James Neave
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Camilla Fisher
RPS Group Plc.

1 February 2023

By email only

Dear Ms. Fisher,

Application Ref: WSCC/015/18/NH (APP/P3800/W/18/3218965)

Proposal: Recycling, Recovery and Renewable Energy Facility and Ancillary Infrastructure

Address: Former Wealden Brickworks (Site HB), Langhurstwood Road, Horsham, West Sussex, RH12 4QD

Condition(s):

Thank you for your recent submission regarding the above. The Council has considered the information and I am now able to inform you that:

Condition 7 – Construction and Environmental Management Plan

The submitted details for condition 7 (ref: Construction Environmental Management Plan – Version 5 - dated Jan 2023) are acceptable, and the pre-commencement element of condition 7 is now **discharged**.

Yours sincerely

James Neave

RECYCLING, RECOVERY AND RENEWABLE ENERGY FACILITY, FORMER WEALDEN BRICKWORKS, WEST SUSSEX

Construction Environmental Management Plan

Principal Contractor
CEMP
Final
January 2023

rpsgroup.com

Quality Management

Version	Status	Authored by	Reviewed by	Approved by	Date
1	Draft	Clare Russell			1 May 2020
2	Second draft	Clare Russell			26 May 2020
3	Final version	Clare Russell	Edward Nabbs		12 October 2020
4	Updated	Clare Russell			25 Nov 2022
5	Updated to respond to comment	Clare Russell			Jan 2023

Approval for issue

Clare Russell	25 November 2022

Prepared by:

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Prepared for:

Britaniacrest Recycling Limited

Contents

1 INTRODUCTION

1.1 Background

1.1.1 This Construction Environmental Management Plan (CEMP) has been prepared on behalf of Britaniacrest Recycling Limited in relation to the appeal decision reference APP/P3800/W/18/3218965 to construct a recycling, recovery and renewable energy facility and ancillary infrastructure (the proposed development) at the Former Wealden Brickworks, Langhurstwood Road, Horsham, RH12 4QD.

1.2 Purpose of the CEMP

1.2.1 The CEMP establishes the framework for identifying, planning and managing the environmental impacts associated with the construction activities of the proposed development. The framework is based on a series of control measures required to ensure that the environmental impacts are minimised. These control measures include legislation requirements and the environmental commitments identified in the reports that supported the application and to discharge planning conditions.

1.2.2 This CEMP has been prepared in response to condition 7 of the planning consent, which states that a CEMP must be submitted and approved by the County Planning Authority (i.e. West Sussex County Council (WSCC)) prior to construction commencing. The condition requires that the CEMP must provide details on the following matters:

- *'the method of construction;*
- *the method of demolition of existing structures and surfacing;*
- *the measures to prevent the mobilisation of existing contamination by airborne and waterborne routes;*
- *the parking of vehicles by construction site operatives;*
- *staff accommodation;*
- *details of public engagement both prior to and during construction works;*
- *dust suppression methods, particularly during demolition;*
- *litter control measures;*
- *the storage, loading and unloading of plant, materials and waste;*
- *the measures to minimise and manage waste from construction activities;*
- *the use of temporary lighting;*
- *the erection and maintenance of construction screening hoardings;*
- *the provision during the construction phase of wheel washing and/or other works required to mitigate the potential impact of mud/dirt on the public highway;*

- *traffic management, including the anticipated number, frequency and types of vehicles used during construction (including a framework for managing abnormal loads), and the installation of any signage within the site and the highway;*
- *the measures to minimise noise arising from construction activities; and*
- *the measures to prevent spills on site'.*

1.3 Scope of the CEMP

1.3.1 The CEMP applies to all construction activities relating to the proposed recycling, recovery and renewable energy facility at the Wealden Brickworks as consented under APP/P3800/W/18/3218965. This includes the demolition of all current structures within the site and the construction of the energy facility and its associated infrastructure. The framework and measures set out in this CEMP will be adhered to and applied by all contractors undertaking work on the project.

1.3.2 Activities, controls and mitigation as referenced and required by the CEMP will all take place within the site boundary.

1.3.3 The CEMP is considered a 'live' document and as such will be reviewed on a regular basis to ensure it remains appropriate and effective. Updates to the CEMP may be made throughout the construction phase and may also be necessary due to any changes in environmental management 'Good Industry Practice', national legislation and/or the nature of work and contractors on site.

1.4 Implementation of the CEMP

Method Statements

1.4.1 The CEMP will be agreed with West Sussex County Council prior to construction works commencing, in accordance with Condition 7 of the planning consent. The CEMP will be implemented through management plans (appended to the CEMP) and guided by Good Industry Practice.

1.4.2 Method statements will be prepared for the key construction activities by the Principal Contractor and their Subcontractors and will incorporate the principles set out in this CEMP and the standard Principal Contractor procedures AA 426 01 and AA 426 02 (as contained within Appendix A). The method statements will describe how the demolition and construction activities will be undertaken (including construction methods and the types of plant required) and will include risk assessments and the associated environmental, and health and safety issues and mitigations. There is no requirement for the method statements themselves to be approved by the County Planning Authority unless they propose to differ from the principles within the CEMP. A record of all risk assessments and method statements will be kept on site for the duration of the demolition and construction periods as appropriate.

1.4.3 For those activities, which are not covered by method statements, the principles and measures of the CEMP will be implemented through general working practices as directed by the Principal Contractor.

1.4.4 A Permit to Work system will be applied for those activities where a safe system of work is required as identified by the Principal Contractor Procedure AA 426 03 (Appendix A).

1.4.5 All construction staff will be required to follow the CEMP and implement the measures to control the environmental impacts during construction. The requirement to comply with the procedures of the CEMP will be as included in the contract conditions for each element of the works.

Training

1.4.6 All construction staff will receive training on their responsibilities for minimising the risk to the environment and implementing the measures set out in the CEMP. A record of all training provided will be kept on site for the duration of the demolition and construction periods as appropriate.

1.4.7 The Principal Contractor will ensure that all subcontractors employ an appropriately qualified and experienced workforce. The Principal Contractor will also be responsible for identifying the training needs of their personnel to enable appropriate training to be provided. Training will include daily site briefings in addition to toolbox talks to provide the necessary knowledge on health, safety and environmental topics and control measures pertinent to the construction activities being carried out.

1.4.8 The briefings will be attended by all personnel working on the site at the time involved in the activities concerned.

2 PROJECT DESCRIPTION

2.1 Site Location and Description

2.1.1 The site is located at the former Wealden Brickworks site, approximately 1 km northwest of Horsham. It extends to approximately 3.8 hectares (ha) within a much larger site (covering 24.4 ha) formerly occupied by the brickworks. (Please refer to proposed site plan below)

2.1.2 The site is currently occupied by a large portal-frame building (used as a Waste Transfer Station/Materials Recycling Facility) surrounded by hardstanding and several smaller buildings.

Surrounding Land Uses

2.1.3 The southern boundary of the site is defined by an internal access road beyond which lies the Warnham Brickworks factory, and the London to Horsham main railway line lies immediately to the west. The eastern boundary is defined by an internal access road beyond which is the Brookhurst Wood Mechanical and Biological Treatment (MBT) Facility. To the north of the site are two ponds within an area of dense scrub, beyond which are several derelict buildings that were formerly used as part of the brickworks. An Aggregate Treatment and Recycling Facility is located approximately 315 metres north of the site boundary beyond which is the Brookhurst Wood landfill site, which is undergoing restoration.

2.1.4 Approximately 410m southeast of the access gates of the site, planning permission has been granted for the new 'North of Horsham' development, parts of which are under construction. The development will extend over a 500-acre area and will eventually have 2,750 homes, schools, shops, businesses, community facilities and green open spaces. Any homes will not be occupied until well after completion of the Wealden 3Rs Facility.

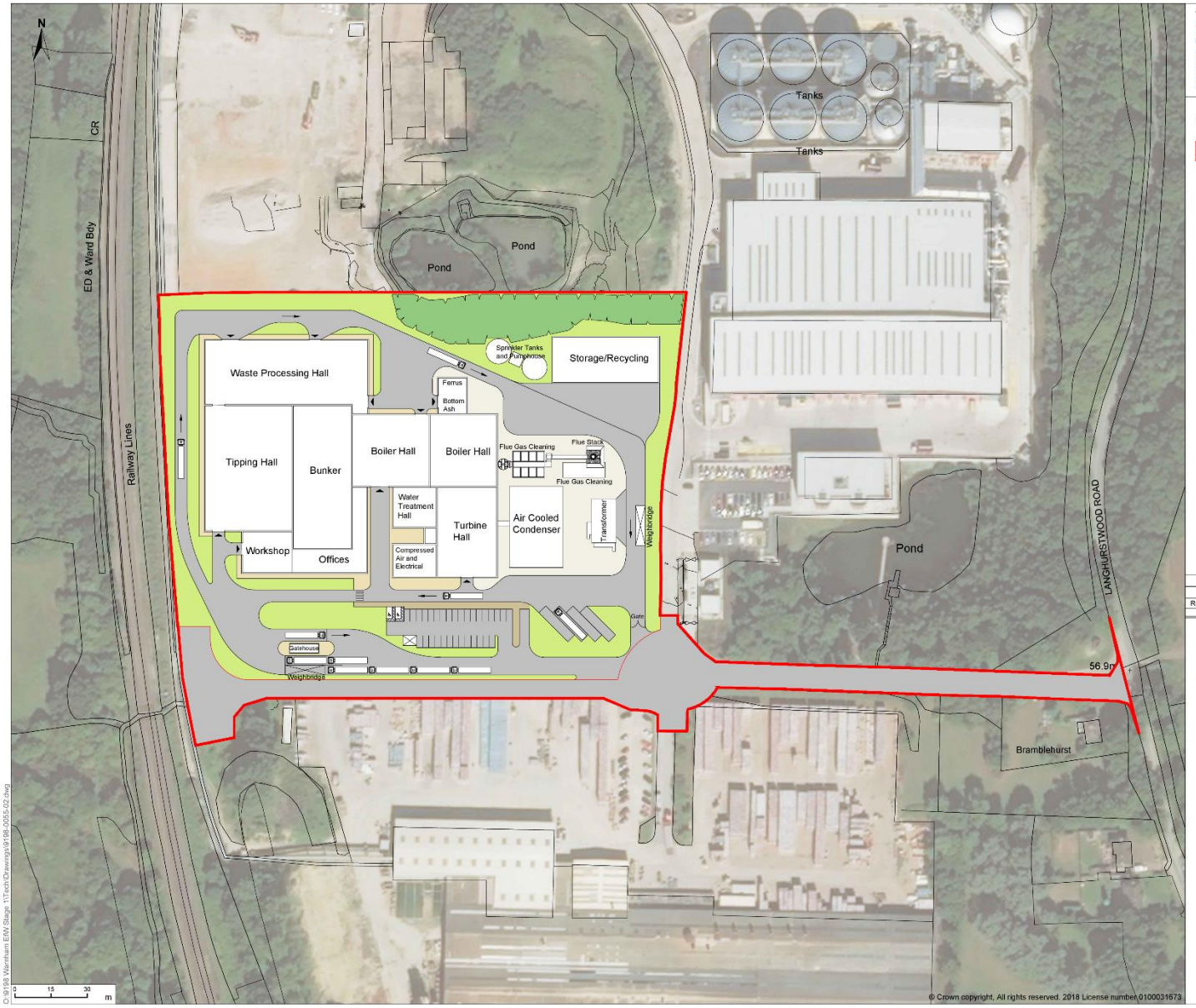
2.2 Proposed Works

2.2.1 The proposed development comprises a recycling, recovery, and renewable energy facility to process up to 230,000 tonnes per annum of residual non-hazardous commercial and industrial (C&I) waste and/or residual municipal solid waste (MSW) (see Figure 2.1).

2.2.2 The processing of waste by the proposed development will generate an estimated 21 megawatts (MW) of electricity per annum. The proposed development will also be capable of supplying heat to suitable external users subject to a viable heat network becoming available.

2.2.3 The proposed development will comprise the following main features:

- Waste reception & Processing Hall (including the bunker);
- Offices, welfare and workshops;
- boiler hall;
- turbine hall;
- flue gas treatment;
- flue stack;
- bottom ash bunker;
- water treatment;
- storage/recycling area;
- roads and hard standings; and
- weighbridge office and weighbridges.



Notes
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Legend

Site Boundary

Rev	Description	Date	Initial	Checked

RPS

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Client	Britaniacrest Recycling Ltd
Project	3Rs Facility, Wealden Brickworks, Horsham, West Sussex
Title	Proposed Site Plan

Status	Drawn By	PM/Checked by
FINAL	RM	AR
Job Ref	**Scale @ A3**	**Date Created**
OXF9198	1:1,500	Mar 2018
Figure Number		**Rev**
2.1		-

rpsgroup.com/uk

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3 APPROACH TO CONSTRUCTION

3.1 General Approach

3.1.1 The proposed development will be constructed in compliance with all relevant legislation, standards, and codes of good industry practice to minimise adverse impacts on the local community and environment as far as reasonably practicable.

3.2 Environmental Management

3.2.1 The Principal Contractor shall have an established Environmental Management System certified to ISO 14001. As such, the following will be in place:

- An Environmental Policy, such reviewed annually
- A Site Environmental Legal and other Compliance Requirements register, updated quarterly
- Procedures and Plans detailing how key environmental aspects shall be managed
- Environmental competence and training matrix
- Inspection and monitoring schedule to ensure compliance with the CEMP and relevant legal requirements
- Record-keeping arrangements.

3.2.2 The Principal Contractor shall plan their works in advance to ensure that commitments as set out in this CEMP are complied with. This will be documented in those method statements and risk assessments generated for the key construction activities to be carried out on site and completed checklists/written observations from site walkovers by Supervisors and the Site Management Team.

Aspects

3.2.3 Aspects and Impacts shall be assessed prior to work commencing, following any incident or matter that gives rise to review and at least annually using the Principal Contractor Procedure AA 426 15 Identification of Environmental Aspects and Impacts (Appendix A). This assessment shall be undertaken jointly between the Site HSE Manager and the Site Construction Team.

3.2.4 The Register provided in Section 5 shall be used as a basis for the Site Aspects and Impacts Register but shall be expanded once detailed design is underway and subcontractors have been appointed. All environmental aspects and impacts listed shall be ranked pre and post mitigation. Any potentially significant impacts pre mitigation shall be communicated to key members of Site Management Team together with key mitigations.

Monitoring

3.2.5 Contractors engaged on the project are required to include environmental aspects in the (mandatory) weekly inspections carried out on site.

3.2.6 HZI Site HSE Team shall have a separate HSE inspection schedule which will include weekly documented HSE inspections and a monthly Environmental Inspection to ensure compliance with this CEMP. In addition, the Site HSE Manager or delegate will carry out a compliance review of each method statement and associated risk assessment within one week of that task commencing to ensure mitigation measures are being implemented.

3.2.7 The Corporate Environmental Manager will periodically audit the project, to include as a minimum an internal annual ISO 14001 compliance audit and two Environmental Inspections to ensure compliance with Project and other compliance requirements.

Training & Communication

3.2.8 Comments, feedback, and suggestions from workers will be recorded and followed up using the Site Observation Report (SOR) system. Periodic HSE Roadshows shall be carried out by Environmental Manager and other Corporate HSE Team staff, which is also an opportunity for staff to provide feedback. Regular co-ordination meetings with Contractors shall be held which also provide a channel for feedback from workers.

Environmental Documentation

3.2.9 All environmental documentation shall be kept on site at all times and be available for inspection by internal and external auditors, regulators, the client and management. Site personnel will be made aware immediately if any significant changes in work procedures are implemented.

3.2.10 Relevant documentation will include the following:

- Site Weekly HSE Checklist
- Environmental Aspects and Impacts Register – based on outline register in the CEMP
- Method Statements and Risk Assessment
- Construction Environmental Management Plan
- Site Waste Management Plan
- Emergency Preparedness Plan
- Training Matrix

3.2.11 Weekly HSE inspections will take place on site by the Site HSE Representative. The findings of these inspections and any associated actions shall be appropriately documented.

3.3 Legal and Regulatory Requirements

3.3.1 A function of the CEMP is to make construction staff aware of their legal duties and environmental responsibilities during the construction of the project. A framework of legislation has been compiled and is contained within Appendix B. The list is not exhaustive and does not absolve the Principal Contractor requiring construction staff and subcontractors from complying with other relevant legislation. The legislation register will be reviewed and updated during the construction process.

3.3.2 Specific construction-related activities may be subject to regulatory controls through the provision of consents, licences or permits and mitigations agreed in the discharge of planning consents. Where relevant they have been incorporated into this document.

3.4 Best Practice Guidance

3.4.1 Construction activities will be undertaken in accordance with the following good industry practice guidelines:

- Best Practicable Means under Section 72 Control of Pollution Act (1974) as amended;
- Environmental Protection Act 1990: Part 2A - Contaminated Land Statutory Guidance (Department for Environment, Food and Rural Affairs (Defra), 2012);
- Groundwater Protection Position Statements (Environment Agency, 2017 and amended 2018);
- Land Contamination: Risk Management (Environment Agency, 2019);
- CIRIA C741 Environmental Good Practice on Site (2015);

- Institute of Air Quality Management (2014) Assessment of dust from demolition and construction.
- British Standards Institution (BSI) (2014) British Standard 5228: Code of practice for noise and vibration control on construction and open site. Part 1: Noise +A1:2014; and
- British Standards Institution (BSI) (2014) British Standard 5228: Code of practice for noise and vibration control on construction and open site. Part 2: Vibration.

3.5 Method of Demolition of Existing Buildings and Structures

Scope of Demolition and Sequence of Works

3.5.1 The structures to be demolished on the Site are shown in Figure 3.1. These are as follows:

- Structure A - a portal frame building with external cladding and stack;
- Structure B - a brick single storey building with pitched roof and cable support pole;
- Structure C - a brick single storey building with pitched roof and cable support pole;
- Structure D – a brick single storey building with flat roof;
- Structure E – a brick structure with flat roof;
- Structure F – concrete slab;
- Bund – screening bund to be removed and replaced by planting.

Figure 3.1 – Overview of Existing Site showing structures to be demolished

3.5.2 Photographs of each of the structures concerned are contained in Appendix C.

Design, Work Methods and Sequence

3.5.3 The demolition method statement will be checked weekly by the Demolition Supervisor to ensure that it remains appropriate to the works on site. If the work method or sequence is required to be changed to suit the site conditions, then the demolition method statement and associated risk assessment will be revised and issued to the site team and all involved personnel inducted into the new methodology and any new mitigations.

3.5.4 No explosive techniques shall be used during the demolition process.

Sequence of Demolition

3.5.5 The general sequence of demolition works will be as listed below. It should be noted that the sequence stated here may need to be re-ordered in particular circumstances as required by an approved demolition method statement.

Survey of buildings and structures

3.5.6 A pre-demolition audit of the existing buildings on the site will be undertaken to identify and remove any hazardous materials such as asbestos, locate existing services and assess the structures for the most suitable means for demolition / dismantling as well as identifying those materials with the potential for reuse or recycling.

Isolation of all live services

3.5.7 All services (electricity, gas, water, and communications) conduits and cables and associated equipment will be isolated or terminated where supplies are no longer required. This shall be carried out in stages as each structure is demolished to maintain functionality of the existing operations for as long as possible. The main drainage system which runs off site shall be capped using a proprietary bung where there is a risk of contaminants reaching off site during the demolition phase or main construction phase.

Isolate demolition areas

3.5.8 The structures to be demolished shall be physically isolated by the introduction of barriers / barricades restricting access to only approved personnel whilst incorporating mobile plant and pedestrian segregation measures.

Asbestos removal

3.5.9 All identified asbestos containing materials (ACMs) will be removed from the site prior to commencing of any intrusive or structural demolition works. Clearance certificates and hazardous waste notes will be placed within the site file and issued to Britaniacrest Recycling Ltd at the end of the project.

3.5.10 Should any additional ACMs be identified within any structure during demolition, work will cease, and the Site Supervisor notified. It will remain undisturbed and the structure isolated. A specialist asbestos surveyor will then be called to site, and a sample taken for testing to confirm the substance prior to works in that area continuing. If the analyst confirms that it was asbestos that was disturbed, the incident must be reported to the Reporting of Injuries, Diseases and Dangerous Occurrences (RIDDOR) Regulations.

3.5.11 The Health and Safety Executive will be notified under the statutory ASB5 form on the HSE website (www.hse.gov.uk) of the intended asbestos removals that are to be executed on site.

Removal of all soft materials (soft strip)

3.5.12 All non-structural items from buildings shall be removed for recycling or re-use when considered viable or disposal at a permitted off-site facility. This will include all soft furnishings, floor and ceiling coverings, timber fixtures and fittings. Where necessary to aid transportation of material off-site, recovered components shall be cut into manageable sizes.

3.5.13 Materials removed from the buildings shall be either placed into containers to facilitate transportation or placed in temporary storage, once sufficient quantities are held to facilitate transportation the respective material will be removed from site for further recovery or disposal.

Removal of all existing, internal plant and equipment

3.5.14 All large redundant plant and machinery shall be removed from the building, including ducting and extraction equipment. This shall be undertaken in accordance with the demolition contractor's method statement, whilst minimising the need for hot works such as burning and cutting.

Structural demolition of Structure A and Structures B – E (inclusive)

3.5.15 Demolition of the structures identified as A to E above will be in accordance with an approved demolition method statement. The main portal building shall be demolished progressively, from one end to the other. Following the removal of internal components, cladding shall be removed from the outside face of the building using mechanical plant, such as long reach excavators with grab attachments. Metallic and non-metallic cladding shall be segregated and held for removal off-site being placed into containers where possible to aid transportation. Structural steelwork shall be cut using machine mounted shears and to ensure a managed progressive collapse of the main building components.

3.5.16 Structures containing brickwork, structural timbers, joists and trusses will be removed for recovery, should the material be viable, following the initial dismantling of any walls.

3.5.17 Existing concrete hard pavements and foundations shall be broken up using excavator mounted mechanical breakers. This shall be to ensure sections can be moved effectively to facilitate removal off site, where suitable material will be crushed for re-use.

Crushing of concrete and masonry

3.5.18 During demolition, where inert cementitious material or masonry cannot be recovered for re-use in its existing form, it shall be crushed and held in a temporary stockpile prior to utilisation on site or alternatively transported off site for onward recycling. Crushers shall be installed with dust suppression measures for use at all times during operation and magnets for the recovery of ferrous materials such as reinforcement from the crushed product. Mobile crushers shall be utilised to ensure close proximity to the working area within the site boundary.

3.5.19 Where crushing actives are undertaken, dust suppression measures will be undertaken, in line with the Dust, Noise and Vibration Management Plan (DNVMP) given in Appendix D. An excavator with bucket attachment will be utilised for loading the crusher hopper, or alternatively, for loading of vehicles for removal of material off site for further grading of aggregate and recovery.

3.5.20 The crusher subcontractor will procure any permits for the works in line with Process Guidance Note 3/16(12) Statutory guidance for mobile crushing and screening or other related guidance in force at that time.

Removal of materials from site

3.5.21 Vehicles used for the removal of material from site will be either fully enclosed or sheeted when leaving the site to prevent any spillage or dust generation.

Removal of bund

3.5.22 During the re-development of the site it will be necessary to remove the existing screening bund as part of the phased construction, to be replaced in due course by the approved planting scheme (Approved under Condition 5). Where practicable soils shall be retained for use in the approved planting scheme when this is implemented.

Levelling of site to required levels prior to construction of the 3Rs Facility.

3.5.23 Prior to commencement of the main construction, the site levels for the proposed development will be created. This will involve both levelling and excavation and be achieved by the use of conventional earth moving machinery such as excavators, back-hoes, bulldozers, skid steers, and dump trucks.

Hidden Services

3.5.24 The demolition contractor will collate all relevant information on known services in or close to the site and liaise with local Utility Providers. where gas lines or pressure reduction equipment is identified, standard exclusion distances would be applied to excavation activities.

3.6 Method of Construction

3.6.1 Following removal of the existing slab, the site shall be prepared to a level plateau. A cut and fill exercise shall be undertaken to provide a working platform from which construction activities can take place. Due to the nature of the construction activities some large excavations will be needed, specifically to excavate the waste bunker and pits associated with the process equipment. Should the ground conditions allow excavated materials may be reused or sent for processing and re-use rather than disposal.

3.6.2 A materials management plan shall be developed by the Principal Contractor to define the management of soils excavated as part of the works. This document will identify anticipated material quantities and measures for materials testing. The document will meet the CL:AIRE code of practice and will be signed off via the CL:AIRE process prior to earthworks commencing.

Construction Method statements

3.6.3 Prior to the commencement of the works, a specific method statement and associated risk assessment will be in place as per the Principal Contractor procedures AA 426 01 and AA 426 02 (Appendix A). Method statement and risk assessments will be updated as required as works progress. Compliance with method statement and risk assessments will be checked regularly by the relevant HZI Supervisor for those works. In addition, the Site HSE Manager or delegate will do a compliance check within 7 days of the work commencing.

3.6.4 All method statements and associated risk assessments will fully adhere to the principles within the CEMP and associated documents.

Construction Sequence

3.6.5 An indication of the construction sequence is set out below together with predicted timeframe however, it is envisaged that some of the phases will overlap. The construction sequence and timing are indicative only as this shall only be confirmed once the demolition contractor and Principal Contractor are formally appointed, with the anticipated duration being in the order of 42 months post the conclusion of enabling works.

Enabling Works

3.6.6 Enabling works carried out prior to the main construction phase commences to ensure the main construction works can be undertaken without logistical restrictions is anticipated to take between 3 to 12 months and shall comprise;

- Site surveys;
- demolition of existing structures;
- clearance and re-profiling of the site for the 3Rs Facility;
- connection of temporary services for use during construction;
- remediation of the Site, if required;

Construction Phase 1 – Excavation and Foundations

3.6.7 Indicative duration of Phase 1 is between months 6 to 12 of the construction programme and shall comprise:

- Piling and / or ground improvement.
- Groundworks, excavations for the Boiler Hall and Bunker;
- Loading and unloading of materials on-site and stockpiling of materials;
- Installation of drainage and other services infrastructure.

3.6.8 In line with Condition 8 of the planning permission, details of any penetrative method, piling or foundation works will be submitted to and approved by the County Planning Authority (WSCC) prior to such works taking place.

3.6.9 As with all construction activities there is potential for the emission of dust during the earthworks and therefore mitigation methods are necessary to reduce these. Potential dust impacts will be managed in accordance with the Dust, Noise and Vibration Management Plan in Appendix D.

Construction Phase 2 - Main Civils Construction

3.6.10 Indicative duration carried out between months 8 to 20 of the construction programme, Phase 2 will comprise:

- the construction of reinforced concrete (RC) foundations, structures and buildings;
- the construction of the concrete bunker
- erection of tower cranes
- creation of site roads / hardstanding;
- installation of the electrical substation and connection to the UKPN network.

3.6.11 Off-site fabrication and modular construction will be used wherever possible.

3.6.12 Mixing of concrete may occur on-site and be directly delivered to the required area of construction. It is not anticipated that on-site batching will be used. If in the unlikely event that on site batching is necessary, the Principal Contractor shall inform WSCC Planning Department and submit a Method Statement describing the activity to be carried out, locations and the mitigation measures to be applied, for approval, prior to any such works.

Phase 3 - Main Mechanical & Electrical Installation

3.6.13 Indicative duration is that this will carried out between months 13 to 36 of the construction programme, Phase 3 will comprise:

- erection of steelwork;
- Installation of process equipment and pipework
- electrical installation including cabling and switchgear
- installation of control equipment & instrumentation; and
- internal fit-out.

3.6.14 A wide range of materials will be handled during this phase of the construction and various trades will be deployed on site simultaneously.

Phase 4 – Commissioning and Introduction of First Waste

3.6.15 Carried out between months 36 to 42 of the construction programme, Phase 4 will comprise:

- commissioning and testing of components;
- boiler cleaning and steam blow;
- introduction of process chemicals;
- introduction of first waste;
- energisation of the plant; and
- testing of systems, reliability runs and completion of the operating plant.

3.6.16 Construction will be completed when the facility is fully tested and handed over to the Client.

3.6.17 Much of the work during this phase will be within the building, nevertheless, the controls required by this CEMP will continue to be applied.

Plant and Machinery

3.6.18 A range of plant and equipment will be used for the demolition and main construction of the 3R's facility, an indicative range of plant and equipment which is anticipated be used is provided at Appendix E to this CEMP.

3.6.19 All plant shall be switched off when unattended with the keys removed.

3.7 Roles and Responsibilities

Project Director

3.7.1 The Project Director shall:

- Take overall responsibility for Project HSE requirements and for the achievement of Project HSE objectives as per HSE Policy and compliance requirements;
- Ensure that HSE Management System is implemented throughout all phases of the Project;
- Ensure that sufficient and competent resources, human and material, are allocated for all HSE requirements;
- Monitor the Project HSE performance.

Site Manager

3.7.2 The Site Manager has overall responsibility for the demolition/construction areas and will be responsible for ensuring the method statements and risk assessments are prepared and approved and ensuring that the environmental measures set out in this CEMP are implemented.

3.7.3 The Site Manager will also be responsible for monitoring compliance during construction; and undertaking staff induction courses on environmental issues whilst ensuring that all practices and procedures are kept up to date together with training requirements for all personnel on site.

HSE Manager

3.7.4 A full time HSE Manager will be employed on site. The HSE Manager shall, with the assistance of the Site HSE Advisor(s):

- Ensure compliance with this CEMP, the CPP and any other supporting documents;
- Carry out daily site inspections as well as other HSE compliance audits and inspections as detailed in this CEMP;
- Ensure that all incidents are reported and investigated as per Incident Investigation and Reporting Procedure;
- Ensure that working practices include the relevant environmental controls, for example, by checking Contractor method statements and ensuring that inductions include appropriate environmental information;
- Monitor and control of main natural resources consumption; and
- Provide environmental training.

