 13 01*	Solid wastes from soil remediation containing hazardous substances
19 13 02	Solid wastes from soil remediation other than those mentioned in 19 13 01

3.0. Accident Management

The processes to be followed in the case of an accident/incident on site are to be adopted to ensure that if an accident/incident does occur, the impact on the environment is as minimal as possible.

The operator recognises that “accident” for the purposes of this document means an accident, incident or event that may result in pollution.

The site risks will be identified by the risk assessment completed for each deployment. The following list details those items which require particular attention:

- Emissions and monitoring (including noise, dust, odour)
- Breakdown and Spillages
- Drums and other containers
- Plant and vehicle maintenance
- General accident procedures

Following the completion of the site-specific risk assessment, where it is deemed necessary (particularly with reference to emissions) where it is deemed that a specific monitoring plan needs to be in place this will be submitted as part of the deployment form. Generally, these will include / reference the CEMP documents.

3.1. Emissions and Monitoring

Odour / Dust / Noise can all be potential issues off site and are commonly associated with remediation projects / practices. However, site specific plans have been formulated at the site when the waste is being treated should any complaints be made that the treatment is giving rise to any of these issues. A site specific NMP / DMP has been produced and is to be used with this EMS. Odour is not an issue with the site or the treatment of the material but should this become an issue an OMP will be implemented and agreed with NRW.

Prichard Remediation Ltd will continue to maintain and service all plant used at the site in accordance with the manufacturer recommendations to help keep the machinery as quiet as possible and working effectively.

Mud, debris and dust will be managed by utilising rumble strips, good housekeeping and compliance with the site specific DMP. The use of a road sweeper will be used if deemed necessary and be used more frequently if required along the roads and lanes surrounding the site where the deployment is being made. Tractors and bowsers may also be used.

However, if complaints about noise and dust are received from outside of the deployment boundary then an investigation will be initiated. This will include Frisbee monitoring for dust and a noise monitoring programme will be developed that incorporates monitoring of noise levels at several locations at different times of the operational day. This will enable Prichard Remediation Ltd to identify any patterns in the complaints and noise levels, reducing them where possible.

3.2. Breakdown and Spillages

In the event of breakdown of the plant, alternative machines will be brought on site until it is repaired. If an alternative machine cannot be used, then waste will be stored until the plant is repaired. In the event of a long-term breakdown of the plant an alternative machine will be brought on site until the faulty unit is repaired. Due to the large volume of plant and machinery available through the group it is no foreseen that any breakdowns will result in the deployment needing to be stopped at any time.

Any spillages of fuel will be cleared immediately by depositing materials from a spill kit on the affected area. The material will be placed in a skip/container to be taken to a suitably licensed site for disposal.

If there is a risk that dust will be emitted following a malfunction or breakdown the plant will be shut down for repairs.

3.3. Plant and vehicle maintenance

Each item of plant and machinery used by Prichard Remediation Ltd is visually inspected each day before the plant is operated. This includes maintaining equipment specifically to reduce noise levels, for example balancing fans and fixing loose covers. If any defects are noted, these are immediately reported to the plant manager and the defect is fixed either onsite, or if this is not possible, the plant is transported to the maintenance department at where a full repair workshop is sited. When not in use, the plant will be shut off to avoid any potential nuisance being caused by the turning over of the engines.

The plant and machinery are routinely fully serviced and maintained at 6 month and annual time periods to ensure the effective and efficient operation of the site.

Prichard Remediation Ltd run an effective maintenance programme for all plant used.

4. Operational Procedures

4.1. Inert / Non-Hazardous/Hazardous Wastes

Aggregate and soils will generally be the materials destined for treatment under the mobile plant permit. Material will be required to be screened and or mechanically separated and sorted. The mobile plant will be brought to the material to be treated wherever possible and the material will only be subject to the minimum amount of treatment required to achieve the desired client specification and comply with the requirements of the site-specific remediation.