Supervisors

3.7.5 Demolition/Construction Supervisors shall assist the Site Manager in the review and approval of the method statements and will be responsible for overseeing demolition/construction activities within their area of responsibility on a day-to-day basis to ensure that all environmental commitments are met.

Corporate Environmental Manager

3.7.6 The Corporate Environmental Manager shall :

- Visit the project at least three times per year. All visits will result in a recorded inspection sent to Senior Management;
- Check compliance with the CEMP and other Project compliance requirements; and
- Ensure any actions resulting from such inspections will be tracked and closed out in a timely manner.

Environmental Specialists

3.7.7 In some cases, specialist environmental support may be required and external consultant shall be appointed. In such instances the Principal Contractor shall engage suitably qualified and experienced specialists. This will include acoustics and dust specialists to main the particular and sound level meters described in the Noise, Dust and Vibration Management Plan (Appendix D).

Logistics Manager

3.7.8 Logistics Manager shall support the implementation of the relevant sections of the traffic management plan to ensure that transport is managed appropriately on site.

3.7.9 They shall ensure that movements of vehicles to site comply with the routing requirements and that deliveries are managed properly to ensure that multiple deliveries are avoid at the site entrance.

4 GENERAL REQUIREMENTS

4.1 Construction Programme

4.1.1 It is anticipated that construction of the proposed facility will commence within three years of being granted planning permission depending upon financing and procurement lead times. The construction of the proposed development is estimated to take approximately 42 months from completion of demolition and clearance of archaeological works and include commissioning and testing.

4.1.2 The construction programme will be phased and will be based on the four phases listed in paragraphs 3.6.7 to 3.6.1717.

4.2 Working Hours

4.2.1 During the construction period, the normal working hours will be 07:00 to 19:00 Monday to Friday and 08:00 to 16:00 on Saturdays. Deliveries of equipment and materials will also be made to site within the normal working hours period. Non-intrusive activities (such as electrical installation, commissioning operations etc) may be undertaken outside of these hours to minimise the overall construction programme.

4.2.2 In certain circumstances, specific works may need to continue outside the normal working hours (e.g. concrete pours and steam blow).

4.2.3 For the concrete pouring of the bunker slip forming (continuous 24-hour concrete pour) is likely to be required). This slip forming process typically takes one month.

4.2.4 Where 'out of hours' activities are to take place with the potential to cause local disturbance, agreement will be sought in advance, in writing, with West Sussex County Council in line with Condition 15 of the planning consent. Such agreement would be sought at least one month in advance, unless associated with an emergency.

4.2.5 Where required, a Section 61 consent application, will be submitted to Horsham District Council as the applicable authority, or an agreed method statement in line with the Control of Pollution Act.

4.2.6 Letter drops will be made to advise neighbours/businesses of the works to be carried out together with an outline of mitigation measures (see Communications section 4.10 and Appendix D: Dust, Noise and Vibration Management Plan for more details).

4.3 Laydown and Welfare Facilities

Construction Compound

4.3.1 Sufficient space is required for the construction offices, car parking, welfare, canteen, drying rooms for the peak of personnel plus visitors, operational staff and the Client. This will at least match and, in many cases, exceed the requirements of CDM 2015

4.3.2 An area has been allocated for this purpose and an indicative layout is presented at Appendix F This indicates sufficient room is available on site to accommodate the necessary welfare, office and parking requirements. The exact location of the compound may change as the construction progresses to respond to the phase of works within the programme; however this will be retained within the site boundary.

4.3.3 The cabins will be a range of single and double storey in height.

4.3.4 As soon as the welfare facilities are installed a company will be engaged to clean them on a daily basis.

4.3.5 Once the number of workers on site exceeds a threshold (typically 100 workers) a canteen will be provided serving hot and cold food and a medic will be present on-site during daytime working hours. The site medic shall also carry out periodic occupational health checks and health campaigns for workers.

4.3.6 A worker welfare committee shall be established on site and meet at least monthly as well as various channels for workers to provide feedback on their health, safety and other welfare conditions including a robust Site Observation Reporting System (A process is in place for addressing all site observations and these can be posted anonymously).

4.3.7 Construction laydown will be split into distinct areas based on size required and need along the project timeline. Localised laydown, close to immediate works will also be used.

4.3.8 The construction laydown will be allocated such that several HGVs can be offloaded at the same time, and that safe pedestrian routes exist between the construction office area and the site.

Site Entrance

4.3.9 24 hour security shall be positioned at the entrance to site to ensure that unauthorised vehicles/personnel cannot enter the ERF construction site. Those that are permitted shall be:

- Inducted;
- booked in;
- relevant contractor contacted by Security;
- delivery information taken;
- driver advised of site layout and area to report to.

4.3.10 Vehicles shall not be permitted to block the entrance way or queue off site.

4.4 General Site Layout and Good Housekeeping

4.4.1 A good housekeeping policy will be applied to the construction site at all times. The following principles shall be applied:

- All working areas will be kept in a clean and tidy condition;
- Adequate welfare facilities will be provided for construction staff (see 4.3);
- Smoking will not be permitted within the construction site;
- Wheel washing facilities will be provided at an appropriate location close to the exit from the site and will be cleaned to ensure it remains effective (see 6.4.13);
- Open fires on site will be prohibited at all times;
- All necessary measures will be taken to minimise the risk of fire and the Principal Contractor will comply with the requirements of the local fire authority;
- Any waste material generated from the construction site shall be stored securely in covered skips or containers and in accordance with the Site Waste Management Plan (see 4.7).

4.5 Site Security and Fencing

4.5.1 The site boundary (excluding the access road) is already securely fenced with palisade fencing. This will be retained and maintained throughout the construction programme. Due to the context of the site, additional hoarding is not considered necessary. Debris netting shall be erected on the site fencing during the demolition and earthworks phases which will also provide a degree of screening.

4.5.2 The access will be gated and secured. Plant and machinery will be immobilised overnight and stored in the construction area.

4.5.3 Once the Principal Contractor is mobilised, the security gates shall be manned 24/7 by Security Guard(s). Security will undertake periodic perimeter patrols at agreed intervals.

4.6 Lighting

4.6.1 The approved permanent lighting scheme will be installed as soon as practicable when the building construction progress permits. Prior to this, suitable temporary site lighting will be installed to cover access, egress and emergency escape until such time as the permanent lighting is installed. External task lighting (excluding security lighting) will be used in line with agreed construction hours, Specific task lighting will be provided by sub-contractors.

4.6.2 External lighting of the construction area will be designed and positioned to:

- Provide the necessary levels of light for safe working;
- Switching off lighting when not required for safety purposes;
- Keeping security lighting at the minimum level needed for visual and security protection;
- Where safety considerations allow, considering motion sensitive lighting in order to avoid unnecessary lighting;
- Using louvres and shields to prevent undesirable light to minimise light spillage or pollution and avoid disturbance to nearby residents, and to wildlife; and directed away from railway lines and highways.

4.6.3 In accordance with the Bat Conservation Trust recommendations, lighting will be directed away from features with potential for roosting, foraging and commuting bats. For example, lighting will be directed away from the railway adjacent to the site's western boundary as this forms an important foraging corridor for bats.

4.6.4 Lighting during construction will take into account of the requirements set out in BS EB 12464-2:2014 (BSI, 2014). Lighting units will be designed to minimise light illumination outside the construction works area i.e. will be directional, task orientated, fully shielded (where possible) and switched off when not in use.

4.7 Management of Construction Waste

4.7.1 Waste shall be managed in accordance with the principles of the waste hierarchy (i.e. avoid, reduce, reuse, recycle, recover, disposal). An effective document control system shall be used to track and confirm that procedures have been adhered.

4.7.2 All waste will be transported and managed by appropriately licenced contractors and subject to duty of care.

4.7.3 A preliminary Site Waste Management Plan is provided in Appendix G to provide more information as to how waste will be managed on site.

4.8 Pest Control

4.8.1 The risk of pest/vermin infestation shall be reduced by ensuring that food waste (from the welfare facilities) or other putrescible waste is stored appropriately and is regularly collected (i.e. weekly), and effective preventative pest control measures are implemented. It is unusual for a pest infestation on construction sites, however should such occur it shall be dealt with promptly and notified to the relevant local authority as soon as practicable.

4.9 Emergency Planning and Procedures

4.9.1 Emergency procedures will be developed by the Principal Contractor taking into account the anticipated hazards of the construction site. The procedures will include measures for dealing with actual or suspected pollution incidents involving spillages of oils or chemicals, discharge of silty water or other pollutants to watercourses; floods; fire (emissions to air) and firewater runoff; and the discovery of potentially contaminated land. The measures will be based on Environment Agency guidance (where appropriate) and will be documented in an Emergency Response and Pollution Control Plan. A sample Emergency Preparedness and Response Plan is located at Appendix H.

4.9.2 The emergency plan will include the location of fire hydrants, fire extinguishers, first aid boxes, muster points and the nearest muster points and the nearest defibrillator. Details of all persons qualified in first-aid and the site medic will be posted on key noticeboards. The key elements of the plan will be communicated to all personnel during induction

4.9.3 General control measures will include the provision of emergency equipment such as spill kits, absorbent materials, drain covers and oil booms and the need for staff training in emergency procedures. Equipment will be located at the construction compound and other appropriate locations. The spill plan shall be based on the Stop-Contain-Notify principle.

4.9.4 In the event of an actual or suspected pollution incident the Principal Contractor will implement the measures from the Pollution Control Plan and report the incident to the Environment Agency if required.

4.9.5 The Plan will also contain emergency phone numbers and the method of notifying local authorities and statutory authorities (e.g. the Environment Agency). The procedures will be available on the construction site and all staff will be required to follow them. In the event of an emergency, members of the public will be able to contact the project via the contact details on the site entrance or the project website (www.britaniacrestrecycling.co.uk).

4.10 Communications

4.10.1 As part of the environmental management system, communication and engagement of communities, neighbours and interested parties will be introduced and maintained throughout the life of the project. A dedicated point of contact will be provided to manage communications with local residents, local businesses, emergency services and the local authority. An Interested Parties Register will be developed during the early stages of the project.

4.10.2 The approach to communications will include the following steps:

- continuing the Community Liaison Group (CLG) as detailed in the Liaison Committee Terms of Reference submitted to discharge Planning Condition 10.
- a site notice board will be erected at the access road off Langhurstwood Road at the entrance of the construction site that meets statutory requirements and sets out key facts about the construction programme, where further information could be found on the project website and the contact details for the key members of the construction team;
- the www.britaniacrestrecycling.co.uk website will be updated regularly to provide information regarding the project (including key information on the construction programme and areas of works);
- occupiers of nearby properties will be informed through letter drops and through community liaison meetings of any works proposed to be undertaken outside the normal working hours, which may have the potential to disrupt, including aspects associated with commissioning, such as steam blow, or the arrival of any abnormal loads, together with an outline of mitigation measures to be taken during such events.

4.10.3 Best endeavours would be made for letter drops to be carried out at least 2 weeks in advance of out of hour workings. The CLG quarterly meetings will make note of upcoming works and events and discuss letter drops and their timings to keep communications under review.

4.10.4 Any complaints from external stakeholders shall be handled in accordance with the Complaints Procedure given in Appendix I.

5 ENVIRONMENTAL ASPECTS REGISTER

5.1.1 The table below provides an outline Environmental Aspects and Impacts register. The register identifies sensitive receptors and the potential impacts or key issues of the proposed construction works based on the information provided in the Environmental Statement.

5.1.2 Commitments and agreements to mitigate these impacts are set out in the Environmental Statement and are discussed in the Environmental Control Plans within this CEMP. The register will be updated during detailed design and will provide a tool for the construction teams when preparing their method statements.

Environmental Topic	Sensitive Receptors	Potential Impacts during Construction	Environmental Control Plans
Landscape and Visual Impact	Residents, users of local Public Rights of Way, passengers on the Dorking to Horsham railway	Temporary change in views as a result of cranes and construction activities.	Lighting during construction.
Ecology and Nature Conservation	Nesting birds Ponds Bats Great crested newts	Temporary and permanent loss of habitat; loss of connectivity; effects on retained habitats; and effects on fauna through removal of habitat.	Establishment of buffer around existing ponds. Timing of vegetation clearance. Limited lighting during construction.
Transport and Access	Road users along Langhurstwood Road and A264	Traffic delays as a result of construction vehicles; Nuisance of mud on the highway.	HGV routing plans and Transport Management Plan Location of wheel wash facilities
Water Resources	Ponds adjacent to the northern boundary Boldings Brook	Disruption to site's drainage system (e.g. disruption to existing overland surface water); Pollution events from spillages of construction materials or fuel/other materials; Polluted surface runoff from exposed soil and stockpiled materials.	Location and layout of compound and storage areas. Pollution control measures.
Air Quality	Ponds adjacent to the northern boundary Adjacent businesses	Deposition of dust affecting habitats Potential dust nuisance to businesses Deposition of construction dust on nearby roads	Dust Management, Mitigation and Monitoring as detailed in Dust, Noise and Vibration Management Plan
Noise and Vibration	Residential and office noise / vibration sensitive receptors on Langhurstwood Road, Station Road and Cox Farm	Noise or vibration disturbance from construction activities	Noise Management and Monitoring as detailed in Dust, Noise and Vibration Management Plan
Historic Environment	Remains of Hoffman kiln	Damage to/removal of buried archaeological remains	Written Scheme of Investigation

6 ENVIRONMENTAL CONTROL PLANS

6.1 Landscape and Visual

6.1.1 To minimise the visual impact of the construction site, lighting will be kept to a minimum. Focused lighting will be used where illumination is required (e.g. task lighting and security lighting). Night-time construction works will be limited to a minimum and only conducted where necessary.

6.2 Ecology and Nature Conservation

Habitats

Trees and Scrub Retention

6.2.1 Native trees and scrub/shrubs shall be retained in accordance with the Landscaping and Ecological Scheme along the northern boundary, to create work-free buffer zone between the proposed development and the ponds.

6.2.2 Prior to the commencement of construction, fencing will be provided along the edge of the buffer zone (in accordance with the Tree Protection Plan consented under Condition 5): storage of construction equipment and materials will not be permitted within the fenced buffer zone areas. Where appropriate, fencing will also be provided around individual trees to be retained to protect tree roots from compaction. Fencing will meet the requirements of British Standard 5837:2012 'Trees in relation to design, demolition and construction' and will remain in place until construction within the area has been completed.

Ponds

6.2.3 The deposition of dust from construction activities may affect the nearby ponds. Dust control measures as listed in the Dust, Noise and Vibration Management Plan (DNVMP) (see Appendix D) will be implemented to avoid/reduce potential impacts.

Protected Species

Great Crested Newts

6.2.4 During construction there will be temporary loss of terrestrial habitat (i.e. dense scrub, tall ruderal and ephemeral/short perennial habitats) to allow site preparation activities. Great crested newts (GCN) and their habitats are legally protected, and although they have not been found in nearby ponds during pre-commencement surveys, the limited vegetation clearance required on site will be undertaken under a Precautionary Method of Working as detailed in the Method Statement developed and submitted to discharge Planning Condition 3. This includes the requirements that: that;

- An ecologist will be present prior to site clearance to undertake a walkover inspection of the habitats and features within the working area to identify any features/cover in which GCN could be sheltering and to observe where required by the Method Statement and where there is a risk of GCN being present;
- Works to clear vegetation will be undertaken from late March to mid-November when GCN will be out of hibernation and active.
- A toolbox talk shall be presented to the site team undertaking vegetation clearance at the outset of the working day;

- To ensure there is no risk of GCN entering the wider development works area, amphibian-proof fencing will be erected along the northern and eastern site boundaries near to the pond once vegetation clearance has been completed
- In the event that a GCN, or any protected species, is encountered, the works should cease until the ecologist has confirmed the species and advises how to proceed.

6.2.5 Note - Works to clear vegetation have been completed and fencing will be installed in line with the requirements of Planning Condition 3.

Nesting Birds

6.2.6 The existing ruderal vegetation/scrub mosaic habitat on site provides dense cover and has the potential to support nesting bird species. However, based on the limited extent of such habitat on site, the number of potential nests within the site would be expected to be low.

6.2.7 If any vegetation removal is required on site which is suitable for bird nesting, such as trees and hedgerows, it will be cleared outside of the bird nesting season, as far as practicable. The clearance works will be undertaken between October and mid-February to ensure nesting birds are not disturbed. If any clearance is required outside of the period, the relevant areas will be inspected by a suitably experienced ecologist to check for the presence of nesting birds prior to any vegetation clearance. If an active nest is present, the nest and the vegetation (or built structure) within 5 metres of it will be retained until the young birds have fledged.

6.2.8 If the nest proves to be a species listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) advice from the inspecting ecologist regarding suitable distances to avoid disturbance will be sought and agreed with the contractor. These buffers will remain in place until the young birds have fledged and left the nest.

Bats

6.2.9 Lighting outside the standard construction working hours will be restricted to that necessary for individual tasks and will be directional to avoid light spill onto areas where lighting is not required. Construction lighting will be designed and positioned to endure there will be minimal artificial light spill onto the railway corridor during the period when bats will be foraging/commuting.

Invasive Species

6.2.10 No invasive species were encountered during the ecological surveys undertaken for the Environmental Statement. However, should any invasive plant species are identified during construction, the area will be fenced off to minimise the risk of further spread. Site staff and operatives will be made aware of the presence of invasive plant species on site during toolbox talks. A management procedure for the control of invasive species will be prepared in accordance with the Environment Agency's Knotweed Code of Practice and other relevant guidance.

6.3 Water Resources

Existing Resources and Drainage

6.3.1 The Weald Clay beneath the site is classified as an Unproductive Stratum (proven to a depth of 5 m), with the underlying Tunbridge Wells formation classified as a Secondary A Aquifer. Groundwater is estimated to be at a depth of approximately 10 m below ground level (m bgl). Based on the information outlined above, the potential for groundwater flooding is considered to be low.

6.3.2 EA surface water flood mapping indicates that the majority of the Site is at 'very low' risk for surface water flooding. Localised areas around small pools and existing buildings are defined as being in low to high risk zones. (High risk means that each year, this area has a chance of flooding

of greater than 1 in 30 (3.3%)). The risk of flooding from surface water from the Site is considered low.

6.3.3 A detailed drainage survey undertaken in 2017 indicates that existing surface runoff is directed to the south-west corner of the site and is discharged into Boldings Brook via culvert beneath the railway embankment. Boldings Brook is an Environment Agency designated main river and is located approximately 125 metres west of the site beyond the London to Horsham Railway Line.

6.3.4 There are also a series of ponds to the north of the site, some of which support an abstraction of surface water for general use by the brickworks.

Pollution Control Measures

6.3.5 Construction works will be undertaken in accordance with best practice guidance such as the measures set out in CIRIA (2001) 'Control of Water Pollution from Construction Sites – Guidance for Contractors' and CIRIA (2015) 'Environmental Good practice on Site'.

6.3.6 All construction staff will be briefed on the location of the nearby watercourses and pollution prevention measures will be included within the site induction.

6.3.7 Areas with prevalent run-off will be identified and drainage will be actively managed, e.g. through bunding and/or temporary drainage.

6.3.8 Machinery will be routinely checked to ensure that it is in good working condition. Refuelling of machinery will only be undertaken within a designated area of the site where spillages can easily be contained. Any storage tanks and associated pipe work containing fuels will be double skinned or bunded, provided with leak detection equipment and inspected daily.

6.3.9 Storage areas of hazardous substances (including oils and chemicals) will be bunded to minimise the risk of hazardous substances entering the drainage system or the local watercourses. Additionally, the bunded areas will have impermeable bases to limit the potential for migration of contaminants into groundwater following any leakage/spillage. The bunding systems for oil/chemical storage will have a capacity of 110% of the oil/chemical volume stored and ideally will be covered to prevent ingress of rainwater. Oil/chemical storage areas will be visually inspected on a daily basis.

6.3.10 Designated areas for the unloading, storage and handling of materials (including the storage of oils/fuels/chemicals) will be sited away from surface watercourses. Storage containers will be appropriate for the materials being stored and all products will be clearly marked.

6.3.11 Any leaks or spillages of potentially polluting substances will be contained, collected and then removed from site in an appropriate manner, e.g. use of absorbent material or bunding. Spill kits will be provided at agreed locations on the site and all construction staff will be trained in their use.

6.3.12 Surface water run off on site will be controlled. Silty water will be managed to allow suspended solids to settle out if required to prevent silty water discharge to Boldings Brook. Treatment is likely to include settlement tanks (e.g. siltbuster) or lagoons or a combination of both.

6.3.13 Through berms or ditches, silty surface water runoff from the site to the ponds to the north shall be prevented.

6.3.14 Washing out concrete will only take place in dedicated areas on the site: the wash out areas will be bunded and the water removed for treatment.

6.3.15 Site wheel washing facilities will be located away from watercourses and any waste water will undergo settlement and taken off site as waste.

6.3.16 No direct discharges of liquids or materials into the nearby watercourses will be permitted.

6.3.17 There is the potential for localised contamination to exist on the site as a result of its historical use. Measures will be implemented to minimise the potential for the mobilisation of contaminants

including locating stockpiles away from the watercourses in the vicinity of the site boundary, covering stockpiles of potentially contaminated materials and the appropriate management of perched groundwater from dewatering of excavations. Appropriate PPE will also be provided for construction staff. Any unexpected contamination shall be handled as per the Appendix J – Contaminated Land Procedure.

6.4 Traffic and Transport

HGV Routing

6.4.1 The access to the site is located off Langhurstwood Road, approximately 800 metres north of the A264, approximately 3.5 km north of Horsham town centre. The access road leads to the wider Brookhurstwood site and is shared with adjacent site users. It is subject to a 10 mph speed limit. The Principal Contractor will ensure that access to neighbouring sites is not blocked by the construction works at any time.

6.4.2 At its southern end, Langhurstwood Road forms a junction with the eastbound carriageway of the A264 via a left in/left out arrangement with associated acceleration and deceleration tapers. There are no facilities provided for right turn movements into and out of Langhurstwood Road on the A264 and so site traffic will be directed to use the roundabouts to the east and west to change direction of travel as required.

6.4.3 The A624 is a high standard dual carriageway forming part of the county's Strategic Lorry Route and links Horsham to the M23 and Crawley. The A264 is subject to a derestricted national speed limit. It is a dual carriageway from the M23 east of the site access to the junction with the A24 west of the site access.

6.4.4 Whilst the location of contractors and suppliers to the site cannot be specified, the most likely routes from the north and east will result in vehicles using the M25, M23 and A264 before turning onto Langhurstwood Road. Alternatively, vehicles travelling from the south are most likely to use the A24 and A264. On this basis, all contractors (including staff vehicles and vans) will be required to agree to use the HGV routing map (Appendix K) as a condition of their contract. Vehicles will only be able to deviate from the prescribed route in exceptional circumstances such as road closure for highway repairs or closure by the police as a result of an accident.

Route Signage

6.4.5 Appropriate signage will be provided on the approach to the site entrance off Langhurstwood Road and on the A264 (where required) to warn of turning and/or slow-moving vehicles. Directional signage for construction vehicles relating to works access and the routing of works traffic will be provided as required in accordance with the Traffic Signs Manual Chapter 8, Part 1: Design (2009). Part 2 Operations (2009) and Part 3: Update (2016). The design and location of the signs on the highway will be agreed with the Local Highways Authority prior to construction commencing.

Deliveries

6.4.6 The Principal Contractor shall ensure that the traffic requirements as detailed in this CEMP comprise part of the contract that is agreed with sub-contractors. In addition, a Delivery Information document shall be developed and shall be sent to all Principal Contractor equipment suppliers and subcontractors, to ensure the requirements are communicated prior to arrival on site.

6.4.7 Deliveries will be scheduled to arrive on site when there is space to unload (i.e. when the loading bays are free); vehicles will not be permitted to queue on the public highway.

6.4.8 All loading and unloading will be undertaken within the confines of the working area or the construction compound.

6.4.9 In line with ISO14001 / 45001, coordination and liaison meetings will be held with other local construction sites to seek to coordinate local construction traffic/impacts as far as is reasonable and possible.

Abnormal Loads

6.4.10 "Abnormal Load" is defined as a vehicle and load that has any of the following:

- a weight of more than 44,000kg.
- an axle load of more than 10,000kg for a single non-driving axle and 11,500kg for a single driving axle;
- a width of more than 2.9m; or
- a rigid vehicle of length greater than 18.65 metres

6.4.11 The Principal Contractor will follow UK Government Guidance (https://www.gov.uk/esdal-and-abnormal-loads) at all times, The Principal Contractor shall plan for abnormal loads in such a way that the disruption to public highways is kept to a minimum. Approximately 10-15 abnormal loads are expected. A full assessment will be carried out by the Principal Contractor or delivery company to ensure that the route to the site is adequately provisioned to accept the load concerned (ie bridge heights, carriageway widths, etc).

6.4.12 The police, the highways authorities, owners of bridges and potentially affected structures on the route will be consulted and the necessary approvals and permissions sought. The Community Liaison Group will also be informed of any Abnormal Loads at least two weeks ahead of the load arriving at the site.

6.4.13 The Principal Contractor notifies arrival of any abnormal loads via the daily co-ordination meeting. Vehicles arriving will be scheduled to ensure that offloading is possible and the vehicle can exit the site within permitted hours. If it is deemed not possible, the vehicle will be directed off site until the following day.

Wheel Wash Facilities

6.4.14 At the entrance/exit of the site a wheel wash system shall be put in place to minimise any potential for mud, debris or other deleterious material being carried by vehicles onto the adjacent access roads or public roads and footways. This shall be located off the access road to prevent disruption to vehicles associated with the adjacent site users.

6.4.15 Dedicated hard core areas will be created for site deliveries. This will mean that site delivery vehicles will not travel over 'soft' ground thereby minimising the amount of mud and debris from the site works areas.

6.4.16 The access road will be monitored daily for mud and debris. If mud or debris is found on the public highway in the vicinity of the site entrance, road sweeper/washer will be employed as necessary.

6.4.17 The washing facility shall be appropriate for the type and number of vehicles using it. The facility shall have an accessible settlement tank to allow the solid waste to be emptied out on a regular basis and also corrugated wheel tracks to loosen large pieces of debris.

6.4.18 As part of routine monitoring and inspection, the Site Manager/HSE Manager shall review the effectiveness of the wheel wash and where required supplement with road cleaning vehicles will be hired where necessary to ensure that high standards of cleanliness are maintained during construction.

6.4.19 This shall be reviewed more frequently when bulk deliveries of stone import or concrete.

6.4.20 The following prevention measures shall be taken:

- Contractors shall remove excess dirt & mud from tyres and excavator tracks prior to leaving the site.
- Instructions given to site operatives, delivery drivers and visitors that they are to use the wheelwash before leaving if they picked up dirt or mud on site.
- Wheel wash shall be in specified areas on impermeable surfaces located at least 10 m away from the watercourses.

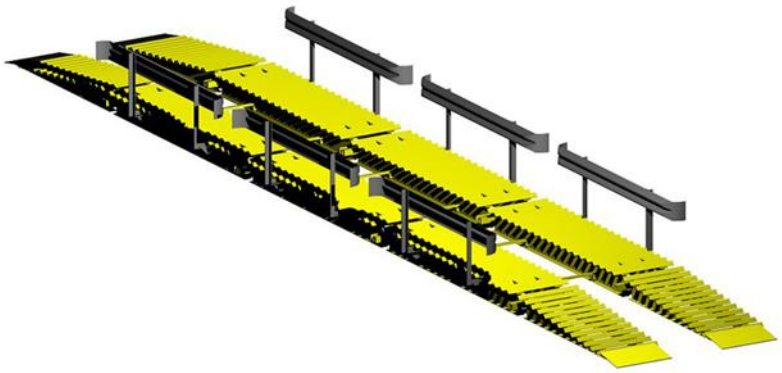


Figure 6.1: Indicative wheel wash

Vehicle Movement Estimates

6.4.21 It is expected that construction and commissioning of the facility will take place over a 42-month period. The level of work is anticipated to fluctuate over the construction programme with the peak level of workers expected to be in from commencement of Phase 2.

6.4.22 Car sharing will be encouraged but this is unlikely to exceed 1.5 persons per car on average, for which the peak level of movements translates to 122 car trips to and from the site per weekday. Subcontractors to the Principal Contractor shall be encouraged to provide communal transport e.g. minibus to site where possible.

6.4.23 The opportunities for using public transport or bicycle to get to site are limited as detailed in the Operations Travel Plan Statement developed to discharge Planning Condition 26. However, should local provision of public transport change or safe access to site from the local railway station for pedestrians or bikes be established, this shall be promoted to site staff.

6.4.24 The profile of worker arrivals will be linked closely to the construction hours with some 70% of workers expected to arrive between 07.00 and 07.30, then 10% arriving between 07.30 and 08.00 hours, with the remaining 20% arriving between 08.00 and 09.00 hours.

On-Site Traffic Arrangements

Offloading

6.4.25 All offloading will adhere to the following requirements:

- Delivery vehicles shall have flashing beacons or indicators (hazard warning lights) on at all times;
- Delivery vehicles shall be marshalled at all times. No reversing without a Banksman;

- Any vehicles that will be loading/unloading goods/equipment using a lorry loader (HIAB or similar) will also be required to demonstrate:
    - The operator shall be qualified;
    - There is a lift plan / risk assessment in place; and
    - Valid certificates are available for all lifting equipment and accessories.

6.4.26 The receiving Contractor shall check and ensure that fall protection is installed on the delivery vehicle and in place before offloading/loading commences. No person is permitted to work on the back of wagons and trailers without fall protection.

6.4.27 All Contractors must develop and maintain a risk assessment for unloading and loading of all types of vehicles expected.

On-Site Traffic Routes and Footpaths

6.4.28 The main traffic routes are indicated through traffic directional signs and speed limits. Designated pedestrian routes will be marked and barriers to separate between vehicles and pedestrians. These will be sufficiently segregated from roads, i.e., barriers in place to separate between vehicles and prevent pedestrians and traffic mixing. All crossing points must remain clear of vehicles.

6.4.29 A detailed Construction Traffic Management Plan shall be developed once the Principal Contractor is established on site, and this will be updated in accordance with project progress. Any required changes shall be discussed in the daily coordination meeting. Unless substantial changes of the plan are made, all contractors should refer to the daily coordination meeting and site notice board for temporary re-routings.

6.4.30 Staff/Visitor Parking

6.4.31 Staff/visitor personal cars shall be separated with an entrance into the staff/ visitor car park. This will allow effective segregation of staff cars / pedestrians from HGVs and other vehicles entering the construction site. Staff with an authorised pass will be able to by-pass Security and either enter the car park with visual authorisation from security or via a swipe card that lifts a car park barrier. Visitors must be pre-notified coming to site, such that identity can be checked on arrival and notification can be provide to the escort.

6.4.32 Restriction may be imposed on the number of passes each contractor can receive or priority given to those who are travelling together. Cars will not be permitted to park outside the boundary of the on site car park area or on the incoming access road and other local roads. To be enforced by the Site Manager.

Contractor Vans

6.4.33 Vans containing tools and equipment shall only be permitted onto the EfW construction site to drop off. A temporary pass shall be allocated by Security on a time out basis (i.e. 30min restriction or similar) to ensure that smaller vans do not block access for construction activities/vehicles.

6.4.34 The EfW construction site does not have the space to allow smaller vans to remain on site and after drop off the vans shall then be parked in the parking area allocated for Contractors. Where contractors have a daily requirement or smaller sub-contractors who visit site regularly, then these requirements shall still apply.

Repair/service Vans

6.4.35 In general, no vehicle maintenance shall be carried out on site and Contractors shall remove defective vehicles from site. However, in cases where urgent assistance is required, service vans from hire companies or the Contractor's own fleet maintenance will be permitted access for short duration and will be issued a site access pass on arrival. Contractors will be required, at all times,

to accompany any person not inducted to Site. Security shall notify the Contractor, who shall allocate a person to escort the individual repair van and remain with the repair operative throughout.

Cycles

6.4.36 The speed limit on local roads is such that it will deter most people from being encouraged to cycle to work. Cycle parking/racks will be made available if it is evident that several people are cycling to work.

Initiatives

6.4.37 From the initial assessment of likely transport routes and options, car sharing is likely to be the most effective. The Principal Contractor shall appoint a travel coordinator, registering details of anyone who is travelling to site, assisting with connecting people who may work for different companies, to be able to travel together.

6.4.38 Where companies are predominantly “lodging” locally, requirements for car sharing shall be made encouraged.

Site plant & Machinery

6.4.39 On arrival, the Contractor shall ensure that the following is available:

- Certification of examination in accordance with the manufacturers schedule of inspection/service record. This can be an attached sticker which clearly shows the date of last/next inspection by date or hours;
- Thorough examination of plant/equipment where this is applicable; and
- Evidence of road worthiness for ANY plant or equipment that is used on the public road.

6.4.40 All plant shall be checked on arrival, weekly, and in accordance with site equipment schedules.

6.4.41 Operators shall be trained and competent on the class of vehicle.

6.4.42 All plant shall carry spill kits in the cab for use in an emergency

6.4.43 A basic check will be carried out on all machinery at the start and end of each day. Machinery will be routinely serviced and maintained in accordance with the manufacturer’s recommendations.

6.4.44 Emergency supplies such as spill kits will be checked on a weekly basis and re-stocked as necessary.

Refuelling

6.4.45 The Principal Contractor shall install a central fuel point for the use be all contractors on site. This will be on a concrete base for contractors to store their double bunded bowsers or fuel cubes. Any fuel bowsers utilised for refuelling large plant such as cranes will be limited to 2000L. This ensures that the fuel spillage and fire risk profile is not elevated during construction.

6.4.46 Refuelling activities shall adhere to the following:

- Contractors shall develop and maintain a risk assessment for refuelling using mobile bowsers, fixed installations and ‘jerry can’ type containers. Only proprietary fuel bowsers or fuel pods may be used.
- The refuelling of mobile plant or vehicles by means of transferring fuel from one item of plant or vehicle to another is strictly prohibited.
- No pedestrian personnel shall be permitted in the vicinity whilst the vehicles are being positioned in preparation for refuelling.

- No hot works shall be permitted within 10m of any refuelling activity. Operators must be instructed and trained.
- All refuelling on the project shall be carried out by trained personnel and in accordance with the specific refuelling method statement and risk assessments.
- Spill kits, plant nappies and fire extinguishers shall be available and used as necessary during refuelling.
- A spill kit shall always be present at the refuelling point and staff shall be trained in their use before being allowed to refuel;
- A plant nappy shall be used during refuelling;
- Drip tray shall not be used unless under cover of building (where they cannot fill with water); and
- A fire extinguisher shall be in the nominated personnel's possession whilst all refuelling activities are being undertaken.

Banksmen

6.4.47 Banksmen shall be used to assist the driver in directing and moving into position and must be used for the following circumstances:

- All reversing where all round visibility is not available. Mirrors are not considered 'all round';
- All movements within buildings;
- All reversing movements ;
- Calling forward from parked areas; and
- Directing to park up and wait.

6.4.48 Where a delivery has arrived and is in the HGV lay-up bay, the Banksman shall receive the HGV by escorting the vehicle into site.

6.4.49 All reversing delivery vehicles shall be under the control of a trained Banksman, irrespective of any alarms or visual aids fitted.

6.5 Air Quality

6.5.1 The demolition and construction activities on the site may lead to potential dust effects. A Dust, Noise and Vibration Management Plan has been prepared for the site based on the guidance from the Institute of Air Quality Management (see Appendix D).

6.6 Noise and Vibration

6.6.1 The demolition and construction activities on the site may lead to potential noise effects. A Dust, Noise and Vibration Management Plan has been prepared for the site (see Appendix D).

6.7 Historic Environment

6.7.1 Prior to the demolition of the existing portal frame building in the north west of the site, a programme of archaeological excavation and recording was required to be undertaken in accordance with the Written Scheme of Investigation by RPS (2020), in line with Condition 13.

6.7.2 However, when the work described in the WSI was started, the site was found to be contaminated with asbestos and the works stopped. The WSI was therefore revised to recommend that due to

safety concerns no further works be required and the asbestos found was removed from site. This amended WSI was resubmitted and approved by West Sussex County Council (RPS, 2021).

6.7.3 An archaeological watching brief will be maintained during all groundworks within the southern part of the site that have the potential to physically impact on buried archaeological remains, particularly those associated with the exploration of iron ore (i.e. mine pits). If archaeological remains are identified during the watching brief, these will be investigated and recorded in line with the procedures of the Written Scheme of Investigation (RPS, 2021)

6.7.4 In the event of discovery of human remains, these will be left in situ and not further examined. The Senior Archaeologist at West Sussex County Council (WSCC) will be informed and specialist advice will be sought.

Appendix A
Standard Principal Contractor Procedures

1 Objective

This procedure defines the minimum requirements for the identification, quantification and control of significant risks to health, safety and environment (HSE).

2 Scope

This procedure is applicable to all Hitachi Zosen Inova (HZI) operations (construction sites, workshops and offices) and includes warranty and guarantee phases as well as service projects. This procedure shall be used by HZI staff. In addition, this procedure may be used by contractors, where contractor risk assessments are of a lower standard than that required by HZI. For some tasks there may only be a requirement for a risk assessment, in which case no method statement will be required, but the risk assessment requires the same level of HZI authorisation.

3 Definitions and Abbreviations

ALARP	As Low as Reasonably Practicable To reduce a risk to a level which is as low as reasonably practicable involves balancing reduction in risk against the time, trouble, difficulty, and the cost of achieving it. This level represents the point, objectively assessed, at which the time, trouble, difficulty, and cost of further reduction measures become unreasonably disproportionate to the additional risk reduction obtained
Acceptable Risk	Risk that has been reduced to a level that can be tolerated by the organisation having regard to its legal obligations and its own HSE policies
Cause	The reason the event / incident occurred
Control	Any measure taken to reduce the likelihood and severity of harm occurring
Consequence	The outcome from an activity. This may include; harm to people, effects on health, impact on the environment, damage to property, social impact, non-conformance to quality or HSE standard, security breaches etc.
DSE	Display Screen Equipment
Event	An unplanned or uncontrolled outcome of an activity that has or could have contributed to an injury to people or environment, property, or reputational damage
Hazard	Anything with the potential to cause harm
HSE	Health, Safety and Environment
HAZCON	Hazard in Construction

HAZID	Hazard Identification – the process of recognising that a hazard exists and defining its characteristics
HZI	Hitachi Zosen Inova
Incident	An unplanned event that has, or could have, resulted in harm to People, Environment, Assets, or Company Reputation i.e. an accident or Near Miss
Likelihood	The possibility of something happening
PPE	Personal Protective Equipment
RAMS	Risk Assessment and / or Method Statement
Residual Risk	The risk that remains after all efforts to identify and eliminate the risk have been made
Risk	The combination of the likelihood of an occurrence of a hazardous event or exposure and the severity of the injury/ill health or adverse environmental impact that can be caused by the event
Risk Assessment	A process for understanding the nature and magnitude of risk. It includes the identification, analysis, and evaluation of the risk
Erection Description Risk Assessment	Some Mechanical Erection Energy from Waste contractors develop an Erection Description Risk Assessment (rather than a task specific RAMS) for their entire scope of work (as detailed in the TII Erection Description). The intent and purpose is the same as the RAMS and the guidance in this document for RAMS applies to Erection Description Risk Assessments
TII	Technical Implementation Instruction

4 Further Applicable Documents

Doc no.	Title
AA 426 02	Risk Assessment Method Statement Evaluation Procedure
AA 426 03	Permit to Work Procedure
GP 426 F01	Risk Assessment Form
GP 426 F02	Risk Assessment/Method Statement Evaluation Form
GP 426 F04	Method Statement Form

5 Responsibilities

5.1 RAMS Development

5.1.1 Project Director / Project Manager

Shall ensure that adequate resources are provided to implement identified control measures.

5.1.2 Site Manager / Construction Manager

The Project Site Manager or Construction Manager is responsible to ensure that the Activity Risk Assessments are carried out prior to the commencement of key activities (Construction, Commissioning, etc.) for the project / office / locations.

5.1.3 Discipline Manager(s)

Discipline Manager(s) or Discipline person in charge (for small projects) shall lead and actively participate in developing Activity Risk Assessments for the key activities considering the recommendations from the HAZ-CON workshop report if any, site conditions, manufacturer's instructions etc.

They should identify the suitable team (Supervisors, Technicians, and HSE Advisors etc.) who are competent and directly involved in the activity for developing the Risk Assessment for the concerned activity and ensure that the control measures from these Risk Assessments are implemented effectively.

5.1.4 Project / Site HSE Manager or Responsible Person

Shall assist the assessment team to ensure a structured and effective approach has been adopted to identify the hazards and control measures, review and accept the final risk assessments for implementation or delegate to a competent member of staff, and audit the site activities to ensure that the control measures identified from the risk assessments have been implemented through permit to work etc.

5.1.5 Discipline Supervisors

Discipline Supervisors shall actively participate in developing Risk Assessments and identifying hazards and control measures.

They must ensure Risk Assessments and Method Statements (RAMS) are submitted and accepted for any work carried out, ensure that the RAMS is reviewed regularly or upon any significant event i.e. change in work process, accident, etc., ensure implementation of control measures identified from the assessments and communicate the hazards to all the employees / workforce under their supervision.

5.1.6 Contractors

Shall ensure full compliance with the requirements described in this procedure in their own areas, conduct activities in a manner designed to minimise HSE risks, protect health and safety of employees, contractors, customers, the community at large and the environment in which the activities take place, ensure that their personnel have access to sufficient training, experience,

facilities and resources necessary to efficiently implement, administer and enforce this procedure, and develop RAMS for each activity in compliance with the requirements indicated with this procedure; and submit for acceptance to the HZI Construction or Commissioning Discipline leader and HSE Manager. They must ensure that suitable and sufficient RAMS are created for their scope of work that address and controls all salient parts of the job. These RAMS should be created by a competent person and be specific for the job. Generic Risk Assessments will not be accepted except for routinely low risk activity.

They must also ensure that the RAMS for their activities are reviewed regularly or upon any significant event i.e. change in work process, accident, etc.

5.1.7 All Employees

Must comply with the requirements and implement control measures specified in the Risk Assessments

5.2 RAMS Review and Acceptance

The HZI Construction or Commissioning team shall review and accept all Method statements using the form GP426 F02 then relevant Risk Assessment shall be accepted by HZI HSE Dept or HSE person in charge, countersigning same form (GP426 F02).

6 Risk Assessment Process

The process description below details the minimum requirements for risk management. Prior to commencement of Construction, Pre-commissioning and Commissioning activities, a HAZCON work shop will be carried out which will essentially provide a project Hazard and Effects Register.

All activities shall be described in dedicated RAMS that are submitted to HZI for acceptance.

Once a Method Statement is accepted by HZI discipline leader, relevant Risk Assessment shall be submitted to HZI HSE Dept or person in charge for acceptance.

No activity is allowed if relevant RAMS is not accepted by HZI.

It is important that the relevant discipline Line Supervisors / Engineers and Managers are involved in the development of Risk Assessments to ensure that the right assumptions are being made and are correctly used. HSE Supervisors / Managers shall guide Line Supervisors / Engineers and Managers to ensure a structured and effective approach has been adopted to identify the hazards and control measures. The following key aspects and conditions shall be taken into consideration (but not limited to) during Hazard Identification and Risk Assessment process:

- Routine & non-routine activities
- Normal execution conditions
- Abnormal execution conditions (shut down, maintenance, startup etc.)
- Simultaneous Operations (SIMOPS)

- Reasonably foreseeable accidents, incidents, and emergency situations
- All Third Parties (Subcontractors, vendors, visitors, members of the public, etc.) present at the work location and their activities
- Applicable Legal and other requirements of the location.
- All human factors such as human behaviour, human capacity, etc.
- Hazards arising from outside of work location
- Hazards arising from work location that are created around the work location (can be evaluated as environmental factors)
- Infrastructure, equipment, and materials that are provided by Subcontractor or Third Parties
- Possible hazardous materials and environmental impacts
- Changes in organisation, activities, system, or materials
- Revisions in HSE Management System (including temporary changes) and their effects on operation, process & activities
- Ergonomics etc.

Risk Management consists of five principal steps as shown below (refer to Figure 1. Risk Management Model). To make hazard and risk identification more manageable, the activity (e.g.: Lifting of a structure, excavation, painting a tank etc.) should be divided into a logical sequence of tasks so that each of the tasks can be assessed individually (refer to Work Method Statements, Procedures, and job cards while dividing the activity effectively into a sequence of tasks).

Prior to the carrying out the risk assessment, to see the physical layout of the area, assessors should visit the worksite wherever possible to consider site conditions, concurrent activities that could pose additional hazards.

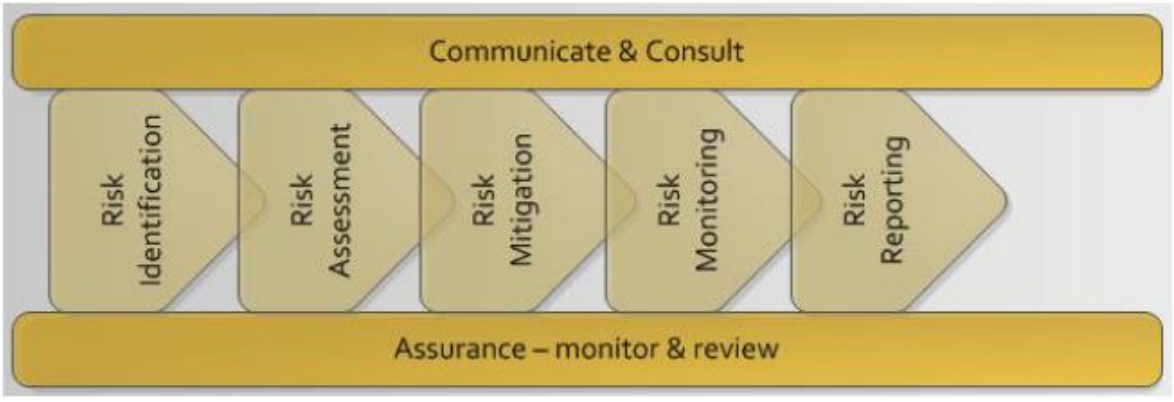


Figure 1. Risk Management Model

6.1 Method Statement

Contractors may use GP 426 F24 to create a Method Statement or provide their own method statement form. In the case of the latter, the method statement shall include the information required in GP 426 F24 as a minimum.

Detailed Work Method statements will be developed by the executor for the work activities to ensure the appropriate safeguards are identified for the safe execution of the job and will be submitted to HZI for review and acceptance. Submission of work method statements to HZI shall be done in good time (e.g. three weeks) for review, comment and acceptance. The final revision of the Work Method Statement will include the safety precautions (Risk Assessment) and will be included in PTW where applicable. HZI will develop a standard template for Method Statements to ensure quality and consistency in the content.

The method statement will detail:

- The job to be undertaken
- A detailed description of how the work will be done including control measures and procedures to complete each activity and the overall job safety
- The individual activities required to complete the job
- The individual trades / disciplines involved in each activity
- Plant, equipment, tools to be used in each activity
- Stop the job trigger points
- Any substances / chemicals to be used and where and during which activity they will be used (together with a MSDS)
- The name(s) of the supervisor(s) for each activity
- Description of the involved working area.

In addition, enough time should be allowed for personnel to be fully briefed by the appropriate responsible persons on the contents of the applicable method statement/s, how it relates to their tasks/activities and that it is understood that compliance is mandatory.

The HZI Site or Construction Manager and HSE Manager will assess and identify critical works which need a specific method statement.

Method Statements will be a key element in providing the basis for an accurate risk assessment and is a requirement for the work activities.

The scope, hazards, controls and mitigations will be communicated to the workforce via toolbox talks prior to the commencement of any work. A written copy, signed off by all involved in the task, confirming that they understood the risks and control measures, will be maintained and available for auditing purposes.

6.2 Risk Assessment Format

Each RAMS must document the following:

- Identification of the hazard, the potential for harm arising
- Evaluation of the risk, describing the likelihood and severity of harm
- Selection of appropriate controls, to prevent or minimise exposure to the risk
- Evaluation of the residual Risk and description of possible additional control measures.

All RAMS must be site specific.

RAMS are required for all activities on site.

All assessments should be made specific to the task.

High consideration should be given to the following:

- Working at Height
- Lifting Operations
- Road Risk
- Vibration/Noise
- Manual Handling
- Handling of chemicals and hazardous materials e.g. refueling
- Radiation
- Display Screen Equipment (DSE)
- Confined Space Entry
- Work Equipment
- Hydrotesting & Pneumatic tests
- Lone Working
- Hot Works
- Electrical activities
- New or expectant mothers
- Young Persons
- Excavation
- Concrete works
- Works near heavy traffic areas.

RAMS shall be completed on form GP 426 F01 (See below) or similar.

Hitachi Zosen INOVA Hitachi Zosen Inova AG	HSE Hazard identification , Risk Assessment & Risk Control

Site / Project:		Assessor:	
Activity / Task:		Reviewer:	
People at risk:		Approver:	

Hazards / Environmental Aspects			Risk assessment prior to control measures			Control
Health and Safety Hazard (HS) Environmental Hazard (E)	**Description** of Hazard or Environmental Aspect (incl. source)	**Risk** to Health, Safety or Environment incl. Effect	1 - Improbable 2 - Unlikely 3 - Probable 4 - Occasionally 5 - Certain Likelihood	1 - Negligible 2 - Minor 3 - Significant 4 - Serious 5 - Extreme Severity	Risk Rating	Existing and additic

The Risk Assessment Matrix should be used (see Appendix 1) to assess the risk rating which is the product of severity and likelihood. It will be used to assess and evaluate risks.

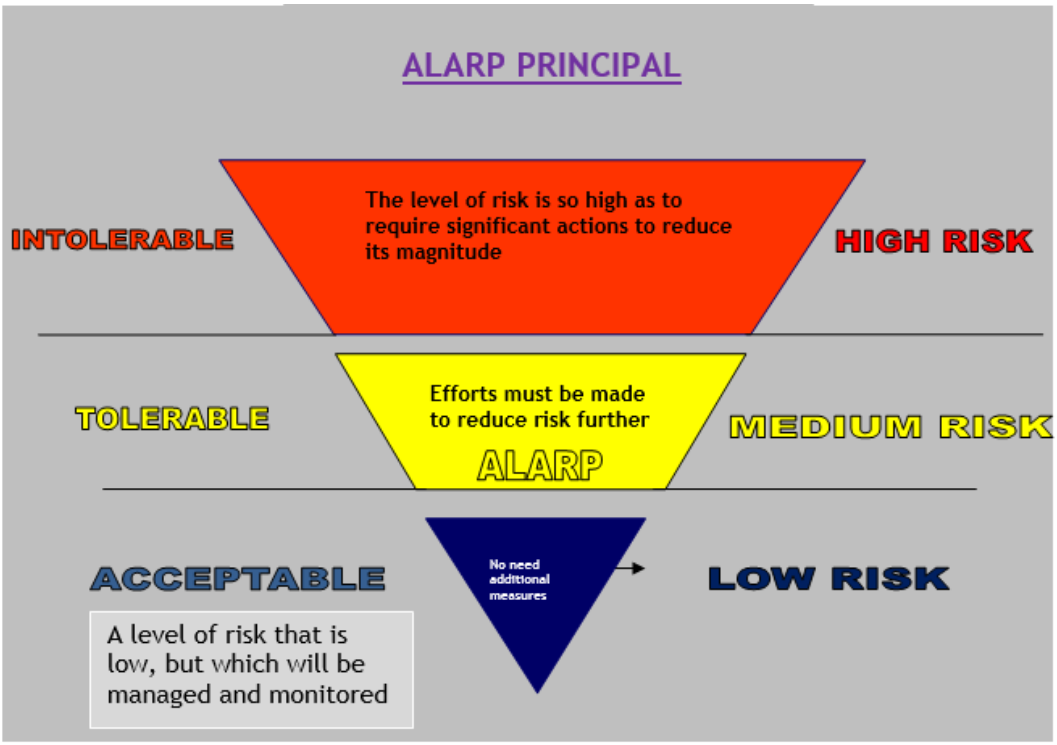
Risk = Severity x Likelihood

The assessment of likelihood is shown on the vertical axis with assessment of consequence / severity shown on the horizontal axis. Four categories of consequences are: impact on people, environment, asset, and reputation.

Risk shall be categorised into three levels as follows;

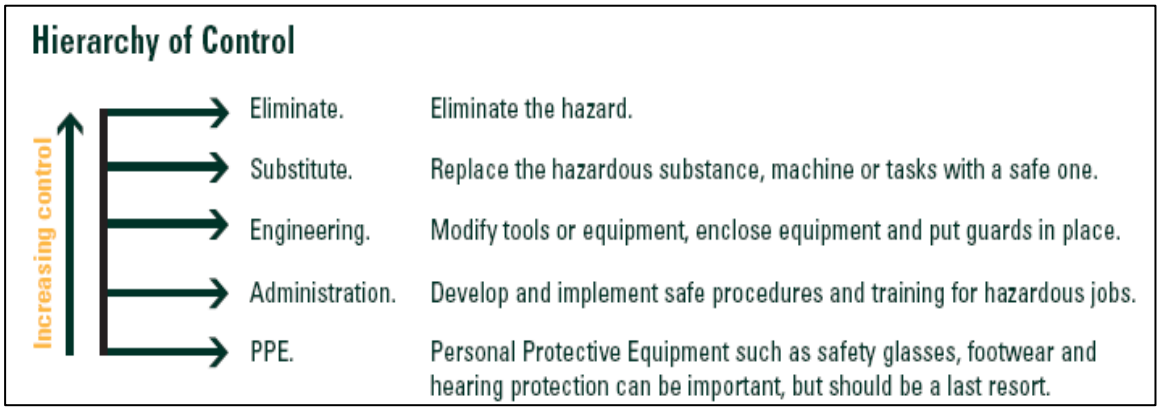
- Low Risk (Green): risks in the green area are regarded as low risks but shall be checked to ensure that there are no obvious simple additional actions which can be taken to further reduce them. They will be monitored to ensure they remain at this level.
- Medium Risk (Amber): risks in the amber area are regarded as medium risks and shall be subject to a full risk assessment to identify measures which could eliminate or mitigate them. Once these measures are implemented and no further reasonably practicable measures can be taken, it is acceptable to proceed when authorized by line management.
- High Risk (Red): risks in the red area are regarded as high risks and if the risks cannot be reduced sufficiently then the operation / task should not be undertaken.

The risk evaluation determines the tolerability of the risk. This is done by comparing risk estimate with risk acceptability criteria to ensure that the risk satisfies 'AS LOW AS REASONABLY PRACTICABLE (ALARP)' principle.



6.3 Risk Mitigation

Where the evaluated risk is in the unacceptable level, risk reduction measures are required to be identified. Each hazard should be systematically assessed and the methods that area needed to control each of the associated risks should be identified. Following figure of Hierarchy of Control may be used to assist in the process.



Risk reduction measures include those to prevent incidents (i.e. reduce the likelihood of occurrence), to control incidents (i.e. limit the extent & duration of a hazardous event) and to mitigate the effects (i.e. reduce the consequences).

6.4 Estimation of Residual Risk

Considering the risk reduction / mitigation measures identified are effective, residual risk of each identified hazard shall be re-estimated using Risk Assessment Matrix provided as Appendix 1. The work can commence with the identified controls in place where the residual risk is tolerable and ALARP. If the residual risk cannot be reduced to a tolerable level, task must not proceed.

The concerned Work Supervisor shall ensure the implementation of all identified control measures at the work site.

7 Communication

All HSE Personnel, Discipline Managers and Supervisors shall be aware of the requirements of this procedure to ensure necessary implementation of control measures to manage risk.

It is the duty of the relevant Supervisor to ensure that all hazards, risks and control methods are communicated to all relevant or affected personnel through the Tool Box Talks which should be recorded and maintained.

All persons involved in an activity must be made fully aware of their authority and responsibility to stop the job when there is a doubt about the safety of the operation.

In addition, it must be made clear that the job must be stopped if conditions or personnel change, or if there is any deviation from the established controls.

On completion of the work, recommendations by the employees should be considered for improving existing work practices and risk assessments and fed back to the Discipline Supervisor.

8 Revision of Risk Assessments and Method Statements

Risk assessments and Method Statements shall be reviewed and revised after a significant change in the task. As a minimum, this applies under the following circumstances:

- If there is a change in normal operation
- If there is a lasting change in the way the task will be carried out (temporary changes can be addressed using Point of Work Risk Assessments POWRA)
- If there is change in the organisation and responsibilities
- After accidents and possible emergency situations
- If there is a significant lasting change in work conditions such as general access or access to perform the work (temporary changes can be addressed using Point of Work Risk Assessments POWRA)
- If there is a change in the equipment / machinery and chemicals that have been in use
- If there is a change in HSE legislation, regulations, standards, and Client requirements etc.

When there is a change, either temporary or permanent, hazards arising from this change must be identified. According to the added new hazards, risk must be re assessed and old risk assessments shall be revised and new controls identified.

9 Management of Change

Work arising from temporary and permanent changes to organisation, personnel, systems, process, procedures, equipment, products, materials, or substances and laws and regulations will proceed only when a Management of Change process is completed, where applicable, to include;

- A risk assessment conducted by all impacted by the change
- Development of a work plan that clearly specifies the timescale for the change and any control measures to be implemented regarding:
- Equipment, facilities and process
- Training, personnel and communication
- Documentation
- Authorisation of the work plan by the responsible person(s) through completion.

10 Revision History

Changes carried out with the revision:

Revision index	Changed chapter	Short description of the changes
00	All	First version
01	1,3,6	Amended in regard to environmental risks
02	6	Insertion of flow chart in better quality
03	Throughout	Minor updates and incorporation of process for Anaerobic Digestion / Service
04	Throughout	Changes and updates including Risk Assessment process, role and responsibilities, revision and acceptance, incorporation of Erection Description Risk Assessment and to adapt for all HZI operations
05	8	Incorporation of learnings from an accident
	Appendix 1	Update of environmental matrix to align with AA 426 15 and AA 426 04

Appendix 1: Risk Assessment Matrix

		Severity Level				
	Risk Assessment Matrix	1 - Negligible	2 - Minor	3 - Significant	4 - Serious	5 - Extreme
Likelihood	1 - Improbable	1	2	3	4	5
	2 - Unlikely	2	4	6	8	10
	3 - Probable	3	6	9	12	15
	4 - Occasionally	4	8	12	16	20
	5 - Certain	5	10	15	20	25

Tolerable / Low	1 to 4
Little or no risk residing. Operation or task is okay to continue. Maintain existing control.	
Medium	5 to 10
Tolerable risk residing. Operation or task is okay to continue. Monitoring of controls should be carried out. Permit to Work may apply. Supervision is required	
High / Unacceptable	11 to 25
Unacceptable risk resides. Operation or task should cease until further analysis is carried out. Decide on alternative methods of work.	