Material encountered will be either inert / non-hazardous in the majority of cases. In the deployed areas, it is believed that the level of risk of encountering hazardous waste is very low and but may be a possibility. In such an instance, material will be isolated, quarantined and removed form site.

The plant will be used to treat material as required to produce fill materials suitable for reuse. The treated materials will generally be stored in separated stockpiles. Each finished stockpile / area will be tested against the requirements of remediation strategy and site specification. Stockpiling of waste materials will be undertaken for the minimum period necessary.

All plant that is to be used on site for treatment of this type of waste material are fitted with water hoses that can be activated, if required, during periods of dry weather. This will act as a dust suppression system should the need be required. In addition to this, the operator has access to their own road sweeper and tractor and bowser that can be used regularly on site to prevent dust becoming a nuisance. The sweeper is also used to clean the local highways and haul roads.

Site infrastructure for treatment

Through the Phase 1 deployment and the compositional testing undertaken by IG, it is clear that the constituent elements of the material to be treated is inert or non hazardous and does not present any significant risk to controlled waters or further land contamination risk. The composition analysis indicates that the material (circa 99%) comprise unbound aggregate/natural stone, concrete/concrete products/mortar/concrete masonry, clay masonry units (bricks and tiles) and miscellaneous materials (less than 1%) include cohesive clay and soil, metals, non-floating wood, plastic, rubber and glass. In accordance with the Specification for Highway Works Series 600 Earthworks, these results would classify the materials as typically Class 1A/C (well graded/coarse granular materials) to Class 2C (stony cohesive materials).

The risks associated with treating this material on site either in exiting phase locations or in stockpile locations are very low. All areas where material is proposed to be treated will be treated themselves so no undue environmental or human health impact will be sustained by allowing the activity to be undertaken on the ground as is. In addition, it is proposed to move the relevant treatment plant to the material as much as possible to minimize the potential environmental impact and footprint of the works. The EMS further provides for the management and monitoring of fugitive emissions and has robust plans in place for the control and management of surface waters. Requiring an impermeable surface or hard standing for each time this happens is simply not practical nor required from a risk management perspective.

4.2. Mobile Plant and Equipment

The plant and equipment used at a site is detailed in table 1. All plant is maintained, as a minimum, in accordance with manufacturer's specification.

Table 1: Processing Plant and Equipment

Item	Function
Screeners / Excavators	Treatment / Processing
Dumper Trucks	Loading / Unloading / Movement

Table 2: Equipment and Infrastructure

Item	Function
Tractor and water bowser with rain gun attachment	Unloading of wastes Dampening down road surfaces across site
Direct Water Suppression hose	Dampening down material directly as it is processed.

5. Management, Site Staff and Training

5.1. Management

The Environmental Manager will undertake audits of the site's performance against the Management System to ensure the site is operating effectively and compliant with any new regulatory or permit requirements. A regular review of the management system will be undertaken by management.

5.2. Technical Competency

The relevant technical competency is held by George Harvey. Management will ensure that the Technical Competency is maintained in accordance with industry requirements. Suitably qualified consultancy staff will be brought in to manage the site if this is not the case.

5.3. Site Management

Direct responsibility for implementing the Management System at the site is held by the Site Manager. All site staff will report directly to the Site Manager.

The Site Manager will also be responsible for interim audits of the management system in response to changes to the site's operation, company changes, incident/accidents, complaints, and use of new plant or techniques. This will include reviewing as appropriate permit documentation such as inspection records, operational procedures and associated records including training.

5.4. Staff Training

All staff will be trained and competent to both manage and operate the site to ensure compliance with the permit and this will be recorded through staff training matrix, tool box talks and staff training schemes as applicable. These will be reviewed and updated regularly as required. Any contractors working on site will also have the skills and knowledge they need and a contractor check sheet will be completed prior to commencing any works.