Likelihood		Weighting
Improbable	Event with negligible frequency of occurrence in the industry (every 100 years) or impact that does not occur.	1
Unlikely	Event with rare frequency of occurrence in the industry (yearly or less than a year) or impact that is unlikely to occur.	2
Probable	Event with sporadic frequency of occurrence more than once per year in the industry) or impact that is not very likely to occur.	3
Occasionally	Event with occasional frequency of occurrence or impact that is likely to occur.	4
Certain	Event with continuous frequency of occurrence or impact that is definite to occur. More than once per year at same location	5

Severity Level	People	Environment	Asset	Reputation	Weighting
Negligible	Non-recordable injuries / First Aid cases. Ill health requiring nonprescriptive medication and/or monitoring. Minor criminal acts or attempts	Small or contained environmental impact with slight or no effect but requiring corrective action No offsite impact	Non-recordable property or equipment loss/damage or minor disruption to operations	-	1
Minor	Medical Treatment or Restricted Work Case	Minor localised contamination / environmental impact but easily recoverable and no offsite impact.	Property or equipment loss/damage or partial shutdown or disruptions to operations e.g. USD<10K	Community complaint Limited negative local media attention	2
Significant	Lost Time Injury	Contamination / environmental impact but recoverable. Offsite impact	Property or equipment loss/damage or extended shutdown of operations e.g. USD 10k < USD 100K	Breach of permit or regulations Negative local media attention	3
Serious	Life changing disability exposure with irreversible life changing health effects.	Extensive but eventually reversible impact, on species, habitat ecosystem Clean up may require external support Multiple breach of permit or regulations.	Property or equipment loss/damage or extensive loss of operations e.g. USD 100k < USD 1M	Regulator enforcement action. Negative national media attention	4
Extreme	One or more fatalities	Major pollution event leading to long-term widespread damage. Major environmental impact causing significant loss of protected species, habitat or ecosystem. National/international support to rectify	Property or equipment loss/damage or total loss of operations e.g. > USD 1M	Regulator prosecution Adverse international media attention	5

Hitachi Zosen INOVA **Hitachi Zosen Inova AG**	**RISK ASSESSMENT AND METHOD STATEMENT EVALUATION/POINT OF WORK RISK ASSESSMENT**	**Doc. No.:** **AA 426 02 Rev. 04**
Author: *Astrid de Cosson, 29.11.2021, Deas*	Reviewer: *Thomas Zandes, 10.11.2021, Zant* *Chris Hibbert, 29.11.2021, Hibc* *Gian Luca Aquino, 29.11.2021, Aqgi*	Approver: *Renato Biso, 29.11.2021, Bire*

1 Objective

This procedure defines the minimum requirements for the evaluation of risk assessments and method statements (RAMS).

2 Scope

This procedure is applicable to the following HZI activities: construction sites; operating assets; service projects; workshops and offices, and includes warranty and guarantee phases.

This procedure is for use by HZI. It shall be made available to Contractors on request.

3 Definitions and Abbreviations

Control	Any measure taken to reduce the likelihood and severity of harm occurring
Hazard	Anything with the potential to cause harm.
HSE	Health Safety and Environmental
HZI	Hitachi Zosen Inova
POWRA	Point of Work Risk Assessment
RAMS	Risk Assessment Method Statement
Risk	The combination of the likelihood of an occurrence of a hazardous event or exposure and the severity of the injury/ill health or adverse environmental impact that can be caused by the event.

4 Further Applicable Documents

Doc.Nr.	Title
AA 426 01	Risk Assessment Method Statement Creation Procedure
AA 426 03	Permit to Work Procedure
GP 426 F01	Risk Assessment Form
GP 426 F02	Risk Assessment/Method Statement Evaluation Form
GP 426 F78	RAMS Compliance Check
GP 426 F84	Take 5 - Point of Work Risk Assessment Form
TII	Lean Construction Management Tool

5 Responsibilities

When acting as Main Contractor, HZI has a duty to obtain risk assessments from all contractors working on the project (whether or not they have a contract with HZI) and ensure both that they are suitable and sufficient and to ensure proper co-ordination and address risks.

In addition, HZI has a responsibility to generate risk assessments for its own activities whilst acting as Main Contractor (see section 6) and for all its activities when acting as Contractor.

6 HZI Created RAMS

HZI are required to generate RAMS for all activities wherever HZI employ individuals on a direct basis (this includes agency staff). These risk assessments will include but not be limited to:

- DSE assessments
- Manual handling assessments
- Task based assessments
- Handling of chemicals and hazardous substances assessment
- Young/vulnerable worker assessment
- Expectant/new mother assessment
- All HZI commissioning team activities

These risk assessments must be completed by a competent and experienced risk assessor. This should be undertaken with regards to Risk Assessment Creation Procedure AA 426 01.

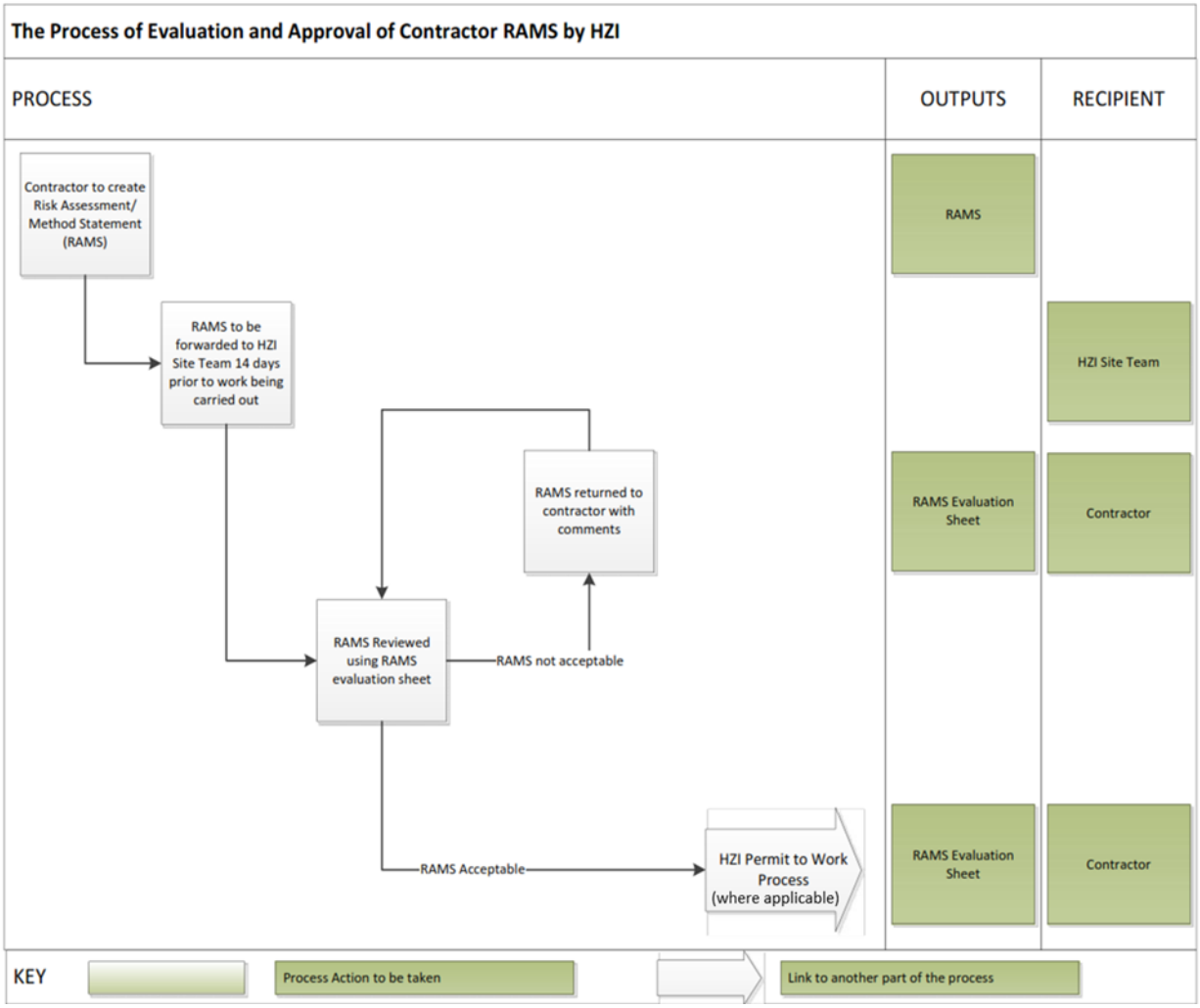
7 Evaluation of RAMS

7.1 Contractor RAMS

Contractors shall provide RAMS to HZI for review at least 2 weeks prior to the work commencing in order to facilitate time for a review. HZI shall review all RAMS using form GP 426 F02. RAMS evaluation procedure must always involve two parties. HZI Site Manager/Supervisor or equivalent will review the technical part of the RAMS and the Site HSE Manager or in their absence Corporate HSE will review the HSE part of the RAMS.

This document must be placed with the RAMS. Where the RAMS does not meet the required standard by HZI then HZI will return the RAMS to the contractor for further work.

Where the RAMS are reviewed and deemed to HZI standards they will be agreed and the contractor will then be required to put forward a permit request (where applicable).

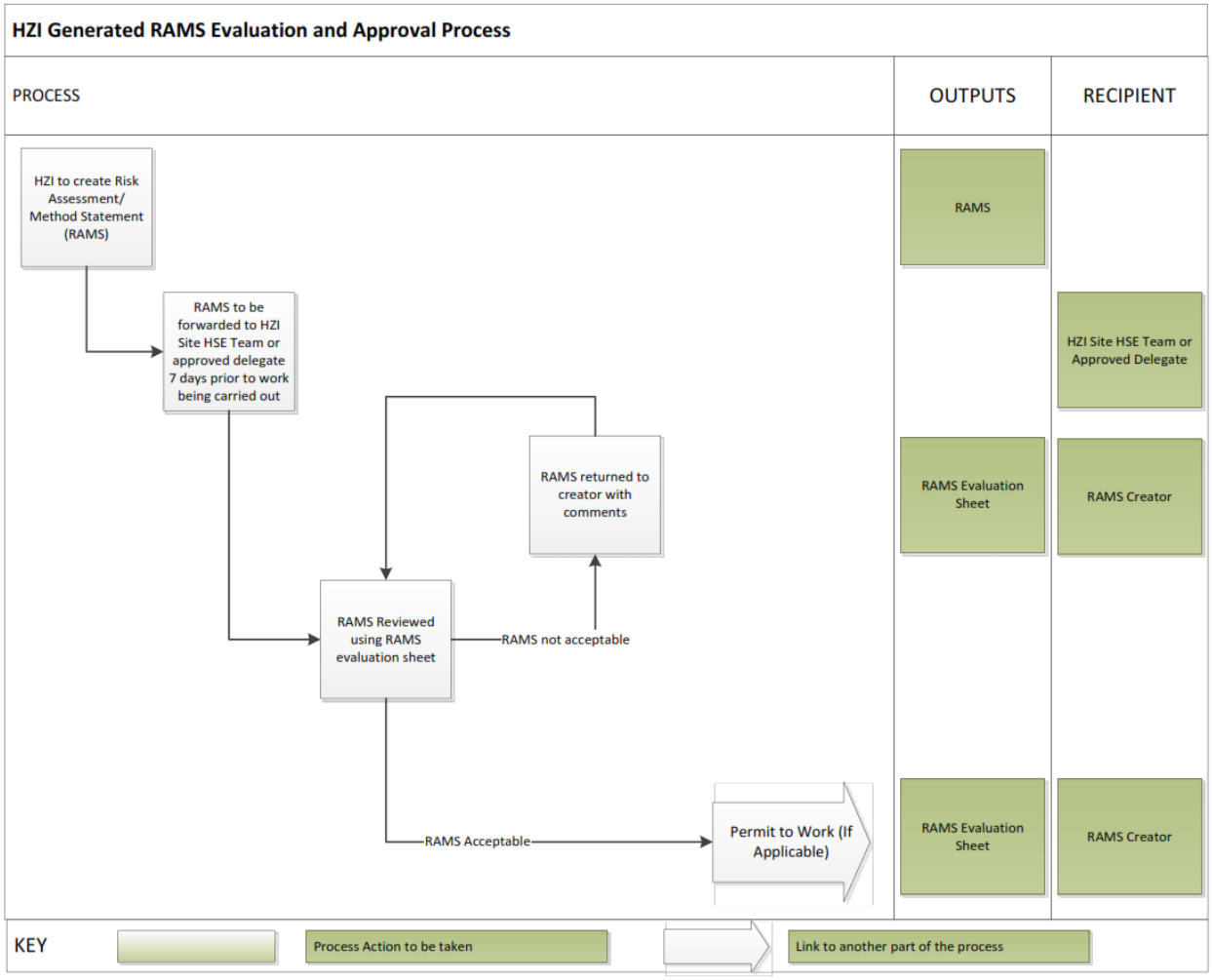


7.2 HZI RAMS

Where HZI are required to generate a RAMS (see Section 6), the risk assessments must be reviewed by Site HSE Department or delegate as noted in Site HSE Plan. RAMS should be provided at least 7 days prior to the work being undertaken in order to facilitate time for a review. All RAMS will be reviewed using form GP 426 F02. This document must be placed with the RAMS.

Where the risk assessment does not meet the required standard by HZI then HZI will return the RAMS to the creator of the RAMS for further work.

Where the RAMS are reviewed and deemed to HZI standards they will be agreed.



8 HZI Service, Maintenance and R&D Division

A risk assessment, and if required a method statement, must be completed for all activities during any work in relation service, maintenance and R&D. This should be completed in line with Risk Assessment Creation Procedure AA 426 01.

9 Monitoring and Reviewing of RAMS

Once a task is being carried out, it should be monitored to ensure that the assessment, its controls and associated systems are adequate and fit for purpose. How, when and by whom this is done will depend upon the nature of the task in hand.

Once completed, a risk assessment must be reviewed and revised whenever required. This could be due to an incident, as a result of suggestions from staff for improvement,

following a specified date or owing to changes to procedures, equipment, location, personnel or the environment. The task itself should also be subject to ongoing monitoring and review arrangements as significant changes may result in the review of the associated assessment.

For Energy from Waste construction projects[1] a RAMS compliance review shall be done one week after work commences (GP 426 F78). In addition, all live RAMS must be reviewed on a quarterly basis.

NOTE – Following an incident the RAMS must be reviewed to ensure that it remains suitable and sufficient and no alterations are required.

10 Communication

Risk Assessments, or relevant parts, must be communicated effectively and in a comprehensible manner to those likely to be affected by the work, including:

- Other contractors, or employers, whose employees may be affected by the work
- Employees and supervisors engaged in the work
- Other employees working in the vicinity of the work
- The Main Contractor (if not HZI)

The precise communication arrangements should be detailed in the company Construction HSE Plans. Sub-contractors are required to comply with these arrangements in communicating their own risk assessments. Feedback on risk assessments and their adequacy should be encouraged from all parties associated with it.

11 Point of Work Risk Assessment (POWRA-Take 5)

Prior to the commencement of any work a point of work risk assessment (POWRA-Take 5) must be completed using the GP426 F84 form or similar. This should be completed using the relevant forms or as detailed in Site HSE Plan. The POWRA should be completed by the appropriate supervisor and be in the form of a discussion with the individuals undertaking the activity. All relevant information must be completed and a copy of the POWRA kept at the job and returned to the Site HSE department once completed.

12 Record Keeping

Risk assessments/POWRAs should be kept for:

- the duration of the project or until a superceding assessment is completed
- at least 5 years after completion of the project.

Those linked to occupational health risks (such as noise, vibration and substance use) should be kept for at least 40 years. In terms of radiation this is to be 50 years.

[1] Applies to Projects using HZI HSE Management System

13 Revision History

Revision Index	Changed Chapter	Short Description of the Changes
01	3; 6; 10	Amended in regard to environmental risks
02	7.1; 7.2; 11	Insertion of flow charts in better quality
03	9 and throughout	Insertion of review periods of RAMS. Minor updates.
04	Throughout	Minor changes to reflect changes in HSE MS. Change to section 9 for EfW construction projects to reflect finding from Internal ISO Audit.

Hitachi Zosen INOVA **Hitachi Zosen Inova AG**	**Permit to Work**	**Doc no.: AA 426 03** **Rev. 05**
Author: Chris Hibbert, hibc., 14.09.2021	Review: Thomas Zandes, zant., 16.09.2021 Richard Keane, keri, 16.09.2021	Release: Renato Biso, bire., 20.09.2021

Table of Contents

1 Objective

This procedure details the requirements for the control and issuance of Permits to Work (PTW) to control activities where the risk cannot be controlled by Risk Assessment Method Statements (RAMS) alone.

The 'Permit to Work (PTW)' system is a formal, signed, documented system used to control the work activities that has been identified as potentially dangerous involving risk. PTW aims to ensure that proper planning and precautions are taken with hazards of a particular job, to eliminate/control the risk to ALARP. PTW is also a means of communication between site management, supervisors, operators, and those involved in carrying out the job.

The permit is a written document which authorizes certain personnel to carry out a specific job at a certain time and place. The permit sets out the precautions needed to complete the job safely.

All PTWs follow the same documented format and are available on the HZI Intranet 'Process Management System (PMS)'. Each PTW has a different colour header and the headers for PTWs used only for Commissioning and Operations have a grid pattern on the coloured header.

In some HZI Projects this procedure is superseded by or integrated with the T-Card system, as explained in TII-HZI-50072451_2.0_TII HZI Lean Construction Management Tool.

2 Scope

This procedure is applicable to all Hitachi Zosen Inova (HZI) operations (construction sites, workshops and offices) and includes warranty and guarantee phases as well as service projects where HZI act as Main Contractor. This procedure applies to HZI staff and to any HZI Contractors.

Where HZI are not the Main Contractor, alternative systems in place on that site may be followed upon agreement with HZI Corporate HSE Department.

3 Definitions and Abbreviations

ALARP	As Low as Reasonably Practicable
HSE	Health, Safety and Environmental
PPE	Personal Protection Equipment
PTW	Permit to Work
POWRA	Point of Work Risk Assessment
RAMS	Risk Assessment Method Statement
SAP	Senior Authorised Person
SIMOPS	Simultaneous Operations
Hazard	The potential to cause harm to people, environment, or to material assets, or a combination of these

Hot Work	Work that involves, or may result in, an open flame, the production of sparks, or other potential sources of ignition, i.e. welding, grinding, cutting, etc.
Permit	An authorising document approved by a competent person, specifying the required precautions and conditions under which potentially hazardous or interacting activities can take place and the allowed duration of the activity
RG	Renewable Gas
Risk	A combination of the likelihood of a hazardous event occurring and the severity of possible consequences of that hazardous event. Risk is also the exposure to something with the potential to cause harm
Risk Assessment	A structure approach to identify and manage the hazard and effects from activities which have the potential to harm people, environment, to cause damage or loss to asset and adversely impact on company's reputation

4 Further Applicable Documents

Doc no.	Title
AA 426 04	Incident Investigation and Reporting Procedure
AA 426 13	Electrical and Mechanical Safety Rules for RG Projects
AA 424 26	Mechanical and Electrical Safety Rules
GP 426 F03	Construction Permit to Work
GP 426 F04	Excavation Permit
GP 426 F05	Hot Works Permit to Work
GP 426 F06	Confined Space Permit to Work
GP 426 F07	Created Openings Permit
GP 426 F08	Pressure Testing Permit to Work
GP 426 F09	Radiography Permit
GP 426 F10	Commissioning/Operations Permit to Work
GP 426 F11	Energisation Notice
GP 426 F12	Limitation of Access

GP 426 F13	Electrical Isolation Certificate
GP 426 F14	Sanction for Operation and Test
GP 426 F16	Permit Handover Form
GP 426 F17	PTW/Safety Document Audit
GP 426 F31	Permit to Work Restoration of Supply
GP 426 F67	Site Road Closure Permit
GP 426 F75	Permit to Work Under Overhead Power Lines
GP 426 F77	Night Shift Checklist
50072451TII	HZI Lean Construction Management Tool

5 Responsibilities

5.1 HZI Project Director

The HZI Project Director is ultimately responsible and accountable for ensuring the Project has the right resources to implement an efficient and robust PTW system.

5.2 HZI Project Manager or Site Manager or Site Representative

Is responsible to ensure PTW procedure, effectively implemented, regularly updated and maintained. Site representative shall ensure applicability and practicality of PTW procedure to the activities performed during the Project scope of work including construction and commissioning phases as applicable.

Site representative shall also appoint the Permit Issuer/Issuing Authority.

5.3 HZI Site HSE Representative

Coordinate with project teams to make sure PTW procedure is properly established for the project and it is effective in accordance with the Client requirements and hazards associated with the project scope.

Support Issuing Authority in conducting Permit Audits (See GP 426 F17).

5.4 Permit Requester/Originator

The requestor/originator is the individual that requests the PTW and is responsible for ensuring that a full authorised work pack is provided with the permit request and that this request is made in advance of the works being undertaken. This will be seven days in advance or as per the Site HSE plan.

This role can be executed by the Permit Acceptor/Permit Receiver.

5.5 Permit Issuers/Issuing Authority

The Issuing Authority is HZI or its Joint Venture/Consortium employee responsible for the issuance of PTW to the performing authority, usually a Site Manager or a Commissioning Manager or Construction Manager.

The Permit Issuer/Issuing Authority is nominated by the Project Director or Project Manager.

The Issuing Authority has overall responsibility for the coordination of work therefore he/she must ensure that when issuing the PTW, consideration is given to the area of work and any SIMOPS are identified in order to reduce risk.

On large projects, HZI Project Manager or Project Director may appoint few Issuing Authorities as Site Manager and Construction Manager and they could nominate few Area Authorities to assist the Issuing Authorities.

Area Authorities do not replace the Issuing Authorities but add an additional control on their area of responsibility.

Specific responsibilities and accountabilities include but are not limited to the following:

- Nominate/authorize the HZI Area Authorities according to the area allocation

- Ensure that HZI and Contractors employees directly involved in the PTW system are trained in the requirements of the PTW procedure
- Assess the risk of simultaneous operations in work area; ensure that the risks associated with SIMOPS are controlled and advise Area Supervisors/Area Authorities accordingly
- Review the new permits and ensure that hazards and control measures identified adequately for work mentioned and authorize permits after assessing the priorities (Sign PTW)
- Ensure all potential hazards and risks identified are effectively communicated to those involved in the work, and that effective control/mitigation measures are implemented during the execution of the activity
- Ensure required documentation (RAMS, Certificates, lay-outs etc.) are attached to the permit
- Ensure PTW Audits are conducted regularly.

5.6 Area Supervisor/Area Authority

The Area Supervisor/Area Authority is HZI or its Joint Venture employee responsible for the area/subcontractor requesting the work. They must ensure that, once the permit is issued, they (Permit Receivers) undertake a 'Point of Work Risk Assessment' (POWRA) that considers the work pack and the PTW documentation. Any issues highlighted should be recorded and if appropriate the work stopped and the work pack/PTW reviewed.

Area Supervisor/Area Authority is nominated by the Permit Issuer/Issuing Authority.

For small projects, Area Supervisor/Area Authority won't be needed.

He/she is the person responsible for the Validation and Re-validation of Permits each shift, and finally for Cancelling Permits.

Before Approving/Validating the permit, they shall be responsible and accountable to:

- Ensure that the worksite has been examined by the Permit Acceptor/Permit Receiver before work starts; as required, conduct work site visits prior to authorizing any work permit
- Ensure that the work does not conflict with others in the area
- Identify hazards, precautions required and PPE requirements for the work specified in the permit
- Ensure relevant RAMS is accepted
- Ensure that all potential hazards and risks identified in the RAMS are effectively communicated to those involved in the work, and that effective control/mitigation measures are implemented during the execution of the activity
- Ensure all relevant control measures are in place before commencement of the activity
- Do a proper assessment of the area during the working day, preferably together with Permit Acceptor/Permit Receiver
- Ensure that the Permit Acceptor/Permit Receiver is aware of other works and status of other permits in the area
- Nominate Permit Acceptor/Permit Receiver

- Support Permit Issuer/Issuing Authority to assess and effectively control SIMOPS.

(Note: Each Area Authority shall approve a maximum of 10 permits simultaneously in their respective areas. However, Permit Issuer/Issuing Authority shall review and authorize the manageable number of permits for each Area Supervisor/Area Authority depending on the location, work activities, etc.)

5.7 Permit Acceptor/Permit Receiver

This is a Contractor employee responsible for the collection and acceptance of the PTW.

They cannot be a person from a lower tier contractor.

They are nominated by the Area Supervisor/Area Authority in charge for the same task.

This person is solely responsible for the PTW whilst the work is undertaken. This person must stay with the work. Should they leave the task for longer than 15-20 minutes at any one time or more than 1 hour in any shift then the task and PTW should be suspended or transferred to another authorized and competent Permit Receiver using GP 426 F16.

They are responsible for ensuring that the PTW procedure is followed and control measures identified in the Permit are implemented.

They are directly responsible for the control of work done in that area at any particular time.

Specific responsibilities and accountabilities of Permit Acceptor/Permit Receiver include the following:

- Be present at work site whenever a permit is live/active
- Apply for a PTW and ensure all the required documents (i.e. RAMS, drawings, certificates, etc.) are attached to the permit and it has been endorsed by the Area Supervisor/Area Authority
- Ensure that all controls/mitigation measures required by, and indicated in, the PTW are implemented
- Ensure that the approved work permit is displayed at the worksite whenever work in underway
- Ensure that only the intended work, as specified in the PTW, is executed
- Ensure that all workers/craftsmen involved in the activity fully understand the limitations, restrictions and hazards involved and the precautions required to be implemented as advised and indicated in the PTW
- Conduct daily briefing at the workplace and keep attendance records for future reference
- Ensure that the PTW is revalidated in case the intended activity require continuation to another shift or day
- Identify the hazards and take precautionary measures before and during the course of work activity
- Ensure the work area is clean, in orderly condition and free of hazards upon completion of work
- Ensure that an applicable PTW has been checked and approved by the relevant authorizing parties prior to performing the work
- Suspend all works in the event that work conditions or environmental conditions change or differ from those defined on the PTW. Such changes in conditions shall be immediately reported to the Area Supervisor/Area Authority or Issuing Authority. Similarly, stop all work and suspend permits in case of Emergency Alarm and when evacuation is initiated.

(Note: A Permit Acceptor/Permit Receiver can hold a maximum of 4 (four) permits simultaneously if he can visually see/control all the activities at one time. However, Issuing Authority shall review and authorize the manageable number of permits for each Permit Holder depending on the location, work activities and risk involved, etc.)

5.8 Senior Authorised Person (SAP)

SAPs are considered Issuing Authority and are responsible for the sign off of Commissioning and Operations Permits to Work and associated safety documents. They ensure that the correct isolations are in place. All SAPs must be formally appointed in writing. This must be recorded using the 'Certificate of Appointment under the HZI Electrical and Mechanical Safety Rules' (see GP 426 F18). In addition, the SAP is responsible for authorizing electrical persons, competent instrument persons and competent electrical persons.

SAPs are formally appointed by a project panel board consisting of a Central HSE Team Manager and either Head of Electrical Commissioning or Head of Commissioning. See AA 426 26 for the appointment process.

Regarding Renewable Gas Projects refer to AA 426 13 Electrical and Mechanical Safety Rules for RG Projects.

5.9 Authorised Person (AP)

All individuals working on Mechanical or Electrical systems must be authorised by the SAP on site. Only these individuals are permitted to work on electrical/mechanical systems. Appointments must be made formally in writing using GP 426 F18 or F19.

6 Training

All individuals within the permit system will require training.

Where HZI act as the Main Contractor then HZI will be responsible for the training of individuals from both HZI and contractors.

Where HZI act as contractor they will provide individuals to be trained in the site agreed PTW system.

7 Permit to Work Process

A PTW system will be utilised on all HZI sites in line with Site HSE Plan. Where HZI act as a contractor and no other PTW system is in place, then HZI will utilize this PTW system in the absence of another system or define an appropriate system within the HSE Plan.

A PTW is required for all activities on site where the risk is too great that it cannot be controlled by Method Statement and Risk Assessment (RAMS) alone.

PTW are only valid for one shift. Several PTWs can be revalidated each day for seven days if the same task is being completed each day in the same work area. This revalidation is only valid for PTWs containing a revalidation box on the form.

There may be exceptional circumstance where the PTW needs to be extended beyond a shift. Where a permit is to extend beyond a shift then the PTW maybe be handed over subject to a handover sheet being completed (GP 426 F16 Permit Handover Form). This must be completed with the current PTW acceptor, the new PTW acceptor and the PTW issuer all signing the PTW handover.

Where a PTW is required any of the documents titled Permit to Work will act as the main PTW. In some cases, more than one permit may be required such as hot works in a confined space in which case both PTWs must be requested and issued.

The following activities are given as examples for the required PTW:

High Risk Activity	Type of Permit	Doc no.
Works involving Lifting Operations	Construction Permit to Work	GP 426 F03
All scaffolding activities or working at height activities when required by specific Risk Assessment such as when personal fall arrest system is used		
All works in or adjacent to environmentally sensitive areas (as specified in the Construction HSE Plan)		
All discharges to the environment e.g. pressure and hydrotest not already covered under site permits		
Chemical cleaning or activities with potential serious environmental impact		
All works involving ground disturbance i.e. excavation, piling, setting out pins	Excavation Permit to work	GP 426 F04
All work involving hot works	Hot Works Permit to Work	GP426 F05
All work involving entry into confined spaces	Confined Space Permit to Work	GP 426 F06
Created openings (gratings removal etc.)	Created Openings Permit to Work	GP 426 F07
Radiographies	Radiography Permit	GP 426 F08
Pressure Testing	Pressure Testing Permit to Work	GP 426 F09
Work on temporary electrical & mechanical systems requiring isolations	Commissioning-Operations Permit to Work	GP 426 F10
Any work on systems handed over for Commissioning		
Whenever entry in an Area with live services/energized system nearby	Limitation of Access Form	GP 426 F12

Any Isolation (Log-out Tag-out) activity	Electrical Isolation Certificate	GP 426 F13
Whenever a test is required on a live system such as a Voltage check (*)	Sanction for Operation and Test	GP 426 F14
Whenever a PTW needs to be extended beyond a shift	Permit Handover Form	GP 426 F16
Whenever supply is restored to a previous energized system (*)	Permit to Work Restoration of Supply Form	GP 426 F31
Prolonged activity requiring road closure	Site Road Closure Permit	GP 426 F67
Work carried out near to or under overhead power lines	Permit to Work Under Overhead Power Lines	GP 426 F75

(*) Applicable for large projects

7.1 Permit Review/Issue

Each PTW will be reviewed by the Permit Issuer (Issuing Authority) and Area Authority (when applicable). Where the review deems the information provided to not be acceptable then the permit request will be declined, and further information requested. This feedback will be provided as per the site working arrangements.

Where the information is deemed acceptable, the permit issuer will prepare the permit, and associated PTW ready for acceptance.

7.2 Permit to Work System Administration

All authorised and trained people to sign a PTW shall be registered by the HZI or its Consortium together with their signatures.

All closed or cancelled permits must be returned to PTW Office if any or to the Issuing Authority/Permit Issuer.

7.3 PTW Form

The PTW Forms and associated Certificates consist of original and at least one self-carbon copies. The distribution is as follows:

- Original: Following approvals, it will be returned to the Permit Holder for implementation. Permit must be displayed on site. When cancelled will be returned to the permit office
- First Copy: Following approvals, it can be kept by the HSE Dept. or by the Issuing Authority
- Second Copy (if any): Following approvals, it will be kept by the Area Authority/Area Supervisor (when applicable) and returned to the Permit Issuer/Permit Authority once the Permit is closed or directly to the Permit Issuer.

In case of loss of original permit, the Permit Acceptor/Permit Receiver shall inform the Area Supervisor/ Area Authority or HSE Dept indicating the Permit Number and Certificates attached to it. The Area

Supervisor/Area Authority or HSE Dept shall inform the Issuing Authority then the permit will be closed, and a new permit will be issued.

7.4 Permit Coordination Meeting

A scheduled meeting shall be held to review all new and ongoing permits. Attendees shall include the Permit Issuers/Issuing Authority Area Supervisor/Area Authority and Permit Acceptor/Permit Receiver. If required, client representatives can join.

If any SIMOPS is to be performed, the involved authorities will discuss work practices and endorse the PTW accordingly to implement appropriate control measures.

In addition, possible extension of work beyond the approved working hours of existing permits will be discussed and agreed during this meeting.

(Note: Permits submitted by Contractor shall be in line on what discussed during the coordination meeting otherwise their issuance will not be granted.)

7.5 Work Packs

The work pack wallet shall be issued at the first issue of the PTW, it is the performing authority's (Permit Acceptor/Permit Receiver) responsibility to ensure that all of the relevant documentation is in the work pack wallet.

The work pack shall be located at the workface so that the workgroup has full access to all of the relevant documentation for the task.

The work pack for each task shall contain the following documentation:

- The relevant RAMS for the task with attendance sheet proving all the involved operatives have been informed of its content
- The PTW and any associated support permits
- The POWRA (Take 5 or similar) for the work period with relevant attendance sheet
- Any other relevant documents such as confined space rescue plan, work at height rescue plan, lift plans, underground service drawings.

7.6 Permit Acceptance

Once the permit has been prepared by the Permit Issuer, the Permit Acceptor may obtain the PTW. The permit acceptor must be trained. The permit issuer will review the permit with the permit acceptor prior to issuing.

The Permit Acceptor is the responsible person for that activity on site. As such, should normally not leave the area except for short duration, before leaving the area Permit Acceptor should ensure adequate supervision with a supervisor trained on PTW system and aware of the relevant RAMS and associated documents. If the Permit Acceptor leaves the area, please refer to paragraph 5.7.

Once understood, the permit acceptor will then ensure that the individuals undertaking the work are aware of the contents of the permit and the condition imposed by the PTW.

The Permit Acceptor and Area Supervisor/Area Authority are responsible for ensuring that the area is left in a safe and tidy condition upon completion/suspension of works.

They are responsible for ensuring that the PTW is returned at the end of the shift when it will either be suspended or cancelled. Where an activity spans several days the PTW must be returned at the end of the shift and then re-issued the following day.

8 Control of Permits

Following any Level 1 incident (as defined by AA 426 04) the permit affecting that work will be suspended and must be reviewed in line with the investigation process.

Following any Level 2 incident (as defined by AA 426 04) all permits for the local area are suspended and must be reviewed prior to work commencing.

Following any Level 3 incidents (as defined by AA 426 04) all site permits are cancelled and must be returned to the permit office.

Following any site evacuation, all permits are to be returned to the permit office for re-issue.

9 Night Work PTW Requirements

For night work, the Permit Acceptor/Permit Receiver shall complete the Night Work Safety Checklist GP 426 F77.

The Area Supervisor/Area Authority shall cross check to ensure that all control measures are in place prior to start of work.

The checklist provides minimum requirements to comply with before Issuing Authority/Permit Issuer approve any night work activity.

10 Permits During Commissioning

Prior to commissioning the permit process will be agreed and communicated throughout the site. This will be recorded. All permits that relate to commissioning must be authorised by the SAP for the activity required. Further information is contained in AA 424 26 Mechanical and Electrical Safety Rules or AA 426 13 (Electrical and Mechanical Safety Rules for Biogas Projects) for RG Projects.

11 Permit Audits

The area authority must ensure that regular audits of permits are taking place in the area they control. This may be supported by other functions also undertaking these audits. Permits audits should be recorded appropriately and any actions required captured accordingly.

12 Document Retention

All permit to work (PTW) closed out copies shall be filed and retained at PTW office until the project completion/as per the contractual requirements of the project for records management, as applicable.

For EfW and Operation, all permits, and permit reviews must be retained for a period of 5 years.

13 Revision History

Changes carried out with the revision:

Revision index	Changed chapter	Short description of the changes
00	All	First version
01	3, 8	New reference to Permit Request Form added New reference to Management of Commissioning (AA 426 26)
02	6,3,7	Insertion of flow chart in better quality
03	3	New reference to TII Lean Construction Management Tool
04	Throughout	Minor changes and updates
05	Throughout	General revision and introduction of new PTWs

1 Introduction

1.1 Objective

This objective of this procedure is to:

- Define Hitachi Zosen Inova's (HZI) method for the identification of environmental aspects of its operations (activities, products and services);
- Detail the methodology, responsibilities and organisation requirements for the process to identify, assess and manage environmental impacts; and
- Describe the process for determining and tracking actions to address potentially significant environmental aspects.

1.2 Scope

This procedure is applicable to all HZI entities (operating assets, construction, workshops and offices) within the scope of the HZI Health Safety and Environmental (HSE) Management System (MS).

However, offices or activities with fewer than 20 workers and works with a duration of less than 6 months shall be excluded from the scope of this procedure. Instead environmental aspects shall be considered in the HSE Plan and / or Risk Assessment Method Statement (RAMS) for any work carried out at these sites.

Where HZI acts as a main contractor or is responsible for designing parts or components, management of environmental aspects and impacts during design phase shall be carried out by the Design Risk Assessment and HazOp Process, as documented in HazOp Risk Analysis (AA425 16) and HZI Design Risk Assessment (99001508).

1.3 Purpose

This procedure has been developed to:

- Fulfil the requirements of the ISO14001:2015 Environmental Management System (EMS) standard, to which HZI is certified, with respect identification and management of environmental aspects and impacts;
- Enable compliance with the HZI Environmental Policy which requires HZI to "prevent pollution, reduce waste and minimise the consumption of resources in all areas of our business";
- Enable entities to identify, mitigate and manage their environmental aspects and associated impacts.

Significant environmental aspects and potential impacts shall be considered by both the entity concerned and the Corporate HSE Team in the setting of environmental objectives and targets and training. Construction sites shall also consider entering significant potential impacts onto Project Hazard Log or Risk Registers.

1.4 Timing

Identification of environmental aspects and impacts is required to be carried out on an annual basis to comply with ISO14001. However, in the event of new developments, new or modified activities, products and services, updates may be required more frequently.

Any changes in significant aspects or impacts shall be considered at the Management Review. Any recommendations regarding the timing of next aspects and impacts review shall be noted as an action.

1.5 Definitions and Abbreviations

1.5.1 Abbreviations

EMS	Environmental Management System
HSE	Health, Safety and Environment
HZI	Hitachi Zosen Inova
RAMS	Risk Assessment Method Statement
TOR	Terms of Reference

1.5.2 Definitions

Environment	Surroundings in which an organisation operates including air, land, natural resources, flora, fauna, humans and their interrelations
Environmental aspect	Element of an organisation's activities or products or services that interacts or can interact with the environment
Environmental impact	Change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects
Environmental performance	Performance related to the management of environmental aspects
Interested party	Person that can affect, be affected by, or perceive itself to be affected by a decision or activity
Life cycle	Consecutive and interlinked stages of a product system, from raw material acquisition or generation from natural resources to end-of-life treatment Life cycle includes activities, products, and services and may include procured goods and services, as well as end-of-life treatment of products and delivery of services, for example, design, manufacture, transport, packaging and end-use or disposal

1.6 Further Applicable Documents

Doc. No.	Title
PM10	HZI HSE Management System Manual
AA425 16	Hazop Risk Analysis
99001508	Design Risk Assessment
GP426 F40	Environmental and Impacts Aspects Form

2 Roles and Responsibilities

2.1 Director of HSE

The Director of HSE shall:

- Provide assurance that the EMS throughout HZI conforms to the requirements of ISO14001. This includes the identification of aspects and impacts;
- Report on the performance of the EMS, including any significant aspects and impacts, to top management;
- Assume responsibility for ensuring that competent technical personnel, with appropriate knowledge and experience, are available to support the identification of environmental aspects and impacts.

2.2 Environmental Manager

The Corporate Environmental Manager shall:

- Support projects with identification of environmental aspects and impacts as required, including lead reviews if required;
- Maintain generic aspects and impacts registers that maybe used by construction sites as a template and assist Site HSE Manager / Representative through this process as required; and
- Provide assurance through audits and inspections that aspects and impacts are identified and managed throughout the organisation as required.

2.3 Site HSE Manager / HSE Representative

The Site HSE Manager / HSE Representative is responsible for:

- The planning and provision of activities in accordance with this procedure. This includes selection of the team required to determine Site Environmental Aspects and Impacts;
- Ensuring adequately skilled personnel are assigned to these activities;
- Communicating a Terms of Reference (TOR) prior to the Aspects Review.
- Monitoring the environmental aspects and impacts process to ensure it fulfils the relevant requirements of the ISO14001 and informing the Corporate HSE Team of any shortfalls;
- Ensuring any subcontractor aspects and impacts registers meet requirements of ISO14001; and
- Ensuring all actions are entered onto the relevant action tracking system.

If not experienced in identification of environmental aspects and impacts, the Site HSE Manager / HSE Representative shall approach Corporate HSE Team for suitable resource who shall:

- Chair the aspects and impacts review by leading discussions ensuring that participants views are heard and recorded, and that the meeting progresses in an orderly and timely manner;
- Ensure that all relevant project information is available prior and during the review;
- Ensure that the full scope of work as defined in the TOR is covered during the review;

- Ensure that the findings raised during the review are recorded and that any actions raised are assigned to named individuals, for completion on specified timescales;
- Be aware of key relevant environmental legislation that may need to be considered during the review; and
- Issue the Aspects and Impacts Register for approval by the Project Manager / Corporate HSE, within a week of completion of the review.

3 Identification and Evaluation Process

3.1 General

This procedure covers those environmental aspects of activities, products and services that the organisation can control (direct aspects) or over which it can be expected to have an influence (indirect aspects). Indirect aspects are those that may arise from the activities of suppliers and contractors working on HZI's activities.

The identification of environmental aspects shall be done applying a life cycle perspective and shall include those life cycle stages which can be controlled or influenced by the organisation. However, a detailed life cycle assessment is not required. Life cycle assessment of the plant design is covered by the Research and Development Department.

The identification of environmental aspects and impacts shall consider normal and abnormal operation, such as set-up, breakdown or emergency.

The Site HSE Manager / HSE Representative or delegate shall consult / invite to the review representatives from Site Management, supply management, infrastructure / facilities or any other functions as appropriate to the scope of the review. Subcontractors can also be invited.

3.2 Terms of Reference

The Site HSE Manager / HSE Representative or delegate shall communicate the TOR to attendees prior to the workshop. This shall include:

- Scope of Aspects review
- Time of review
- Documentation (drawings etc.) required
- Methodology (AA426 15)

3.3 Identification of Environmental Aspects and Impacts

The following guidewords shall be used as a prompt to determine environmental aspects which shall be recorded using the relevant template from GP 426 F40 template or similar.

	Aspect	Examples of Impact
Emissions to Atmosphere	Combustion emissions (mobile and static sources) Volatile organic compounds Particulates Steam Halogenated hydrocarbons Ozone depleting substances	Contribution to greenhouse gases, climate change, acidification, generation of particulates, local heat and humidity changes. Depletion of ozone layer.
Emissions to Water	Water extraction and discharge Contamination of water bodies and groundwater through: spillage of hydrocarbons (diesel, lubricants etc.) or chemicals Firefighting water, foam and chemicals Sedimentation Cooling water Storm water drainage Hydro-test water	Impact on water quality, aquatic flora and fauna, nutrient enrichment, eutrophication, increased biochemical oxygen demand, effect on other users of water resource
Ground	Ground contamination Soil handling and compaction	Ground contamination due to improper, storage, use or disposal Deterioration in soil quality, reduced drainage ability
Use of Resources	Fossil fuels, water, non-reusable / non-recyclable materials, non-renewable raw materials, electrical energy, land take	Depletion of natural resources
Waste	Solids / Liquids / Gas Hazardous substances Radioactive substances	Water or ground contamination due to improper storage or disposal Opportunities for waste minimisation, reuse and recycling.
Ecology	Footprint / land-take Disturbance of habitats and species Impact on protected area	Loss of biodiversity
Nuisance	Odour Noise and Vibration Dust	Nuisance to community
Other	Cultural heritage Visual impact Amenity	Loss of cultural heritage Community nuisance

3.4 Methodology

All potential environmental aspects and impacts shall be assigned a risk ranking (Section 3.4.3) taking into account potential severity (Section 3.4.1) and likelihood (Section 0).

3.4.1 Severity

Severity levels will be based using the classification table below using the environmental descriptors. The Health and Safety and Property Damage descriptors are left this procedure in for comparison.

Severity Level	People	Environment	Asset	Reputation	Weighting
Negligible	Non-recordable injuries / First Aid cases. Ill health requiring nonprescriptive medication and/or monitoring. Minor criminal acts or attempts	Small or contained environmental impact with slight or no effect but requiring corrective action No offsite impact	Non-recordable property or equipment loss/damage or minor disruption to operations	-	1
Minor	Medical Treatment or Restricted Work Case	Minor localised contamination / environmental impact but easily recoverable and no offsite impact.	Property or equipment loss/damage or partial shutdown or disruptions to operations e.g. USD<10K	Community complaint Limited negative local media attention	2
Significant	Lost Time Injury	Contamination / environmental impact but recoverable. Offsite impact	Property or equipment loss/damage or extended shutdown of operations e.g. USD 10k < USD 100K	Breach of permit or regulations Negative local media attention	3
Serious	Life changing disability exposure with irreversible life changing health effects.	Extensive but eventually reversible impact, on species, habitat ecosystem Clean up may require external support Multiple breach of permit or regulations.	Property or equipment loss/damage or extensive loss of operations e.g. USD 100k < USD 1M	Regulator enforcement action. Negative national media attention	4
Extreme	One or more fatalities	Major pollution event leading to long-term widespread damage. Major environmental impact causing significant loss of protected species, habitat or ecosystem. National/international support to rectify	Property or equipment loss/damage or total loss of operations e.g. > USD 1M	Regulator prosecution Adverse international media attention	5

3.4.2 Likelihood

Likelihood levels will be based using the likelihood classification table below.

Likelihood		Weighting
Improbable	Event with negligible frequency of occurrence in the industry (every 100 years) or impact that does not occur.	1
Unlikely	Event with rare frequency of occurrence in the industry (yearly or less than a year) or impact that is unlikely to occur.	2
Probable	Event with sporadic frequency of occurrence more than once per year in the industry) or impact that is not very likely to occur.	3
Occasionally	Event with occasional frequency of occurrence or impact that is likely to occur.	4
Certain	Event with continuous frequency of occurrence or impact that is definite to occur. More than once per year at same location	5

3.4.3 Overall Risk

The overall risk ranking is determined by the matrix below. Risk ranking shall be carried out for both unmitigated and mitigated impacts. Mitigations may include methodologies, procedures and design mitigations. In order to be counted as a mitigation, the mitigation must be in place (i.e. documented) at the time of the review.

		Severity Level				
	Risk Assessment Matrix	1 - Negligible	2 - Minor	3 - Significant	4 - Serious	5 - Extreme
Likelihood	1 - Improbable	1	2	3	4	5
	2 - Unlikely	2	4	6	8	10
	3 - Probable	3	6	9	12	15
	4 - Occasionally	4	8	12	16	20
	5 - Certain	5	10	15	20	25

Tolerable / Low	1 to 4
Little or no risk residing. Operation or task is okay to continue. Maintain existing control.	
Medium	5 to 10
Tolerable risk residing. Operation or task is okay to continue. Monitoring of controls should be carried out. Permit to Work may apply. Supervision is required	
High / Unacceptable	11 to 25
Unacceptable risk resides. Operation or task should cease until further analysis is carried out. Decide on alternative methods of work.	

3.4.4 Action

Actions, together with actionees and completion dates shall be noted in the Aspects Register (see GP426 F40). The Site HSE Manager / Representative shall ensure all actionees get the chance to review wording of actions prior to final issue of the Register. All actions shall be tracked by the Site HSE Manager / Representative of the aspects and impacts register until closure.

3.5 Report

In the final Aspects Register, the Site HSE Manager / Representative shall note:

- List of attendees
- The number of significant impacts post mitigation
- A recommendation of any findings that could potentially be the subject of environmental targets and programmes
- Communication requirements regarding the results of the Aspects Review
- Suggested timing and recommendations for next Aspects Review

4 Revision History

Revision Index	Changed chapter	Short description of the changes
Originally issued as PM08		First issue
00	Throughout	Updated to take into account revised wording of ISO14001:2015. Inserted new risk ranking methodology to align with risk ranking in the Design Risk Assessment.
01	Throughout	Minor updates to take into account changes in HZI HSE Management System (particularly small projects)
02	Throughout	Various changes to reflect new activities covered under HZI EMS. Also amended risk matrix to align with RAMS risk matrix.

Appendix B
Legislation Framework

Appendix B – Legislation Framework

Ecology and Nature Conservation

Wildlife and Countryside Act (WCA) 1981 (as amended);

Conservation of Habitats and Species Regulations 2017 (referred to as The Habitat Regulations);

Countryside and Rights of Way Act (CRoW) Act 2000 (as amended);

Natural Environment and Rural Communities (NERC) Act 2006.

Water Resources and Flood Risk

Environment Act 1995;

Environmental Damage and Liability (Prevention and Remediation) Regulations 2015;

Environmental Protection (Duty of Care) Regulations 1991 (as amended 2003); ·

Floods and Water Management Act 2010;

Land Drainage Act 1991;

The Environmental Permitting (England and Wales) Regulations 2010 (as amended 2016);

The Groundwater (Water Framework Directive) (England) Direction 2016;

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017; and ·

Water Resources Act 1991;

Air Quality

Ambient Air Quality Directive (2008/50/EC)

Air Quality Standards (England) Regulations 2010

Noise and Vibration

The Control of Noise (Code of Practice for Construction and Open Sites (England) Order 2015

Control of Pollution Act 1974 and 1989, England and Wales

Noise Act 1996

Noise and Statutory Nuisance Act 1993

Appendix C
Existing Structures to be Demolished


E
D
A
C
Bund
F
B

East side of Structure A

East side of Structure A

South side of Structure A

West side of Structure A

Cladding on Structure A

West side of Structure A with slab (Structure F)

West side of Structure A showing roof cladding

North side of Structure A

Internal view of Structure A

Internal view of Structure A with equipment

Internal view of Structure A

East side of Structure B

North side of Structure B

West side of Building C

South side of Structure C

Structure D

North side of Structure E

Slab
Structure F

Slab
Structure F

Bund

Appendix D
Dust, Noise and Vibration Management Plan

Project Number	Issued by
Project Name Wealden 3Rs	**Hitachi Zosen Inova AG** Hardturmstrasse 127 CH-8005 Zurich www.hz-inova.com Tel. +41 (0)44 277 1111 Fax +41 (0)44 277 1313

Hitachi Zosen INOVA

Wealden Recycling, Recovery and Renewable Energy Facility

Former Wealden Brickworks

Langhurstwood Road

Horsham

West Sussex RH12 4QD

Rev	Author (Name, Date, Signature)	Reviewer (Name, Date, Signature)	Approver (Name, Date, Signature)	Short description of change
0.0	Astrid de Cosson 1.11.22			First Issue
	Astrid de Cosson 13.01.23			Second Issue

DocType	JHS	HZI Doc No _ Rev	
HZI	HZI		

Dust, Noise and Vibration Management Plan

Table of Content

1 Introduction

1.1 Purpose

This document sets out the Plan for the management of Dust, Noise and Vibration (DNVMP) for construction activities at the Recycling, Recovery and Renewable Energy Facility on the Wealden Brickworks (Wealden 3Rs) Site off Langhurstwood Road in Horsham, West Sussex.

This document therefore outlines key requirements and mitigations / control measures relating to nuisance management, in particular any dust, mud, noise and vibration that could arise during the construction of the Wealden 3Rs Facility and is based on good industry practice. This document also outlines monitoring to ensure that the mitigations and controls are in place and effective.

This NDVMP should be read together with the Construction Environmental Management Plan (CEMP) which describe the overall Health, Safety and Environmental (HSE) management system for the site. This NDVMP will form a key part of the Site Environmental Management System (EMS) which is part of the ISO14001: 2015 certified Principal Contractor EMS.

1.2 Scope

The Principal Contractor as well as any contractors, and their subcontractors working on site shall comply with the requirements set out in this document.

This document applies to the management of the Wealden 3Rs construction area as well as the welfare compound and any laydown areas.

2 Abbreviations

CFA	Continuous Flight Auger
CEMP	Construction Environmental Management Plan
EMS	Environmental Management System
HSE	Health, Safety and Environment
IAQM	Institute of Air Quality Management
MBT	Mechanical Biological Treatment
NDVMP	Noise Dust and Vibration Management Plan
NVSR	Noise and Vibration Sensitive Receptors
PM	Particulate Matter
SR	Sensitive Receptors
TBT	Toolbox Talk
WHO	World Health Organisation

3 Further Applicable Documents

Doc. Nr.	Title
November 2022	Wealden 3Rs Construction Environmental Management Plan
50073121_0.0	Wealden 3Rs External Stakeholder Complaints Procedure
50159403_2.0	Wealden 3Rs Preliminary Site Waste Management Plan
March 2018	Wealden Recycling, Recovery and Renewable Energy Facility: Environmental Statement

4 Legal and Other Requirements

This DNVMP has been developed to comply with:

- Good practice as defined in BS5228 'Noise and Vibration Control on Construction Open Sites' Part 1 Noise and Part 2 Vibration
- Institute of Air Quality Management (IAQM) Guidance on Monitoring in the Vicinity of Demolition and Construction Sites' (v1.1 2018)
- Mitigations as outlined in the Environmental Statement
- Principal Contractor requirements relating to nuisance management as detailed in HSE Management System documents.

5 Sensitive Receptors

The construction site is located on a small industrial estate on the site of a former brickworks. To the east is a Mechanical Biological Treatment (MBT) Plant and to the south / southeast is a brickworks. Further to the southwest (c.410m) is the boundary of the new North of Horsham Development comprising 2,750 new homes and associated facilities such as shops, schools, community facilities, open spaces and employment space part of which is currently under construction.

To the west is a conveyor belt bringing clay from the north to the brickworks, and beyond the conveyor belt is a railway line. The other side of the railway line is a wooded area, beyond which are fields. To the north of the site lies Biffa yard where skips are stored and beyond that a former landfill site under restoration.

The IAQM 'Guidance on the assessment of dust from demolition and construction' sets out 350 metres as the distance from the site boundary and 50 metres from the site traffic route(s) up to 500 m of the entrance, within which there could potentially be nuisance dust and PM10 effects on human receptors. These distances are set to be deliberately conservative.

The national Pollution Prevention Guidelines provides little detailed guidance on identifying dust-sensitive receptors; therefore definitions and examples described in the IAQM guidance have been used. This includes, amongst others, homes, schools, hospitals, car parks/showrooms, places of work and footpaths. The same receptors shall be used for both noise and vibration.

On this basis, to ensure a worse-case scenario, consideration has been given to sensitive receptors within 350 m of the site boundary and along the construction route, as depicted in **Error! Reference source not found.**. These comprise residential receptors on Langhurstwood Road to the east and Station Road to the south as well as local places of business.

Figure 1: Sensitive Receptors

6 Roles and Responsibilities

All site personnel are required to reduce potential nuisance from site by following the mitigation measures detailed in this NDVMP. In addition, the following responsibilities apply as detailed below.

6.1 Principal Contractor

6.1.1 Site Manager

The Site Manager is responsible for:

- Ensuring a system is implemented that identifies and manages the any nuisance being produced from site;
- Ensuring the Complaints Procedure is followed in the event of a complaint;
- Is the key point of contact for external stakeholders, including Local and County Planning Authorities; and
- Shall ensure an appropriate representative from Principal Contractor organisation attends Community Liaison Meetings.

6.1.2 Site HSE Manager

Site HSE Manager shall:

- Ensure nuisance monitoring is carried out on site as per this DNVMP;
- Ensure any complaints or incidents relating to nuisance are reported and handled as per the Complaints Procedure and this DNVMP;
- Raise concerns or opportunities for improvement with management team; and
- Ensure induction and awareness training is carried out as detailed in this DNVMP.

6.1.3 Site Supervisor

Each Site Supervisor shall be responsible for ensuring work and Subcontractors within their scope comply with the requirements of this DNVMP.

6.2 Demolition and Civils Subcontractor

Initially the Demolition Subcontractor, and later the Civils Subcontractor shall:

- Maintain all wheel wash facilities so that they remain fully functional;
- Ensure a road sweeper is on call to clean the shared access road or public road should any dust or mud be tracked onto the road.
- If wet wheel wash facility used, ensure any dirty water from wheel washing is managed as per Site Waste Management Plan (SWMP) requirements; and
- Maintain a bowser / water cannons on site to dampen down any dust.

7 Impact Assessment

The following section details impact assessments as detailed in the Wealden 3Rs Environmental Statement, with details updated to reflect information.

7.1 Noise and Vibration

Noise emissions are likely to be highest at the earlier stages of works i.e. during site preparation (including demolition), civils works (particularly if any driven piles are required) and during steel erection, and would

decrease during the fit-out stages. During the commissioning there would be steam blows (through a silencer) to prepare the boiler for operations.

For the majority of the construction period, plant on-site would comprise various diesel mechanised construction plant including excavators (with various tool attachments depending upon the task being undertaken), dump trucks, fork-lift trucks, concrete wagons and pumps, mobile cranes and delivery lorries. Use of pneumatic tools is likely to be restricted to fixing of the steel working with impact wrenches

From the 2016 baseline surveys existing ambient sound levels in the area are around 48 to 55 dB LAeq,12hr during the daytime between 07:00 and 19:00 hours when construction works would take place. On this basis noise from construction activities is likely to be noticeable and may exceed existing ambient sound levels at the closest Sensitive Receptors at times, but is unlikely to cause a perceived change in the quality of life.

Prior to the work commencing, a new round of noise baseline monitoring shall be carried out to determine any impacts from changes since 2018, such as those associated with construction of the North of Horsham development.

Depending upon the method used, piling has the potential to cause vibration that would be noticeable on-site. However, the propagation of groundborne vibration is subject to significant losses due to the distances between the site and Sensitive Receptors and the varying densities of the subsurface geology. Therefore, vibration effects are unlikely to be noticeable at the closest Sensitive Receptors, which are more than 200 metres from the site construction activity and will require to be minimised also due to the proximity of the railway line.

The Environmental Statement summarised that, it is unlikely that construction works would generate noise levels at NVSRs that are disturbing or that would affect activities commonly occurring in residential areas. Noise levels may be noticeable for limited and short durations when significant works such as piling, erection of the steel structure and steam blow are being undertaken. Vibration is likely to be imperceptible at the closest Sensitive Receptors to the site.

There would be very little change to the evening, night-time and weekend baseline noise conditions as most construction activities would be outside of these more sensitive periods. The magnitude of noise impacts was assessed as being low and the sensitivity of the receptors medium. Therefore, there is likely to be a direct, temporary, medium term noise effect on Sensitive Receptors of minor adverse significance prior to the implementation of mitigation measures. There would be no change due to vibration and the significance of effects in terms of vibration would therefore be negligible.

7.2 Dust

The following activities have the potential to cause emissions of dust:

- Demolition of existing structures;
- Earthworks including digging foundations and landscaping;
- Materials handling such as storage of material in stockpiles;
- Wind blown particulate matter from stockpiles; and
- Movement of construction traffic on unpaved haul roads.

The level and distribution of construction dust emissions will vary according to factors such as the type of dust, duration and location of dust-generating activity, weather conditions and the effectiveness of suppression methods.

The main effect of any dust emissions, if not mitigated, could be annoyance due to soiling of surfaces, particularly windows, cars and laundry.

Taking the site as a whole, the Environmental Statement assessed the overall risk without mitigation as medium. With mitigation measures, the residual construction dust effects would not be significant.