All staff working on permitted activities will be trained on what the management system means and their responsibilities and role within it. Copies of the permit will be kept on site in the main office for access at all times. In addition, each site will generally operate the following:

- Sign in sheet and plant allocations sheet to determine sufficient resource capability and capacity;
- Organigram for each project listing the roles and responsibilities of all your staff

- Tool box talks will be regularly carried out to ensure staff are trained in aspects that can lead to pollution and the measures to be taken to prevent that pollution and accident and incident management
- Site induction for staff, visitors and contractors

5.5. Plant and vehicle training

All operatives that are required to operate plant and machinery are suitably trained in its operation, safety and maintenance. This training is regularly monitored and checked by a dedicated training and resource department. Staff will also be provided with regular tool box talks to ensure they are kept up to date with site activities.

6. General Accident Procedures

If an accident or incident causes damage to the environment, or risks doing so, the site manager or a member of staff designated by him must:

a. Immediately isolate the problem
b. Report the accident to the Natural Resources Wales local office
c. Do whatever is necessary to minimise the environmental consequences
d. Clean up after the incident or spillage
e. Record the incident or accident, in a report book or folder
f. Find out why the accident happened
g. Consider if your response and actions were adequate
h. Take any actions needed to stop it happening again
i. Review and amend the accident management plan as soon as possible. Investigate malfunction, breakdown or failure of plant and equipment, techniques and near misses, releases to the environment, or impacts on the local amenity. The site Manager must be able to:
    I. Detect abnormal operation and investigate the causes
    II. Assess the information and decide what to do.
    III. In the short-term, get back to normal operation.
    IV. In the long-term take steps to make sure the problem does not happen again.

7. Information Records

7.1. Waste Records

In the event that waste is received on the site or removed from the site, the following will be recorded for each load of waste:

- The vehicle registration number;
- The haulier's Registration of Carriers registration number;
- A Transfer Note showing the waste producer, a description and amount of the waste;
- The haulier of the waste and the waste's collection point; and
- Location the load is directed to for unloading.

If the material removed is hazardous, consignment notes will be used and information recorded accordingly.

7.2. Site Diary

The Site Diary will be maintained by Site Staff and kept at the site offices, recording:

- Site opening times;
- Staff on site;
- Daily weather conditions;
- Incidents / abnormal site conditions;
- Refused loads / unacceptable wastes;
- Details of regular daily and weekly site inspections including any consequent actions;
- Regulatory inspections, with the outcome and any actions required;
- Plant breakdown / failure;
- Site closure; and,
- Complaints and actions taken.

The site diary will be available for inspection to Natural Resources Wales officers.

7.3. Other Record Keeping

In addition to the Site Diary the Site Staff / Site Operator will also keep:

- Permit;
- Management system and accompanying documentation;
- Details of plant maintenance and inspection records;
- Details of waste removed from site;
- Complaint details including investigations and outcomes;
- Reviews, audits and amendments of management system;
- Records of training of staff; and

- Natural Resources Wales Compliance Assessment Reports and actions.

All records associated with the site shall be kept for a minimum of six years in accordance with the requirements of the Environmental Permit.

8. Ecological Effects

The existing site has widespread trees throughout, the majority of these will be removed during the development, but a 15m green corridor of trees will remain along the northern boundary. Any Japanese Knotweed encountered on the site will be remediated under watching brief by a competent invasive species specialist. The current position regarding JPK on the site is contained within the document JK Status: Virginia Park. Caerphilly. Dec 25.

9. Complaints

Any complaints received at the site will be immediately investigated by the Site Staff and / or the Site Operator. Where appropriate, remedial action will be taken.

The complaint will be reported to the Site Operator within 24 hours. The original complainant will be informed of the outcome of the investigation of the complaint and any actions taken within 5 workings days.

Details of each complaint, including the complainant's details, actions taken and outcomes, will be recorded on a complaint log, which will form part of the records of the site diary.