8 Mitigation Measures

Mitigation measures relating to the main potential nuisances identified are detailed below and are based on the risk levels identified in Section 7.

Any complaints relating to nuisance shall be managed as detailed in the External Stakeholder Complaints Procedure.

Stakeholder engagement shall be carried out as detailed in the CEMP, to ensure that stakeholders are aware of any potential impacts and know how to contact site in the event of any concerns.

8.1 Noise and Vibration

Potentially high noise generating activities such as demolition and steel erection would be limited to the core hours (see Section 9). Quieter activities such as internal fitout and any radiographic testing would be undertaken outside of core hours.

Activities such as Concrete slip forming for the bunker requires a continuous pouring of concrete (24 hours) and would therefore require to be undertaken outside of core construction hours. Best practicable means as advised in BS 5228:2009 would be utilised for this process to minimise the noise impact from these activities when required and are summarised in Section 8.1.3).

Potential sources of noise and vibration created by construction and the methods of mitigation proposed to reduce these impacts, including best practice working methods are detailed below based on guidance contained in BS 5228:2009 (BSI, 2014a, 2014b) and experience of the Principal Contractor:

- Continuous sound level meters to be set up on boundary fence to monitor noise levels (see Section 10);
- Continuation of Local Liaison Committee arrangements to ensure occupiers of residential and business properties that are likely to be affected by the works would be notified in advance of the works;
- Ensuring contact details for external stakeholders are provided on the website and at Security Entrance to site;
- Site HSE Manager would be appointed to take primary responsibility for the day-to-day implementation of the CEMP and this DNVMP during the construction phase;
- The sole access point to the site would be from the A264 and then directly north on Langhurstwood Road. Construction traffic routes on the public highway would be controlled through a Construction Traffic Management Plan;
- Quieter alternative methods, plant and equipment would be used, where reasonably practicable,
- Plant, equipment, site offices, storage areas and worksites would be positioned away from existing NVSRs, where reasonably practicable.

8.1.1 Fixed and Mobile Plant

- All vehicles, plant and equipment would be maintained and operated in an appropriate manner, to ensure that extraneous noise from mechanical vibration, creaking and squeaking is kept to a minimum.
- Ensuring the use of quiet working methods and the most suitable plant where reasonably practicable;
- Screening fixed and mobile plant to reduce noise which cannot be reduced by increasing the distance between the source and the receiver (i.e. by installing acoustic screens / enclosures or acoustic attachments to machinery);
- Where practicable, orienting fixed and mobile plant that is known to emit noise strongly in one direction so that the noise is directed away from dwellings or sensitive receptors;
- Minimising reversing via the operation of a one-way system where practicable to reduce noise from reversing alarms and use white spectrum / low noise reversing beacons, where possible
- Closing acoustic covers to engines when they are in use; and

- Portable acoustic enclosures/screens would be used, as deemed suitable.
- Turning off machinery when not in use.

8.1.2 Piling

- Minimising the use of driven piles in favour of lower noise and lower vibration piles if possible (e.g. Continuous Flight Auger (CFA) piles);
- Compliance with Condition 8 of the planning permission which requires details of any penetrative method, piling or foundation works to be submitted to and approved by the County Planning Authority.

8.1.3 Slipforming

During concrete pouring of the bunker 24 hour working will be required and a separate request will be made to West Sussex County Council for written consent prior to work (see Section 9).

The best practicable means as advised in BS 5228:2009 would be utilised for this process to minimise the noise impact from these activities when required and typical mitigations agreed with Councils on other Projects are detailed below:

- Equipment will be well-maintained and will be used in the mode of operation that minimises noise;
- No rattle guns or grinders will be used after 7pm. Bolts would be manually torqued after 7pm cut off;
- Works will be staggered so that noisy operations are planned where practicable for the day period;
- Plant and equipment will be shut down when not in use;
- Semi-static equipment will be sited and orientated as far as is reasonably practicable away from occupied buildings and will be fitted with suitable enclosures where feasible;
- Materials will be handled in a manner that minimises noise as far as reasonably practicable;
- Letter drops will be made to advise neighbours/businesses of the works to be carried out;
- All Principal Contractor and relevant Subcontractor personnel will be instructed on BPM measures to reduce noise and vibration as part of their Slipform induction;
- Access to the site will be facilitated at all reasonable times for inspection and noise measurements by the local authority environmental health personnel, following appropriate site-specific induction and health and safety briefing;
- Use of electric power from mains or temporary site supplies, therefore limiting the need for additional power (generators).

8.2 Dust

Potential sources of dust created by construction and the methods of mitigation proposed to reduce these impacts, are detailed below.

8.2.1 Site Planning

- Maximising distance of plant / stockpiles etc. from offsite sensitive receptors;
- Installing debris netting around construction site for demolition and civils construction;
- Ensuring surface water is managed to prevent run off and mud.

8.2.2 General

- Continuous dust level meters to be set up on boundary fence to monitor PM2.5 and PM10 levels 24 hours (see Section 10);
- Ensuring a water cannon is available during demolition to dampen any dust;
- Ensuring means to damp down dust (water bowser) is in place during prolonged dry, weather;
- Ensuring any site machinery is well maintained and in full working order;
- Ensuring dust suppression measures are in place for the mobile crushers

- Prohibiting bonfires and external burning of waste materials on site; and
- Prior to any scabbling of concrete, debris shall be removed / swept from surfaces.
- Minimising drop heights

8.2.3 Construction Traffic

- Laying tarmac or stoning areas near public roads as soon as practicable to minimise trafficking of mud or dust off site;
- Covering loads entering and leaving the site with dust generating potential to prevent escape of materials during transport;
- A wheel wash for all vehicles leaving the site where mud or dust risks being entrained on the shared access / public road;
- Maintaining performance of the wheel washing system by the regular removal of settled sediment from within the sump;
- Water assisted sweeping of local roads if material is tracked out of site on to shared / public road;
- Enforcing vehicle speed limit of 10 mph on site;
- Maintaining site roads and dampen down if necessary, to prevent nuisance dust; and
- Prohibiting vehicles from idling.

8.2.4 Stockpiles

- Damping down of stockpiles (and other dust-generating works where practicable) during dry and windy conditions and sheeting materials to prevent dust migration (as part of stockpile management and offsite transportation of dusty materials);
- Restricting stockpiles to a maximum height of 4 meters;
- Revegetating or covering exposed soils as soon as practicable;
- Seeding any stockpiles retained on site in the unlikely event they are on site for longer than five months;

9 Working Hours

Core working hours would be 07:30 to 19:00 hours Monday to Friday, 08:00 to 16:00 hours on Saturday and at no time on Sundays or on public or bank holidays, with some non-intrusive and internal activities such as fit out, radiography testing and commissioning to be undertaken outside these hours.

In the event that noise generating works are required outside of core working hours e.g. for the continuous concrete pouring “slipforming” of the bunker (See Section 8.1.3), this would be agreed with West Sussex County Council prior to commencement of the activity, at least one month in advance.

In such instances the Principal Contractor would apply to West Sussex County Council for written consent at least a month prior to work commencing by submitting either a Section 61 consent application (to Horsham District Council as the applicable authority) or an agreed method statement in line with the Control of Pollution Act.

10 Monitoring

As well as daily inspections, the Site HSE Manager shall carry out documented Weekly HSE Site Inspections and Monthly Environmental Inspections which shall include checking that the noise, dust and vibration mitigation measures specified in this NDVMP are in place and effective.

10.1 Noise

Three types of environmental noise monitoring are proposed:

- Baseline Monitoring: Prior to mobilising to site, additional baseline monitoring will be undertaken at the nearest Noise Sensitive Receptors (NSRs) so that construction works from North of Horsham development and any other changes since the initial noise baseline monitoring was undertaken in 2016.
- Continuous Monitoring during demolition/construction: consisting of an automatic continuous sound level monitoring point on the site boundary which will inform the Site Manager and the Site HSE Manager in real time to their mobile phones of any exceedances of trigger levels at the boundary fence likely to cause nuisance to receptors off site.
- Periodic Monitoring: where base line readings are taken prior to work commencing as described above, or after a complaint relating to noise has been received that requires further investigation.

The objectives of this monitoring are to:

- Enable and assist the site team to evaluate the efficiency of mitigation measures to control and improve environmental performance on site;
- Enable an understanding on how the measured levels are compared with agreed criteria values; and
- Document and continually report on monitoring requirements, both for demonstrating compliance on a regular basis, and in response to recorded exceedance or complaint.

The monitoring locations will take into account the adjacent sensitive receptors as well as other factors such as existing buildings that may act as acoustic barriers and prevailing winds and the exact location shall be determined by the Noise Specialist employed to provide and maintain the noise monitors. Monitoring locations will be agreed in writing with the Horsham District Council Environmental Health Officer (HDC EHO) in advance of commencement of the works.

The location and number of monitoring points shall be reviewed at key milestones in the construction depending on activities foreseen or in light of any complaints or incidents.

10.2 Dust

It is proposed to undertake continuous monitoring of particulate matter (as both particulate matter with an aerodynamic diameter of less than 10µm (PM_{10}) and less than 2.5µm ($PM_{2.5}$)) to assess concentrations against the Air Quality Assessment Levels (AQALs) prescribed within the UK Air Quality Strategy, and the Air Quality Standard Regulations 2010. To confirm, the corresponding AQALs are:

- PM_{10}:
  - An annual mean concentration of 40µg/m^3; and
  - A 24-hour mean concentration of 50µg/m3 (not to be exceeded more than 35-time per year).
- $PM_{2.5}$:
  - An annual mean concentration of 25µg/m^3. [1]

Continuous monitoring will be undertaken following the principles of IAQM 'Guidance on Monitoring in the Vicinity of Demolition and Construction Sites' (v1.1 2018) as follows:

- Baseline Monitoring: Prior to main construction activities PM baseline monitoring will be undertaken to establish site baseline conditions.
- Continuous Monitoring during demolition/mains civils phase: consisting of two automatic continuous PM level monitoring points on the site boundary which will inform the Site Manager and the Site HSE Manager in real time to their mobile phones of any exceedances of trigger levels at the boundary fence likely to cause nuisance to receptors off site

The objectives of this monitoring are to:

- Enable and assist the site team to evaluate the efficiency of mitigation measures to control and improve environmental performance on site;

[1] *As defined within the UK Air Quality Strategy 2007 and the Air Quality Standards Regulations 2010. Should any new legislative requirement come into force during the duration of the works, then this shall be fully adhered to.*

- Enable an understanding on how the measured levels are compared with set limits (i.e. a concentration dataset to assess deviation against); and
- Document and continually report on monitoring requirements, both for demonstrating compliance on a regular basis, and in response to recorded exceedance or complaint.

The monitoring locations will take into account the adjacent sensitive receptors as well as other factors such as sources of dust generated by neighbouring industries / activities. The exact location shall be determined by a Specialist employed to provide and maintain the PM monitors. Monitoring locations will be agreed in writing with the HDC EHO in advance of commencement of the works.

The location and number of monitoring points shall be reviewed at key milestones and in light of any complaints or incidents but is only anticipated as required during the demolition and mains civils phase. Once the main roads have been laid and the concrete bases poured, stockpiles removed or seeded, and the hardstand in place, the main sources of PM will no longer be present and the monitors shall be removed.

10.3 Trigger / Action Levels

Trigger action levels shall be set for the sound level and PM meters. These shall be calculated by a suitably qualified consultant to ensure compliance of the dust and noise limits at the Sensitive Receptors (based on BS 5228-1: 2009+A1:2014, baseline monitoring and good industry practice and IAQM Guidance on Monitoring in the Vicinity of Demolition and Construction Sites (2018).

The ABC method within Annex E of BS5228 will be used to calculate threshold noise limits for Construction Noise. The process involves measuring baseline sound levels at the nearest receptors and then setting 1-hour L_{Aeq} daytime, evening and night-time limits based on the measured levels and the ABC method in BS5228.

There is no equivalent methodology for PM_{10} to calculate corresponding / appropriate Trigger Action Levels. Alternatively, a Site Action Level of 190µg/m^3 as a 1-hour mean PM_{10} concentration will be applied as recommended within IAQM '*Guidance on Monitoring in the Vicinity of Demolition and Construction Sites*' (v1.1 2018). There is no corresponding $PM_{2.5}$ Site Action Level stated within the IAQM guidance, or any other guidance. Therefore, no $PM_{2.5}$ Site Action Level will be applied.

Once these trigger action levels have been set, alerts shall be sent directly to mobile phones of Site HSE Manager and Site Manager (or delegate) if the PM_{10} or the 1-hour L_{Aeq} trigger or action levels are reached. An investigation will then commence. If the alert is due to activities in on site, works would be stopped and a review of measures in place undertaken, additional mitigation measures would then be implemented where practicable. This would be reported within the quarterly reporting (see Section 12).

10.4 Other Monitoring

Site HSE Manager or delegate shall actively monitor the site to make sure that noise and dust mitigations are being applied as required. Dry and windy conditions increase the likelihood of dust and emissions being produced and dispersed, so extra site surveillance should take place during these times.

Similarly, the shared access road and public road shall be monitored daily by Site HSE Manager to ensure no dust or mud from site gets tracked onto the road.

Compliance with dust and noise mitigations shall be noted on documented Weekly HSE Inspections.

11 Training

General details regarding training and the records required are outlined in the CEMP.

The Site HSE induction shall contain a requirement to ensure that noise and dust resulting from the work are minimised.

This shall be supplemented by Toolbox Talks (TBT) as required to make sure all workers comply with this DNVMP. This shall be delivered by Contractors, who shall retain TBT records and make these available to HZI.

The Site HSE Team shall develop Site Environmental Awareness Training to be rolled out to all Supervisors, to include any impacts, including those related to noise, dust and vibration. In addition, all staff will be informed of key environmental aspects and potential impacts, as identified in the Site Environmental Aspects and Impacts Register.

12 Reporting

The Principal Contractor shall handle any complaints relating to noise, dust or vibration as detailed in the Complaints Procedure. Where requested, corrective actions shall be communicated or agreed between the Principal Contractor and the EHO or County Planning Authority,

Once completed the baseline monitoring outcomes will be shared with the County Planning Authority and the HDC EHO. A summary of the monitoring data, including any trigger alerts, should be reported to the Local Planning Authority (electronically) quarterly. Each report should contain the summary of results from the monitoring undertaken, number of times that the action levels were exceeded, and details of the action taken to address it. This shall include a statement on compliance monitoring in respect of local air quality management objectives for PM.

Appendix E
Indicative Plant and Equipment List

Plant/ Equipment	Stage of Work		
	Demolition	Piling & Foundation Works	Building and General Site Activities
Compressors	2	6	6
Hand Held Pneumatic Breaker	2	0	0
Dump Truck	2	5	1
Wheeled Loader	1	0	0
Water Pump	0	2	2
Piling Rig	0	3	0
80T Crawler Crane	0	3	0
Hand-Held Welder (welding piles)	0	1	0
Generator for Welding	0	1	1
Wheeled Backhoe Loader	0	0	2
Tracked Excavator	2	5	2
Concrete Mixer Truck	0	Utilised, Not site based	Utilised, Not site based
Truck Mounted Concrete Pump and Boom Arm	0	3	3
Concrete Pump	0	2	1
Poker Vibrator	0	0	1
Wheeled Mobile Telescopic Crane	0	4	4
Tower Crane	0	2	2
Lorry with Lifting Boom	1	0	0
Lifting Platform	0	0	2
Fork Lift Truck	0	0	4
Mini Tracked Excavator	0	0	1
Electric Core Drill (Drilling Concrete)	0	0	1
Concrete Floor Cutter	0	0	1
Diesel Generator for Site Cabins	1	4	4
Diesel Generator for Site Lighting	1	2	2
Road Sweeper	1	1	1
Angle Grinder	1	1	1
Road Planer (road construction)	0	0	1
Vibratory Compactor (asphalt)	0	0	1
Asphalt Paver + Tipper Lorry	0	0	2
Electric Water Pump	2	2	2

Appendix F
Indicative Site Compound Layout

Notes
1. This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.
3. i, The plans shown are for planning purposes only.
   ii, All buildings shown are subject to detailed design for construction purposes.
4. RPS is not appointed as principal designer for the purposes of the Construction (Design & Management) Regulations 2015 (or its successors).
5. The design and layout of the buildings shown will be subject to relevant Building Regulation requirements and Construction (Design & Management) Regulations requirements. This may result in further changes to the final design and construction of the development.

Key

- Development Boundary
- Ownership Boundary
- Shared Right of Way
- Indicative wheel wash location

Waste Processing Hall
Tipping Hall
Bunker
Boiler Hall
Boiler Hall
Ferrous
Bottom Ash
Flue Gas Cleaning
Flue Stack
Flue Gas Cleaning
Water Treatment Hall
Turbine Hall
Air Cooled Condenser
Transformer
Workshop
Offices
Compressed Air and Electrical
Sprinkler Tank and Pump House
HZI OFFICE
Contractor Compound
Contractor Parking
Weighbridge
Gate
Pond
Pond
Pond
56.9m
N 134404.401 E 517002.224
N 134379.893 E 517003.132
N 134339.543 E 517006.037
N 134311.681 E 517006.497
N 134266.959 E 517010.420
N 134245.560 E 517012.230
N 134233.960 E 517014.430
N 134217.652 E 517017.652
N 134405.301 E 517021.725
N 134405.601 E 517044.052
N 134405.601 E 517221.296
N 134369.652 E 517217.388
N 134358.564 E 517216.450
N 134337.095 E 517212.721
N 134308.364 E 517211.336
N 134315.783 E 517210.733
N 134299.162 E 517210.606
N 134287.256 E 517210.830
N 134271.497 E 517207.904
N 134257.702 E 517207.804
N 130252.242 E 517233.401
N 134243.504 E 517234.306
N 134232.477 E 517221.646
N 134223.535 E 517221.574
N 134223.497 E 517209.520
N 134237.158 E 517186.695
N 134232.376 E 517186.177
N 134231.852 E 517206.700
N 134220.342 E 517033.786
N 134220.709 E 517033.768
N 134237.154 E 517041.524

Rev	Description	By	CB	Date

MAKING COMPLEX EASY

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Client: Britannia Crest Recycling

Project: Wealden 3Rs
Wealden Brickworks,
Langhurst Wood Road,
Horsham,
RH12 4QD

Title: Indicative site compound and contractor parking plan

Status	Drawn By	PM/Checked by
DRAFT	AJC	CLC/CF

Job Ref	Scale @ A1	Date Created
NP11593	1:1000	November 2022

RPS Drawing/Figure Number: 11593-0001-03
Rev: -

rpsgroup.com

0m SCALE 1:1000

O:\11593 Wealden 3Rs CONDITIONS\Tech\Drawings\11593-0001-03.vwx

Appendix G
Preliminary Site Waste Management Plan

Project Number	Issued by
Project Name Wealden 3Rs	**Hitachi Zosen Inova AG** Hardturmstrasse 127 CH-8005 Zurich www.hz-inova.com Tel. +41 (0)44 277 1111

Hitachi Zosen INOVA

Wealden Recycling, Recovery and Renewable Energy Facility

Former Wealden Brickworks

Langhurstwood Road

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West Sussex RH12 4QD

Rev	Author (Name, Date, Signature)	Reviewer (Name, Date, Signature)	Approver (Name, Date, Signature)	Short description of change
0.0	Astrid de Cosson			First Issue
1.0				
2.0				
3.0				

INDA Doc Type		INDA Doc No _ Rev
DocType		HZI Doc No _ Rev
Issued by (acronym)	HZI	Preliminary Site Waste Management Plan

Table of Content

1 Introduction

1.1 Purpose

This Site Waste Management Plan (SWMP) is for all works associated with the construction of the Wealden Wealden Recycling, Recovery and Renewable Energy Facility (Wealden 3Rs).

The SWMP forms a key part of the Site Environmental Management System, aligned with the requirements of ISO14001: 2015.

This SWMP should be read together with the Construction Environment Management Plan (CEMP) which describes the overall Health, Safety and Environmental ('HSE') management system for the Site.

This SWMP does not cover excavated materials removed from site, which shall be covered in a Materials Management Plan.

1.2 Scope

The Principal Contractor as well as any contractors, and their subcontractors, working on site shall comply with the requirements set out in this document.

1.3 Abbreviations and Definitions

1.3.1 Abbreviations

CEMP	Construction Environmental Management Plan
HSE	Health, Safety and Environment
SDS	Safety Data Sheet
SWMP	Site Waste Management Plan
TBT	Toolbox Talk
WTN	Waste Transfer Note

1.3.2 Definitions

Duty of care	A legal responsibility to ensure that production, storage, transporting and disposal of business waste are carried out without harming the environment. In the UK this is responsibility of the waste producer.
Hazardous (or Special) Wastes	Waste which displays one or more of the hazardous properties listed in Annex III of the Waste Framework Directive.
Non-Hazardous Waste	Anything that is not a hazardous waste.

Preparing for reuse	Checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing.
Prevention	'prevention' means measures taken before a substance, material or product has become waste, that reduce: (a) the quantity of waste, including through the re-use of products or the extension of the life span of products; (b) the adverse impacts of the generated waste on the environment and human health; or (c) the content of harmful substances in materials and products.
Recovery	Any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy.
Recycling	Any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations
Reuse	Any operation by which products or components that are not waste are used again for the same purpose for which they were conceived
Treatment	Recovery or disposal operations, including preparation prior to recovery or disposal.
Waste	Any substance or object which the holder discards or intends or is required to discard.
Waste Hierarchy	The following waste hierarchy shall apply as a priority order in waste prevention and management legislation and policy: (a) prevention; (b) preparing for re-use; (c) recycling; (d) other recovery, e.g. energy recovery; and (e) disposal.
Waste Management	The collection, transport, recovery and disposal of waste, including the supervision of such operations and the after-care of disposal sites, and including actions taken as a dealer or broker.

1.4 Applicable Documents

Doc. Nr.	Title
On site notice board and Intranet	Principal Contractor Environmental Policy
AA 424 35	Kick Off Meeting on Site Procedure

AA 426 01	Risk Assessment and Method Statement Creation
AA 426 23	Management of Chemicals and Hazardous Substances
AA 426 40	Management of Waste
AA 426 41	Management of Excavation Works and Contaminated Land
GP 426 F22	Contractors HSE Monthly Report Template
GP 426 F27	Scored HSE Inspection Form
GP 426 F30	Checklist for Environmental Site Inspections
GP 426 F53	Waste Duty of Care Audit Form
TBA	Toolbox Talk: Waste hierarchy
TBA	Toolbox Talk: Waste Transfer Notes
TBA	Toolbox Talk: Storage of waste
TBA	Toolbox Talk: Hazardous and special wastes
2008/98/EC	Waste Framework Directive
TBA	Site Environmental Legal Register
TBA	Site Infrastructure List
November 2022	Construction Environmental Management Plan

2 Legal and Other Compliance Requirements

This SWMP has been developed to comply with project legal and other compliance requirements.

Legal requirements shall be reviewed at least on a quarterly basis by the Corporate Environmental Manager and recorded in the Site Environmental Legal register. These requirements shall be communicated to the Site HSE Manager and incorporated into this SWMP as necessary.

In addition this SWMP has been drafted to comply with:

- Any requirements associated with Planning Conditions; and
- Principal Contractor Requirements as detailed in HSE Management System documents, including the Principal Contractor Environmental Policy which requires that the company shall through its activities:
  - Prevent pollution, reduce waste and minimise the consumption of resources in all areas of Principal Contractor business; and
  - Commit to continual improvement of environmental performance by measuring against a set of environmental targets and reviewing progress at management level.

3 Objectives and Targets

The Project shall target that 98% of non-hazardous project waste by weight to be reused, recycled or recovered, and therefore diverted from landfill. This shall be reported on a monthly basis to the Site Manager via the Principal Contractor Reporting System.

4 Waste Types

At a strategic level the key waste streams produced on site can be classified as:

INERT - wastes that will not cause adverse effects to the environment when disposed of, or do not decompose and they have no potentially hazardous content when placed in a landfill. Examples of inert wastes are rocks, concrete, uncontaminated soils and aggregates.

NON-HAZARDOUS - wastes that will decompose when buried resulting in the production of methane and carbon dioxide. Examples of non-hazardous wastes include timber, paper and cardboard

HAZARDOUS - wastes that are harmful to human health or the environment (for example, pollution of watercourses) if they are incorrectly contained, treated or disposed of.

Typical waste types anticipated during the construction phase are listed in Section 8. These are mostly from the 'Construction and Demolition' section of the List of Wastes (annexed to Waste Framework Directive), but also include small amounts of kitchen waste and of packaging waste.

Wastewater from the Welfare Area shall be collected in a septic tank before being tankered offsite by a licenced waste carrier.

5 Roles and Responsibilities

All personnel on site have a role in managing materials and waste correctly and applying the waste hierarchy and as such are required to:

- reduce the amount of waste produced where possible;
- handle and store materials correctly and carefully to prevent damage and wastage;
- co-ordinate with the site team the reuse or recycling of material for alternative usage where possible;
- handle waste materials according to this SWMP; and
- dispose of waste in the correct container.

The roles and responsibilities below apply to the main works. During early works, Contractors shall manage all wastes, and shall note in their Site HSE Plan how they will comply with the requirements of this SWMP. Principal Contractor shall continue to provide assurance that the requirements of this plan are being met.

5.1 Key Principal Contractor Personnel

5.1.1 Site Manager

The Site Manager is responsible for ensuring a system is implemented that identifies and manages the waste being produced.

5.1.2 Site Facilities Manager

The Site Facilities Manager, or delegate, is in charge of:

- reducing consumables ordered and managing stock to minimise wastage;
- ensuring provision of waste containers in the welfare area is adequate;
- ensuring provision of non-hazardous waste skips and hazardous waste storage in the construction area is adequate;
- appointing waste carriers and carrying out Duty of Care

- keep waste transfer notes (WTN) and accurate records of non-hazardous waste types, volumes and disposal routes;
- monitor level of the Foul Water Tank(s) and organise emptying when required.

5.1.3 Site HSE Manager

The Site HSE Manager or delegate shall assist in waste management on site as required by Site Facilities Manager.

- Providing on-site assurance over waste management and identify opportunities for improvement through daily walk rounds, weekly HSE inspections and monthly environmental inspections to ensure compliance with this SWMP;
- Monitor main skips and ensure change out is organised as they fill up
- Raising concerns or opportunities for improvement with management team;
- Carrying out awareness training to ensure Principal Contractor personnel know the correct procedures on site for waste segregation and disposal as part of HSE training programme;
- Reviewing Risk Assessments and Method Statements to ensure that provision is made for any wastes generated;
- Carry out annual reviews to identify opportunities for waste improvement;
- Carry out periodic checks on WTNs and Consignment Notes for compliance e.g. that they are correctly filled out and accurate waste designations;
- Provide details of waste generated each month and performance against project objectives and targets in the HSE Monthly Report.

5.1.4 Site Supervisor

The Site Supervisor shall be responsible for ensuring contractors under their control segregate and manage their waste correctly.

5.1.5 Corporate Environmental Manager

The Corporate Environmental Manager shall:

- Arrange regular formal inspections to ensure site waste management requirements are being met; and
- Maintain Site Legal Environmental Register and inform site of new legal requirements.

5.2 Contractors

Each contractor shall have appointed a person responsible for the waste management of the company on the site. This person shall have sufficient knowledge and training to manage wastes generated by that Contractor.

Contractors shall:

- Identify opportunities for waste reduction and reuse;
- Minimise materials ordered to reduce the amount of waste produced;
- Ensure materials are handled and stored correctly to prevent damage and wastage;
- Ensure that adequate segregation of wastes is taking place;
- Keep work and waste storage areas clean and tidy;
- Ensure that worksite waste containers are suitable for the wastes being produced;
- Store and manage non-hazardous and hazardous wastes in accordance with the requirements of this SWMP;

- Keep copies of Waste Carrier Licences and WTN and accurate records of hazardous waste types, volumes and disposal routes of any wastes they handle;
- Note any wastes requiring special treatment / handling on the task Risk Assessment Method Statements;
- Provide contractor employees with any training they need to comply with this SWMP;
- Reject any deliveries that do not comply with this SWMP or Principal Contractor requirements (e.g. inadequate labelling of consumables).

6 Waste Carriers and Contractors

The Principal Contractor shall handle waste arising from the demolition and construction and will be responsible for:

- provision of waste skips / containers in good condition and engineered to contain the specific type of waste; and
- collection and onward handling of waste for recycling, recovery or disposal in accordance with legal requirements and best practice.

Waste shall only be transported in suitable and secure containers and vehicles that prevent waste from being spilled. Any loose materials must be covered or netted to prevent them being blown out of the vehicle prior to leaving site.

All vehicles removing waste from Site (including re-cycled materials) shall have the facility to be “tracked”. The system will include automated tracking of vehicles, such that the route and timing of the vehicle between sites can be checked. Consideration shall also be given to photographing vehicles as they leave the Site and retaining these records for audit.

All waste taken off site must have a WTN (or a Season Ticket) and a copy of this shall be retained on site as per Section 12. Copies of Contractor WTN or any Contractor Hazardous Waste Consignment Notes shall be made available to Principal Contractor on request. The WTN must contain the following:

- A description of the waste
- The appropriate European Waste Catalogue (EWC) code of the waste
- Any processes the waste has been through
- How the waste is contained or packaged
- The quantity of the waste
- The place and date of transfer
- The name and address of both parties
- Details of the permit, licence or exemption of the person receiving the waste
- The licence or registration number of the person handing over the waste
- The Standard Industry Code (SIC) of the business (41201 for Principal Contractor)
- Signature of the driver and the customer. A season ticket (maximum one year) may be used where the waste stream is frequent and going to the same waste transfer station.

7 Management of Wastes

The section below details key mitigations relating to waste and incorporates the measures to comply with national and local legislation, as well as the requirements from the Principal Contractor Management of Waste Procedure (AA 426 40).

7.1 Waste Hierarchy

Construction waste generated will be managed according to the principles of the waste hierarchy. The waste hierarchy ranks waste management options according to what is best for the environment, giving top place to waste prevention. When waste has been generated, priority is given to preparing it for re-use, then recycling, then recovery, and last of all disposal (for example, landfill). The waste hierarchy is a key element of sustainable waste management and is a legal requirement.

7.1.1 Prevention

The first priority in the Waste Hierarchy is to minimise waste volumes. The following shall be carried out to identify waste prevention opportunities:

- standard contractor contracts shall require all Suppliers to minimise packaging. In the event a supplier provides unnecessary volumes of packaging, this shall be raised with the supplier to rectify for future projects;
- waste minimisation opportunities shall be identified through Design Reviews and Annual Waste Reviews;
- contractors shall be required to identify materials to be brought on site and identify
- opportunities for waste minimisation (particularly packaging) and encouraged to use
- materials with recycled content; and
- toolbox talks / training to reduce spoiled goods and increase reuse.

To reduce the amount of waste and surplus materials, all parties involved in construction shall be encouraged to consider the following (as applicable):

- locate wash-down points for the concrete wagons in a suitable location so that the washed-out aggregates form part of the fill;
- when the concrete bases are being poured have other bases excavated so that any surplus concrete could be utilised as blinding or use as hard stand for fuel area or waste area;
- materials, which arrive on pallets, are unloaded and the pallets are stored and removed from site once the numbers are sufficient to make collection economical;
- use prefabricated materials for on-site assembly;
- use plasterboard sheets precut to suit the wall heights and to reduce the number of off cuts;
- provide suitable and secure storage for materials to prevent damage by weather, where ‘just-in-time’ deliveries cannot be set up;
- consider mechanical systems and machinery for moving materials to reduce the risk of damage;
- programme and monitor construction activities to avoid overlap of incompatible trades working in the same area and to reduce the potential for waste to be generated from replacing damaged work;
- Contractors when purchasing goods and materials shall be cognisant of the fact that often materials are packaged for transport. Material and goods suppliers shall be instructed to ensure that packaging is minimised whilst ensuring adequate protection of said goods and materials.
- Where loose materials are being purchased, quantities shall be controlled by contractors to ensure that only the amount required is brought to site.
- Once materials arrive, care and consideration of location shall be undertaken to ensure that materials are not broken and need replacing. Individuals who are moving and handling materials shall be instructed to have due care and attention to ensure materials are not damaged in transit around site.

As part of this SWMP, designers shall be required to demonstrate that the specifications produced for the plant incorporate the desire of the project to reduce waste. Choice of materials should be done on the basis of standard sizes and maximise the use of standard products. Where specialist materials are used, these

should be chosen on the basis of a specific need and be so designed that the installer can maximise the use of the material with little or no waste.

Throughout the design process, Principal Contractor will challenge the design teams to ensure that the materials being specified are in accordance with this plan and achievable.

Designers can specify pre-cast units, prefabricated elements and sections to reduce the fabrication and therefore waste production on site, where it is limited for reuse of materials.

7.1.2 Re-Use

The re-use of materials, that would otherwise be disposed of as waste on site is preferential to recycling or disposal. Examples of this shall be publicised on site and may include:

- Reuse of inert demolition materials whenever possible to form the base for welfare compound and other roads on site;
- reuse of excavated soils onsite for backfill and landscaping;
- plan for reuse of areas of hardstand once no longer required (i.e. crush and use for fill on site);
- Reuse of metal containers e.g. bolt containers as workplace bins;
- Reuse of surplus wood on site e.g. pigeon-holes (for hard hats) outside welfare cabins, workbenches, temporary barriers etc;
- Reuse of insulation cut-offs for workplace bins / containers and other receptacles;
- Only re-usable eating utensils (plates, cups, cutlery, drinking bottles, etc.) will be used for workers eating in the canteen. The stock is to be procured in time for mobilisation and continually maintained thereafter;
- Returning packaging to suppliers for reuse where possible;
- Reuse of strong polythene packaging as waterproof covering of materials vulnerable to weather/wind; and
- Reuse of plastic bags for litter collection bags.

7.1.3 Recycling

Wastes generated during the construction process will be segregated into waste types to facilitate off-site recycling. The layout of the Site will be designed to allow sufficient space for separate containers of key waste materials to be stored. These containers will be clearly labelled, and construction staff will be given training on waste segregation. Due to space limitations within the main construction area and the large amount of space required by extensive segregation, dry recyclables that can be collected together without compromising the ability of Waste Handling Company to separate waste at a later date may be considered.

A penalty scheme for Contractors who do not comply with site segregation requirements shall be in force on the project.

Principal Contractor shall consider the use of recycled materials where possible, subject to client approval, cost and availability such as:

- use of recycled aggregate in concrete;
- use of recycled materials in construction (e.g. envirokerb); and
- use of consumables made out of recycled materials (e.g. Spill kit absorbant).

7.1.4 Energy Recovery

Where waste cannot be reused or recycled, if possible, the material will be sent to a biogas facility or incinerated at Energy-from-Waste Plant to produce energy.

7.1.5 Disposal

Principal Contractor is committed to preventing all waste to landfill or incineration without energy recovery. At any point where it is identified that waste falls into this category, this plan shall be reviewed to ensure that all opportunities are being taken to recover materials for reuse or recycling.

7.2 Waste Storage

7.2.1 General

The storage provided for all wastes must be at least, but not limited to:

- marked on the site plan for communication purposes;
- on hard standing, in a designated area and secure (from the public);
- located away from surface drains and watercourses.

Waste storage area shall be managed as follows:

- Skips to be enclosed or secured to prevent the spread of wind-blown wastes;
- Segregated by type of waste (e.g. metals, wood, plastics, concrete/bricks and municipal waste);
- Clearly labelled with their intended contents;
- Engineered to contain the specific type of waste;
- Checked regularly to ensure that containers are not corroded, worn out or damaged.

In addition, for hazardous wastes:

- Hazardous and non-hazardous wastes should under no circumstances be co-mingled;
- Hazardous wastes shall be stored in accordance with requirements on Safety Data Sheet (SDS);
- Everyone exposed to hazardous waste shall be instructed according to SDS;
- For certain wastes, such as asbestos or sharps, specialist containers are required;
- All liquid wastes shall have secondary containment;
- Stored in suitable labelled containers away from sensitive receptors and away from the risk of damage by site traffic;
- Controlled access to any hazardous waste skips;
- Storage duration on site shall be limited to a minimum.

An area for undamaged Europallets will also be allocated when there is sufficient space, away from any fire sensitive areas.

7.2.2 Welfare Compound

The same requirements for waste storage shall apply to the welfare compound storage area as for the construction area described in Section 7.2.1.

Waste containers shall be provided as a minimum for the following streams:

- Dry Recycling (Paper, cardboard, plastic bottles, cans etc.)
- General Waste
- Medical Waste

Any batteries and waste electrical and electronic equipment shall also be stored separately by Facilities Manager.

7.3 Handling Waste

Employees and contractors must be informed through the risk assessment and training on how to handle and dispose of each type of waste that might be produced on site. This training must be evidenced accordingly.

7.4 Additional Actions

Waste shall not be burned nor buried on site and the site and its surroundings shall be kept clean of waste / litter.

8 Waste Streams

8.1 Volumes

8.1.1 Demolition

A pre-demolition audit of the existing buildings on the site will be undertaken to identify and remove hazardous materials and those materials with the potential for reuse or recycling. Existing areas of concrete hardstanding will be crushed and used as granular base material as appropriate either on or off-site.

8.1.2 Construction

Preliminary waste estimates shall be developed by Principal Contractor. These estimates will be used to plan total waste provision required on the Site and be used as an opportunity to separate out waste streams.

The wastes being generated on site shall be reviewed regularly by the Site Facilities Manager to ensure waste provision is adequate. As new waste streams are anticipated, new waste skips shall be ordered to enable waste to be segregated.

Wastewater tank capacity will be sized using UK norms to accommodate the anticipated labour force throughout the project.

8.2 Streams

A list of typical construction wastes is given in Table 1 below:

Table 1: Summary of Construction Waste Types and EWC Code

Waste Type
Construction Area
Wood (17 02 01)
Metals (17 04 07)
Plaster Board (17 08 02)
General Mixed Non-Hazardous (20 03 01)
Insulation (17 06 04)
Plastics (15 01 02)
Wiring (17 04 11)
Concrete (solids) (17 01 01)
Oily Wastes (15 02 02*)
Welfare Area
Sewage Waste (20 03 04)
Light bulbs (20 01 21*)
Batteries (20 01 33*)
Food waste (20 01 08)
Medical Waste (18 01 03*)
Dry Mixed Recyclables (17 09 04)
General Mixed Non-Hazardous (20 03 01)

9 Monitoring

9.1 Inspections and Audits

The following inspections shall take place as a minimum:

- The Site HSE Team shall include the Waste Management as part of their Daily Checks, Weekly HSE Inspections and Monthly Environmental Inspection; and
- The Corporate Environmental Manager (or delegate) shall cover Waste Management as part of their Scored HSE Periodic Inspection.

A more formal inspection and review schedule by both Corporate HSE Team and the Site Team shall be in place as detailed in the CPP. A component of these audits and inspections shall be checking waste management is carried out as per this SWMP. Changes in waste management or any non-conformances shall be discussed at weekly HSE meeting organised by Principal Contractor (see CPP).

Any environmental incidents or deviations from this plan shall be recorded, along with the corrective actions. Corrective actions should be logged and tracked through to completion on PIRS.

9.2 Waste Contractor Audits

The waste producer has a responsibility to take all reasonable steps to ensure that when the waste is transferred to another waste holder, that the waste is managed correctly throughout its complete journey to disposal or recovery. Copies of waste carrier permits and licences of the receiving stations shall be retained by Principal Contractor on site, of all waste contractors directly contracted with Principal Contractor to remove waste from site.

Where a contractor of Principal Contractor generates hazardous wastes or is in charge of non-hazardous wastes (e.g. the enabling works contractor), the Contractor shall be required to be provide evidence of Waste carrier licences / permits.

9.3 Waste Review

Annually there shall be a site waste review for which shall look at the following data:

- Operations/ staffing levels, composition, waste monitoring reports and quantity of waste generated as detailed in monthly reports;
- Current waste management procedures;
- Existing activities including, for example, key roles and responsibilities;
- Findings from audits and inspections relating to waste; and
- An estimation of waste volumes including a comparison from previous and projected years (where appropriate).

The review will provide an opportunity to consider the suitability of the management strategies that are in place in relation to relevant regulations and best practice procedures, and identify areas for improvement, lessons to be learnt and improved cost saving and sustainability and proposals to drive continual improvement.

A formal waste audit shall be undertaken annually as a minimum. Following a waste audit, a review shall be undertaken by the HSE Manager and the Site Manager. In the waste review the suitability of the management strategies shall be verified and potential for improvement shall be identified. The waste review may be combined with Environmental Aspects and Impacts Register Workshops if appropriate.

With the assistance of the Corporate HSE Team, the Site HSE Team shall ensure that lessons learned, and best practice is shared with other Principal Contractor sites.

10 Training

General details regarding training and the records required are outlined in the CPP.

The Site HSE induction shall contain a requirement to ensure that waste is minimised and that wastes are handled as required by this plan.

This shall be supplemented by Toolbox Talks (TBT) on waste at suitable intervals to make sure all workers comply with this SWMP. This shall be delivered by Contractors, who shall retain TBT records and make these available to Principal Contractor.

The following Principal Contractor Corporate HSE team materials are available for Site HSE Team to use:

1. Waste Hierarchy TBT;
2. Waste Transfer Notes TBT;
3. Storage of Waste TBT; and
4. Hazardous Waste TBT.

The Site HSE Team shall develop Site Environmental Awareness Training to be rolled out to all Supervisors, to include any impacts, including those related to waste. In addition, all staff will be informed of key environmental aspects and potential impacts, as identified in the Site Environmental Aspects and Impacts Register.

11 Reporting

All Contractors shall provide monthly reports to Principal Contractor Site HSE Manager which shall include volumes and types of any hazardous wastes generated and the route of disposal / recovery that month and a summary of total waste to date in line with HSE Monthly Report Template (GP426 F22). Principal Contractor shall ensure non-hazardous waste figures are reported monthly.

These monthly waste figures shall be distributed onwards to Project Management and Principal Contractor Central HSE Team.

Any incidents involving waste shall be reported as per the Incident Reporting and Investigation Procedure (AA 426 04).

12 Retention of Records

Records of the types and quantities of waste taken off site (e.g. WTN, consignment notes) shall be retained on site, together with a copy of the Waste Contractor Licence for that type of waste and the permit of the receiving facility. WTNs shall be retained for a minimum of 2 years and Consignment Notes for 3 years.

Principal Contractor Waste Carrier details shall be saved on the document control system.

Appendix H
Sample Emergency Preparedness and Response Plan

Project Number	Issued by
Project Name **Wealden 3Rs**	**Hitachi Zosen Inova AG** Hardturmstrasse 127 CH-8005 Zurich www.hz-inova.com Tel. +41 (0)44 277 11 11

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Rev	Author (Name, Date, Signature)	Reviewer (Name, Date, Signature)	Approver (Name, Date, Signature)	Short description of change
0.0	Astrid de Cosson			
1.0				
2.0				
3.0				

INDA Doc Type		INDA Doc No _ Rev
DocType	JHS	HZI Doc No _ Rev
Issued by (acronym)	HZI	Emergency Preparedness and Response Plan

Table of Content

1 Introduction

This Emergency Preparedness and Response Plan (EPP) covers foreseeable emergencies likely on the construction of the Recycling, Recovery and Renewable Energy Facility on the Wealden Brickworks (Wealden 3Rs) Site off Langhurstwood Road in Horsham, West Sussex. Although the exact nature of an incident/emergency cannot be predefined, this document sets out the procedures to be followed to prepare for and manage any emergencies effectively.

The EPP shall be distributed to all Sub-contractors working on site and held available on site for relevant interested parties. The EPP shall be reviewed on a regular basis in order to remain effective and up to date. Any changes shall be document controlled and shared with Contractors on site.

1.1 Structure

This document is structured as follows:

- Sections 1 – 7 give general information regarding emergency response. This information should be used setting up the process and monitoring it.
- Section 8 to 15 is written as information which should be used in an emergency - flow charts, prompt sheets, contact details etc. which can be printed out and kept at key locations on site, ready for use in the event of an emergency.
- Section 16 outlines spillage response measures.

1.2 Related Documents

- Construction Environmental Management Plan (November 2022): Outlines HSE Management and general HSE requirements;
- Incident Investigation and Reporting Procedure (AA 426 04): Further detail on requirements for reporting and investigation of HSE incidents;
- First Aid Provision (AA 426 06): Procedure to ensure that suitable and sufficient measures are in place to provide persons with effective and timely medical attention that may arise from on site;
- Permit to Work (PTW) procedure (AA 426 03)
- Confined Space Procedure (AA 426 21)

2 General Information

2.1 Site Layout Plan

The initial site layout plan describes suitable escape routes on site that lead to a place of safety. Daily inspections by the Principal Contractor management team shall ensure that escape routes remain free from obstructions and are clearly signed.

2.2 Assembly Point

The main assembly point will be located near the main site entrance. In the event that access to the primary assembly point is not possible, all workers shall assemble at a location that will be determined depending on the emergency.

2.3 Training

All employees, contractors and visitors on site shall receive Site HSE Induction Training in respect of the actions to be carried in the event of an emergency (including spill response).

The Site HSE Manager or nominee shall instruct the Site Manager and Security Guard(s) in the duties and role of the Incident Co-ordinator. The Site management team shall be trained in the incident management checklist.

Contractors shall ensure that as a minimum they have the following trained personnel within their site team:

- fire wardens
- first aiders

First Aider(s) shall hold a current certificate issued by a UK recognised organisation. A minimum ratio of one first aider to twenty workers is required.

2.4 Exercises

Emergency exercises shall be carried out at regular intervals. The frequency and type of exercises should be commensurate with the type and magnitude of the risk on site. As a guide emergency evacuation should be tested every 6 months. Smaller exercises e.g. rescue from height, removing an injured person from scaffolding, confined space rescue, spillage response training etc. should be carried out in the intervening periods. As a minimum target an incident management exercise should take place every three months.

2.5 Arrangements for Communicating this Plan

The fundamentals of this plan shall be communicated at the site HSE induction.

Reminders of the contents will be communicated in the site newsletter and refresher toolbox talks will be issued as and when required.

‘Action in the event of fire’ and ‘Action in the event of site evacuation alarm’ notices will be posted at prominent places around the site.

2.6 Inspections and Monitoring of Equipment

An emergency equipment checklist will be produced, identifying equipment and its location on site (incl. spillage kits). This will be inspected on a weekly basis by Site HSE Manager.

2.7 Liaison with the Emergency Services

Principal Contractor shall ensure effective liaison with the Emergency Services and arrange a meeting on site with representatives from the emergency services (Police, Fire and Ambulance). The meeting will discuss site arrangements and inform the emergency services of the potential support requirements. Particular attention will be paid to Air Ambulance.

2.8 Emergency Shutdowns and Making Safe

If safe to do so the following emergency shutdowns shall be completed via local isolations:

- the isolation of electrical power to Portacabins and other onsite installations;
- the closing of acetylene, oxygen and propane cylinder outlet valves;
- the closing of fuel or lubricant oil storage tank valves; and
- the isolation of water supplies.

All full gas cylinders which are not in use shall be kept in a locked cage. A key to this cage shall be available to the Incident Co-ordinator at all times.

2.9 Testing of Emergency Equipment

Sounding of the site emergency alarm shall be carried out each Wednesday at 11.00 am.

The Site HSE team shall complete weekly inspections of the equipment supplied for safety to ensure it is available, complete and in good order. Reports on the condition of items shall be issued to the Site Manager.

2.10 Visitor Access Control

All persons that visit the site for the first time shall report to the security office.

Visitors will not be permitted to access the site unless accompanied at all times by a sponsor who has completed a full site HSE induction.

2.11 Provisions for Rescue (Work at Height and Confined Space)

Each sub-contractor shall ensure that where their work activity involves Work at Height or in a Confined Space, they should have available a plan for rescue. This rescue plan must be provided to the Site HSE Department with the relevant RAMS for the task.

2.11.1 Site Rescue Team

When work involves work at height a trained rescue team for rescuing individuals who fall from height shall be maintained by the Principal Contractor. This team shall be suitably trained and equipped. Provision of this team does not alleviate sub-contractors of the responsibility of providing a rescue plan as described above. The team is there to ensure the fastest possible reaction times in the event of an emergency.

3 Roles and Responsibilities

3.1 Principal Contractor Site Manager

3.1.1 Preparation

The Site Manager shall ensure that:

- the EPP is produced, maintained and available at site;
- the EPP is communicated to all sub-contractors;
- the EPP is communicated any adjacent sites or relevant construction projects.
- an 'Incident Co-ordinator' is appointed;
- the SITE EMERGENCY ALARM is an Air horn, which will be:
  - tested no less than weekly; and
  - sounded in an emergency that requires a site evacuation;
- the site emergency arrangements and equipment are tested no less than every three months.

3.1.2 Incident

The Site Manager shall ensure that the client is informed of the incident / emergency and that notifications and incident investigation is carried out as per procedure (AA426 04).

3.2 Security Officer

3.2.1 Incident

The Security Officer shall monitor the site emergency number 24 hours a day and immediately contact Principal Contractor via the emergency phone in the event of an incident.

3.2.2 Roll Call

The Security Officer shall, as soon as an incident is notified that requires evacuation of the site, print a full list of all persons on site. This list will be collected from the Security Officer by an HSE Advisor.

3.2.3 Emergency Services

On instruction from Principal Contractor the Security Officer shall:

- Contact the Emergency Service to give details of the incident;
- On arrival of the Emergency Services, direct them as specified by the Incident Co-ordinator;
- Ensure the access / egress routes for emergency vehicles remain clear at all times.

3.2.4 Press / Enquiries from the Public

In the event of an incident the Security Officer shall:

- Prevent access to site and give no statement to the press or other interested parties either in person or via telecommunications; and
- Record the date, time contact details of all callers and pass these to the Incident Co-ordinator as soon as practicable.

3.3 First Aiders

3.3.1 Preparation

First Aiders shall ensure that the First Aid Room, defibrillator, First Aid Boxes and eye wash bottles are available and their contents are maintained in accordance with their contents list, and safety showers are operable.

3.3.2 Incident

First aid personnel shall:

- Assess injured personnel;
- Call for the Site Paramedic and an ambulance, if necessary;
- Give first aid treatment as appropriate; and
- Advise the Site Paramedic of the condition of the injured.

3.4 Principal Contractor Site HSE Manager

3.4.1 Preparation

The Principal Contractor Site HSE Manager shall:

- With the assistance of others prepare the site EPP and ensure the plan is updated to cover the different phases of the project or when changes are required;
- Ensure that adequate training is given to those persons with responsibility;
- Identify the project's significant environmental aspects, with impacts that might require emergency preparedness actions and controls;
- Monitor and audit arrangements that site emergency drills are carried not less than 6 monthly; and
- Ensure that the Principal Contractor Site HSE Advisor(s) carry out responsibilities as detailed below.

3.5 Incident Management Roles

3.5.1 Incident Co-ordinator

The Site Manager shall usually assume the role of 'Incident Co-ordinator'. In the absence of the Site Manager, the Deputy Site Manager, Construction Manager or Duty Manager should assume the role. During commissioning this will default to the Commissioning Manager.

The Incident Co-ordinator shall:

- Decide if the emergency services are required;
- Decide if the site is to be evacuated;
- Go to the Incident Control point in the event of an incident;
- Nominate a Scene Controller and Contractor Incident Co-ordinator (if required);
- Follow guidelines of the incident management checklist; and
- Ensure enquires from third parties (press, relatives, public) are co-ordinated.

3.5.2 Sub-contractor's Incident Co-ordinator

The Contractor's Incident Co-ordinator shall, once nominated by the Incident Co-ordinator:

- Go to the Incident Control Point;
- Assist the Incident Co-ordinator with their duties and provide relevant contractor specific details; and
- Arrange for a Sub-contractor's Scene Assistant if instructed by the Incident Co-ordinator.

3.5.3 Scene Controller

The Scene Controller shall, once nominated by the Incident Co-ordinator:

- Control the incident location by, ensuring area is made safe,
- Provide information on the incident to the incident co-ordinator,
- Remove unnecessary personnel,
- Ensure access is available for relevant support (fire, first aid etc.);
- Follow orders from the control point; and
- Take charge of the scene assistants.

3.5.4 Scene Assistant

The Scene Assistant(s) shall follow out duties as directed by the Scene Controller.

4 Dealing with the Press and Other Visitors

In the event that the press or other interested parties arrive at the site entrance, after an incident involving the emergency services has occurred, the Security Officer shall prohibit their access to the site. Under no circumstances shall the Security Officer or other unauthorised employee or sub-contractor make any statements relating to the incident or other information to any activities on site.

The Security Officer shall inform the Incident Co-ordinator that the press or other interested parties are at the gate who should then inform.

The Incident Co-ordinator shall ensure that the facts relating to the incident are recorded. This information shall be passed on to the Client's representative, so that they may make a statement, if deemed appropriate. The Incident Co-ordinator shall also ensure the Communications are made in line with the Principal Contractor procedure AA426 04.

In the event that unauthorised persons, including children, demonstrators, the press, or trespassers are found to have entered the site, the site Security Officer shall be contacted. On no account should employees or Contractors try to evict these persons other than by asking them to leave. If they refuse to leave, the Security Officer shall immediately call the police. The location of these unauthorised visitors shall be tracked so that the police may be informed of their latest position.

The Security Officer shall inform the Principal Contractor Site Manager and the Client's Site Manager that unauthorised persons have entered the site.

Records of all unauthorised entries to the site shall be maintained by the Security Officer.

Refer also to Human Factors to do with Industrial Relations (AA215 02) for further information on managing any industrial action or picketing around site.

5 Foreseeable Emergencies

Activity / Element	Foreseeable emergency	Number and type of persons involved	Action required/relevant plan/procedure
Fire/smoke	Large scale fire effecting the visibility local road	1 to 20 members of the public	The emergency services 999 must both be informed immediately of any possible impact to visibility
Third party / intruder accessing site	Rescue third party	1 to 2 Member of public / intruder / child	Strict personnel control All personnel identified with induction hat sticker Induction procedure Site security procedure
Vehicles / plant / deliveries - traffic movement on site	Road traffic incident on site road. Site road closed	1 to 5 Construction site employees Delivery drivers	Traffic routes accommodate large vehicles, passing places. Arrange breakdown and recovery services. Traffic management plan
Vehicles / plant / deliveries - traffic movement to/from site	Incident resulting in road closure immediately outside site resulting in no access/egress to/from site.	250 Construction employees and delivery drivers.	Ensure appropriate bodies are informed. Close roads leading to incident scene. If road closure foreseen for long period i.e. >24hr then organise safe pedestrian access off site to a suitable vehicle pick up point.
Excavations	Excavation collapse/recover personnel from collapsed excavation. Injured person within excavation	1 to 5 Construction site employees	Recover personnel from excavation. General rescue/recovery procedure
Work at height	Personnel fall from height Personnel suspended at height - in fall arrest harness	1 to 5 Construction site employees	Contractor rescue plans Height rescue/recovery procedure
Work at height from Mobile Elevated Work Platform (MEWP)	Plant / equipment failure Personnel injured / stranded in MEWP	1 to 2 Construction site employees	Contractor rescue plans Remote MEWP recovery procedure
Lifting operations	Failure of lifting equipment/operation Damaged equipment and structure	1 to 20 Construction site employees	General rescue/recovery procedure
Confined spaces	Injured person within confined space	1 to 5 Construction site employees	Contractor rescue plans Confined space rescue procedure
General work at ground level	Personal injury to a member of the construction team resulting in incapacitation at ground level	1 to 2 Construction site employees	General rescue/recovery procedure Recover personnel from site Enable emergency services access to work face Means of transferring IP

Activity / Element	Foreseeable emergency	Number and type of persons involved	Action required/relevant plan/procedure
General work at remote location within site boundaries	Personal injury to a member of the construction team resulting in incapacitation in a remote area	1 to 2 Construction site employees	Find and recover personnel from remote area Afford access to remote area of site Means of transferring IP General rescue/recovery procedure
Drowning (including secondary drowning)	Unplanned personnel entering deep water.	1 to 2 Construction site employees, and possible intruder / child.	Access will be restricted to any surface water. However, an Emergency life ring will be available in an emergency. Anyone falling into the river or pond must attend hospital.
Cooking, warming food, electrical equipment, smoking	Fire within welfare/office/kitchen complex	1 to 250 Construction site employees	Office Fire Risk Assessment Office Fire Safety Plan PAT testing electrical equipment Installed fire detection and firefighting equipment Call Emergency Services
Industrial relations, human factors	Altercation/demonstration, acts of physical violence	1 to 2 Construction site employees	Site security procedure Police involvement
Human factors	Controlled substances found on site	1 to 2 Construction site employees	Site security procedure Police involvement
General construction activities, use of hand tools	First aid injury Ill health/sudden illness	1 to 5 Construction site employees	First aid risk assessment First aid facility
Contact with existing services	Incidents that involve contact with buried services or overhead power lines	1 to 2	General rescue/recovery procedure
Explosions	Involving fuel and welding gas cylinders and pressurised pressure systems.	1 to 50	Principal Contractor site evacuation procedure
Electrocution	Of contractors and others whilst electrical supplies, circuits and equipment and being installed.	1 to 2	General rescue/recovery procedure
Collapse of scaffolding	Involving defective erection & inspection, impacts by site vehicles, damage caused by adverse weather conditions.	1 to 10	General rescue/recovery procedure
Collision of crane plant or structure	Incidents involving contact between cranes, cranes and other plant, cranes and structures, cranes load and structures etc.	1 to 50	General rescue/recovery procedure
Spills	Spills involving hydrocarbons, chemicals or any unauthorised discharge (e.g. sewage, concrete washout water etc.)	1 to 100	See Section 11 for evacuation requirements. See Section 16.3 for spill control and clean-up measures.

6 Emergency Plans and Procedures

EMERGENCY ARRANGEMENTS	CONTRACTOR	PRINCIPAL CONTRACTOR
First Aid	Each sub-contractor shall produce a first aid risk assessment taking into consideration the number of employees, the nature of their work and their location/response time with respect to on site first aid. This assessment will be submitted to Principal Contractor for review. Sub-contractors should provide sufficient first aid trained personnel (including arrangements for extended working, weekends or nightshift).	Principal Contractor will provide a basic common user First Aid facility within the welfare village which will be made available to the contractor groups if required in an emergency.
Occupational Health (OH)	Each Sub-contractor shall have access to a suitably qualified OH practitioner who shall perform health surveillance (relevant to the risks associated with their work) on a pre-defined basis. Sub-contractors shall ensure their RAMS consider the health and capabilities of individual employees. Sub-contractors shall notify Principal Contractor of any employees who have a physical condition that affects their (or their colleagues) safety at work. Sub-contractors shall review Risk Assessments in light of this information before allowing work to begin. Note: Principal Contractor does not require details of the condition, merely the impact it has on work.	Principal Contractor will be proactive in promoting employee wellbeing by educating and discussing diet, drinking habits, stress, exercise, quitting smoking, cancer prevention, heart disease and diabetes prevention. Motivate employees to take responsibility for their own health by making lifestyle changes. Liaise with First Aiders and HSE team.
Fire - Construction Site	Each sub-contractor shall; Include an assessment of the construction fire risks relative to their activities in their RAMS.	Principal Contractor will produce a Fire Risk Assessment for the construction site. Principal Contractor shall apply the PTW and RAMS Review process and ensure all Fire Risks have been considered and precautions taken. Call Emergency services.
Fire - Welfare / office / kitchen complex	Each sub-contractor in control of premises shall complete a fire risk assessment for any offices/buildings under their control. Each sub-contractor shall have a suitable number of trained fire wardens relative to their activities and appoint a suitable number of competent roll callers to implement their mustering arrangements in the event of an emergency.	Principal Contractor will produce a Fire Risk Assessment for all buildings in the Welfare/office/kitchen complex. Call Emergency services.

Major incident/ Construction site evacuation.	Sub-contractors must alert Principal Contractor immediately of any major incident via telephone, site radio or through supervision. All personnel must follow the site evacuation and mustering procedure, as outlined in the induction process. It is imperative that all personnel once mustered do not leave the muster area unless instructed to do so.	Principal Contractor site evacuation procedure.
Specific emergencies - confined spaces, working at height, working in excavations	Sub-contractors shall submit a Rescue Plan with each PTW request. Each Sub-contractor shall have suitable arrangements for the rescue of persons and the preservation of life following a specific emergency such as; confined spaces, working at height, working in excavations. Sub-contractor HSE plans shall describe the arrangements in place for rescue/recovery from specific risks. These plans will be reviewed and approved by Principal Contractor prior to work commencing. The emergency services shall not be relied on for rescues from height or confined spaces.	Principal Contractor shall apply the PTW and RAMS review process and ensure all risks have been considered and precautions taken. Principal Contractor will review Sub-contractor HSE plans. Confined space working is strictly controlled utilising the Principal Contractor PTW procedure (AA 426 03) supported by the Principal Contractor Confined Space Procedure (AA 426 21).
Off-site Emergency Services	The nearest hospital. All emergencies use the 999 emergency phone number.	Principal Contractor will liaise with the emergency services; The median ambulance response time is: 6 minutes (approx.) The fire brigade response time is: 10 minutes (approx.) The police response time is: 96% of calls within 15 minutes (approx.)
Environmental	Sub-contractors shall provide adequate spillage containment equipment to deal with spillages depending on quantity of oil or fuel. Sub-contractor's staff must also have received suitable training. Sub-contractors will provide interception / containment for any spillages that may occur during the project. Sub-contractor shall report all spills to Principal Contractor.	Principal Contractor shall apply the RAMS Review process and ensure all risks (incl. risk to the environment such as spills) have been considered and precautions taken. Emergency spill equipment will be available on site. Site HSE Manager or delegate will check regularly for indications of contamination. Tanker away any identified floating pollutants.

7 Essential Information

SITE ADDRESS	Wealden Recycling, Recovery and Renewable Energy Facility Wealden Brickworks Site Langhurstwood Road Horsham West Sussex RH12 4QD

7.1 Emergency Alarms

Tone	Site	Tested	Action	Contact telephone
Continuous electronic siren from emergency call point	Construction Area Alarm	11:00am every Wednesday	Evacuate to the assembly point , Near the Main Site Entrance	Principal Contractor HSE Manager Tel: TBA or Principal Contractor Site Manager TBA
Continuous electronic siren from emergency call point	Office/Welfare Cabin Alarms	11:00am every Wednesday	Evacuate to the assembly point , Near the Main Site Entrance	Principal Contractor HSE Manager Tel: TBA or Principal Contractor Site Manager TBA

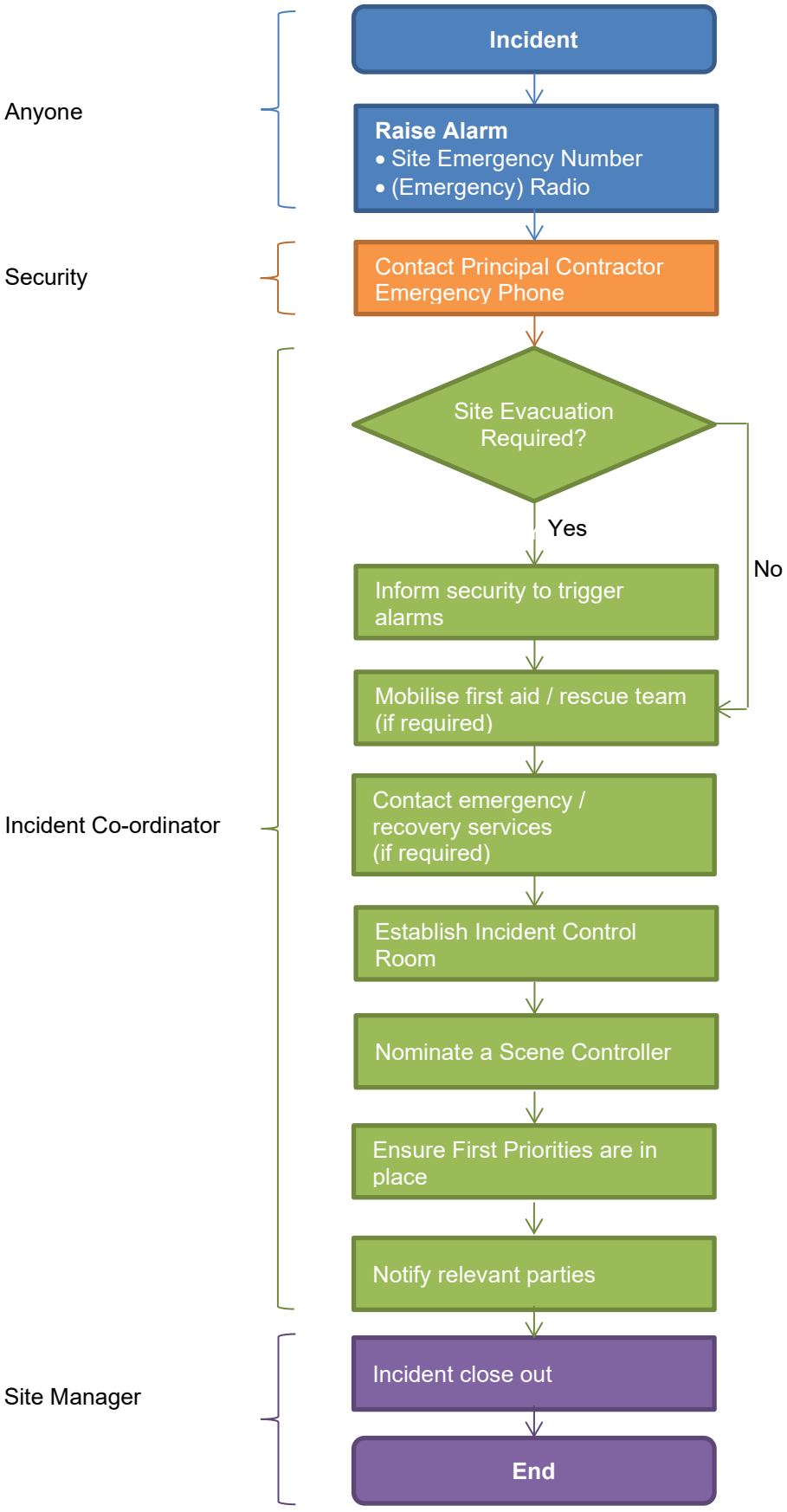
7.2 Emergency Contact Details

EMERGENCY CONTACT DETAILS- SITE		
Site Paramedic	TBA	
WAH Rescue Team	TBA	
Confined Space Rescue Team	TBA	
Emergency Services Police, Fire, Ambulance	999/112	
Site Emergency Number (Site HSE Manager)	TBA	
Principal Contractor 24hr Emergency Phone	TBA	
Project Director – Pierre-Jean Matherat	TBA	
Site Manager – TBA	TBA	
Site HSE Manager – TBA	TBA	
Site Security (24 Hour)	TBA	
	Office Hours	**Out of Office Hours**
Highways Agency (National Helpline)	0843 208 0986	0300 123 5000
Environment Agency (Local office)	0370 850 6506	0800 80 70 60

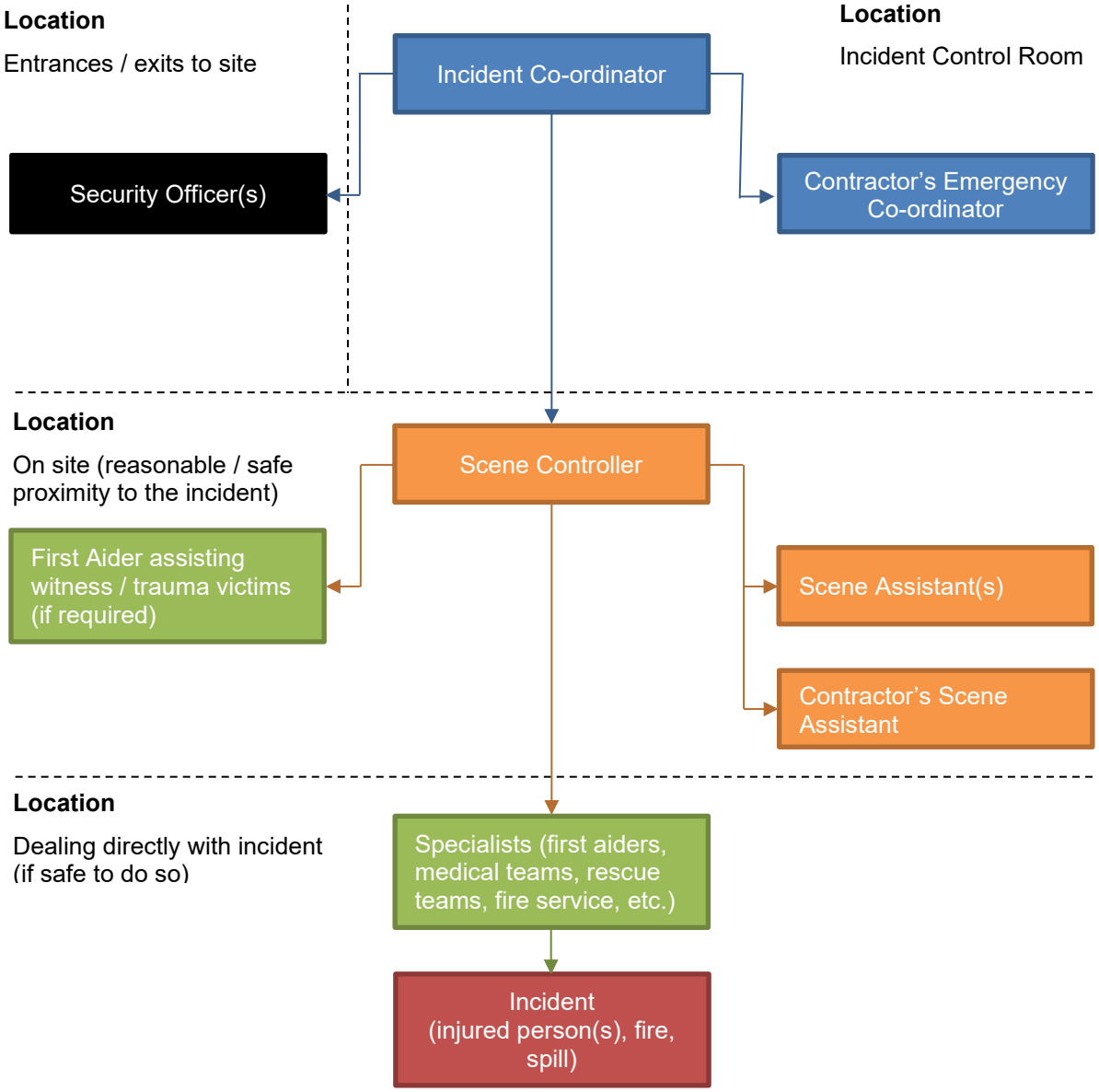
Waste Contractor	TBA	
Hazardous Waste management contractor		
Water Provider	TBA	
Electricity Supply	TBA	
Network Rail	TBA	
Special Spill clean-up contractors	TBA	

EMERGENCY MUSTER LOCATION	SITE ASSEMBLY AREA
Diagram to be added	

8 Incident Management Flow Chart



9 Incident Management Team Structure



10 Incident Management Checklist

ID	Question	Y/N	Time	Remarks
First Priorities				
1	Area made safe?			Hazards isolated (gas, electricity, chemical, others) and made safe. Enough lighting and safe access provided.
2	First aid in place?			Sufficient means and number of first aiders who can work safely.
3	Site evacuated?			
4	Emergency services notified?			Call 999. For Ambulance, police, fire brigade.
5	Helicopter landing area available if necessary?			Sufficient space, no crane movements, no overhead cables, no loose debris.
6	Link man waiting for emergency services assistance?			Gates opened, routes / landing area clear.
7	Transport to emergency services access point available?			Routes clear for stretchers / other transport. If collection via helicopter transport to landing site available?
8	Trauma assistance in place?			Appoint first aider to look for traumatised persons, particularly fist aiders, witnesses, direct colleagues. Bring traumatised individuals to separate location and do not leave unattended.
9	Location secured?			Ensure situation is stabilised and then protect evidence. Protect against watchers and remove bystanders. Photograph the scene where appropriate.
Notification and Information				
10	Client notified?			Within 30 minutes of an incident.
11	Principal Contractor Head Office notified?			See also procedure AA426 04 on Incident Reporting and Investigation
12	Regulatory Body notified?			If required (e.g Environment Agency, the HSE).
13	Family(s) notified?			Who and by whom
14	Hospital details known?			
15	Witness statements?			Take witness statements as soon as practicable. Interview in a separate location and individually however witness wellbeing is the most important aspect to consider.
Longer Term Follow Up				
16	Hospital visits			Contractor senior management or similar visiting the hospital? Family, friends?
17	Longer term trauma assistance			Ensure any trauma victims are appropriately supported longer term after the incident.
18	Incident investigation			
19	Workforce update			Facts only released to the work force to reduce rumour. What has happened, what we will do. No statements to the press by anyone other than the Principal Contractor Site Manager.

11 Site Evacuation Strategy

11.1 No Evacuation

Injury
- Injured party can be easily transported to the welfare area.
- No risk to bystanders.

Fire
- Easily manageable by fire extinguisher.

Spill
- The spill can be easily managed by one or two persons; and
- The spill poses no risk to health.

11.2 Partial Evacuation

Injury
- Injured party cannot be moved to the welfare area.
- First aid and medical assistance is needed at the location.
- Risk of impact on / distraction caused to others around.

Spill
- The spill is limited but not contained; and
- The spill poses no risk to health.

11.3 Full Site Evacuation

Injury
- Major injury.
- Fatality.
- Multiple injured parties.
- The impact / distraction on others is significant.

Fire
- Fire is not manageable by fire extinguisher

Spill
- The spill is hazardous to health; and
- The spill is extensive and not contained.

12 Site Evacuation Procedure

On hearing the evacuation alarm:

Individuals

1. Immediately stop all activities.
2. Turn off any machinery that is in operation but leave the keys in place.
3. Head as quickly as possible to the main assembly area.
4. On arrival at the assembly area report to the relevant company's role call point.
5. Register your presence at the assembly area and await further instructions.
6. DO NOT LEAVE THE ASSEMBLY AREA.

Area Supervisors

7. Area Supervisors are responsible for carrying out a roll call of their designated list of personnel in the event of an evacuation.
8. Once roll call has been completed the Area Supervisors will report their roll call findings to the Principal Contractor HSE Advisor.

Contractor HSE Manager / Advisors

9. Sub-contractor HSE Manager / Advisors report their roll call findings to the Scene Assistants.

13 Contacting the Emergency Services

Remember

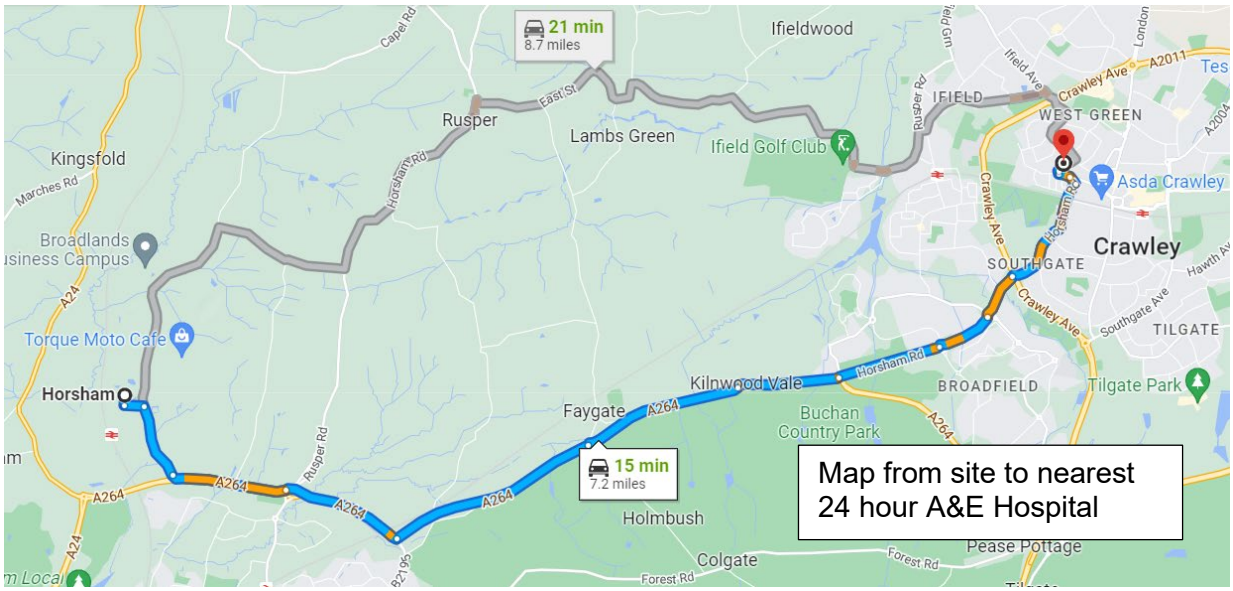
- When talking speak clearly and slowly
- Multiple services may be required

Step	Action
1	Dial 999/112
2	Give your name
3	Give your telephone number
3	Give where you are calling from: Wealden Recycling, Recovery and Renewable Energy Facility Wealden Brickworks Site Langhurstwood Road Horsham West Sussex RH12 4QD Post Code Phonetic R Romeo H Hotel 1 One 2 Two 4 Found Q Quebec D Delta
4	Give details of the required service Police, fire brigade and / or ambulance.
5	Give details of: • what has occurred; • number of persons involved; • suspected injuries; • any special details e.g. confined space, chemicals involved etc.
6	Any other information required by the emergency services.
Once the call is completed	
7	Note the time of the call.
8	Inform the Incident Co-ordinator that the emergency services have been contacted.
9	Ensure that security team are informed and expecting the arrival of the emergency services.

14 Directions to Accident and Emergency Units

14.1 Directions to Nearest 24-hour Accident & Emergency Unit

Road	Distance (miles)
Turn right onto Langhurst Wood Road to A264	*0.6 miles*
Follow A264 to Horsham Road A2220	*4.4 miles*
Follow Horsham Road / A2220 to destination	*2.2 miles*
Urgent Treatment Centre Crawley Hospital West Green Drive Crawley West Sussex RH11 7DH Telephone: +44 01293 301025 (24hr A&E)	

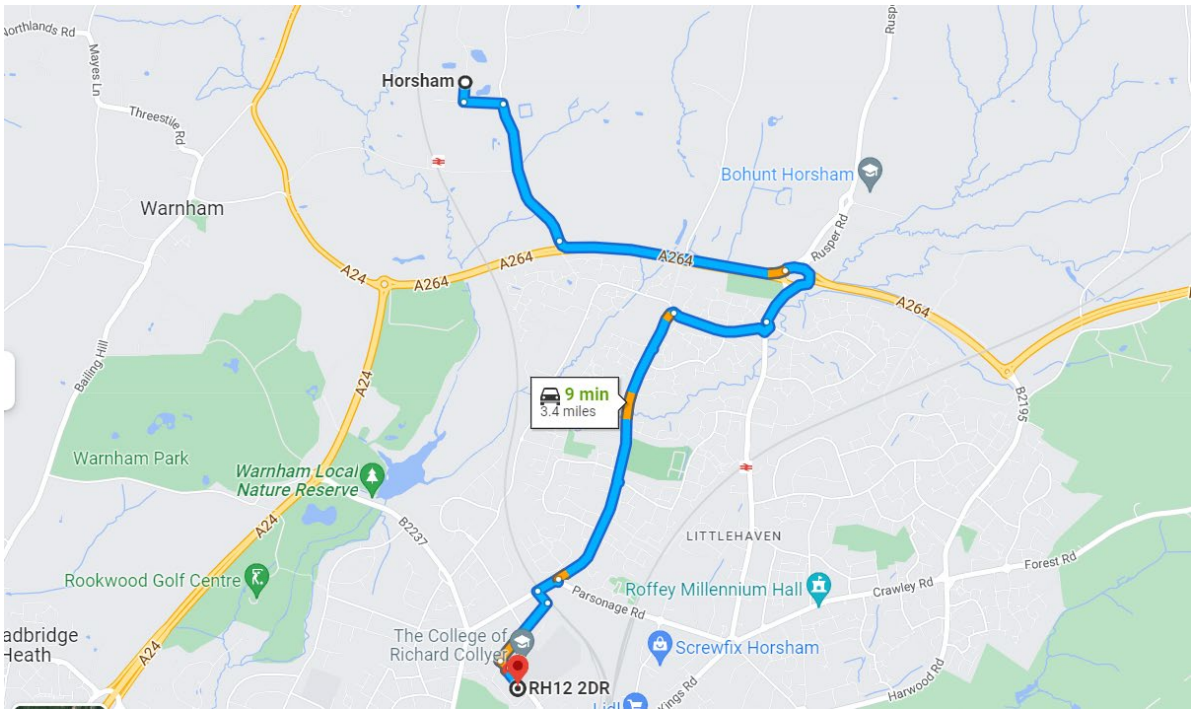


14.2 Directions to Nearest Urgent Care Centre (Daytime only)

Road	Distance (miles)
Turn right onto Langhurst Wood Road to A264	*0.6*
Continue on A264 to Horsham	*1.0*
Taken North Heath Lane to Wimblehurst Road	*1.3*
At the roundabout continue straight onto Wimblehurst Road	*446 ft*
Follow Richmond Road to Hurst Road B2180	*0.3*
Turn left onto Hurst Road B2180	*0.3*
Horsham Minor Injuries Unit Horsham Hospital	

Hurst Road
Horsham
West Sussex
RH12 2DR
Telephone: (01403) 227000 ext 7202

Open 9am – 5pm



15 Trauma Symptoms

In case of an accident be aware of persons with abnormal behaviour. These symptoms could include:

- Absent minded
- Crying or laughing
- Very busy talking (more than normal)
- No talking (other than normal)
- Active behaviour
- Very busy with (unimportant) matters
- Smoking (normally not)
- Other abnormal behaviour

These symptoms can appear in any phase from directly after an incident through two days after an incident.

Special attention is required for involved first aiders, direct colleagues, family on site, neighbours and friends. Persons need to be separated and reassured as much as possible. Do not leave them alone or unattended.

16 Environmental Spillage Response

Procedures with regard to emergency response training, exercises, reporting etc. as well as roles and responsibilities related to emergency procedures are given in the previous chapters of this document and cover environmental incidents. This chapter indicates specific spillage response measures.

In order to keep this EPP as practical as possible it shall only contain spillage control measures for substances relevant to the respective phase of the project. Control measures for substances to be used for commissioning and start up (i.e. aqueous ammonia, lime etc.) will be added to this EPP prior to commencement of commissioning.

16.1 Site Drainage and Chemical Storage Plans

The locations of the chemical storage shall be marked on an annotated copy of the construction site drainage and shall be kept with the EPP. No chemicals or fuels or other hazardous substances (e.g. concrete washout) shall be stored within 20m of any surface water.

Details of construction and operations phase drains shall be appended to this EPP, together with details of surface water in proximity to the site that could be impacted by a spill.

Safety Data Sheets (SDS) and Chemical Assessments of all chemicals and fuels on site are kept in the Site HSE Manager Office / Medic.

16.2 Spill Kit

The type of spill kit required depends on the activity and products used. Sub-contractors are required to hold spill kits on site at suitable locations and appropriate in type and volume for the clean-up of the chemicals or fuels in use. Subcontractors shall train their personnel in the use of the spill kits.

In addition, Principal Contractor will provide the basic type of spill kit (a) on site as appropriate to the stage of the project.

a) Type 1 Spill Kit:
1 x 250 litre wheelie bin which contains:
1 x Proprietary universal spill kit (or oil / chemical depending on the activities on site)

b) Type 2 Spill Kit:
1 X 250 litre wheelie bin which contains:
1 x Plastic Shovel
1 x long handled broom
10 heavy duty plastic bags with ties and labels
1 pair of safety goggles
1 pair .of rubber gloves
1 pair of plastic overalls
1 pair of rubber boots
2 x P3 respirators
1 x roll of hazard warning tape
Sorbant pads, sheets and socks

c) Type 3 Spill Kit:
1 x 250 litre wheelie bin which contains:

- 1 x Plastic Shovel
- 1 x long handled broom
- 10 heavy duty plastic bags with ties and labels
- 1 full face shield

- 1 Pair of superchem coveralls
- 1 pair of rubber boots
- 1 x 4000 series respirator with FFABEK1P3D filters
- 1 x roll of hazard warning tape
- Sorbant pads, sheets and socks

16.3 Spill Response Procedure

16.3.1 General

All spill response procedures are based around the principle of 'stop and contain (if safe to do so), notify, clean up and investigate'. When controlling pollution, the following hierarchy of measures applies (see also Appendix A):

1. PPE to be worn as specified in the SDS / Chemical assessment;
2. Ensure that the spillage / release is minimised by;
    a. **Containing pollution at source** by i.e. sealing or isolating the damaged container or pipework, turning a container, putting the leaking container into another secure container, close any valves on pipework to stop material flow.
    b. **Containing close to source** by i.e. using spill kit to boom or soak up the spilt substance, ensuring drains are covered and the spill does not enter drains or gullies, transferring the leaking material into an undamaged container, use sorbent products to soak up the spill, use small portable containers to collect the spill.
    c. **Contain on the surface** by i.e. using booms to prevent the material spreading, use drain mats to cover surface drain openings and manhole covers, use temporary storage containers and portable tanks.
    d. **Contain in the drainage system** by i.e. closing oil separators, closing penstock valves or pollution control valves in the drainage system (as indicated on the construction site drainage plan), or use pipe lockers.
    e. **Contain on site:** Prevent from reaching Surface WAter.

    For larger or more complex spills (where chemicals have the possibility of entering surface or groundwater), the external spill response contractor (see Section 7.2 for contact details) shall be mobilised to carry out clean up.
3. The site of the spill shall be barriered off to prevent people or vehicles inadvertently spreading contamination.
4. Contaminated absorbent material, drain covers, dams, recovered liquids etc. shall be placed into suitable sealed plastic sacks / containers and stored in an area or in a receptacle providing adequate secondary containment to be treated as hazardous waste. Hazardous wastes shall not be comingled;
5. Hazardous wastes shall be stored in a hazardous waste area and collected by a licensed waste carrier as soon as practicable;
6. In the event of rain and the contamination is at risk of spreading in the rain, the area should be covered with a tarp or similar until the clear up is complete;
7. Should the spillage result in hydrocarbon or chemicals entering the site drainage system (Appendix A) the contents of the adjacent road gulley's and inceptors shall be analysed and the appropriate clean up and disposal route employed;
8. The Environment Agency shall be contacted immediately if there is an accidental discharge to a Controlled Water.

In the event of a spillage of oil inside a bunded area the Site HSE Manager shall assess whether a specialist cleaning contractor is required to safely remove the oil and clean out the bund. Spent spill kit or waste oil / chemicals shall be handled as per points 4 and 5 above.

16.3.2 Spillage on Plant Equipment

Should a leak have caused hydrocarbons or chemicals to be spilt on plant or equipment, the Site HSE Manager or delegate shall review the extent of contamination and decide, with specialist advice where necessary, the decontamination requirements. Care shall be taken to check for hydrocarbon or chemicals that may have been absorbed into insulations materials.

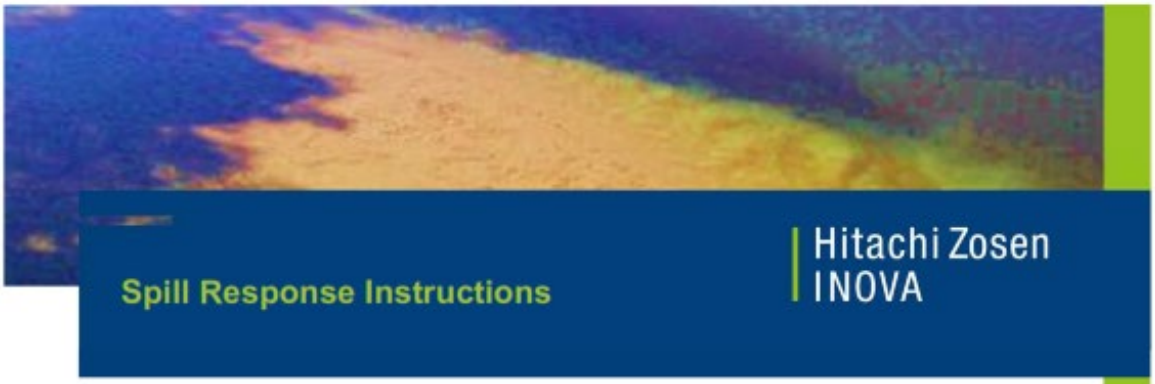
Where spillage has occurred on areas of open mesh flooring, the corresponding areas on all lower floors shall be taped off until decontamination has been completed.

16.3.3 Other Information

Following any hydrocarbon spillage incident all hot work permits shall be withdrawn immediately.

- The site drainage plan should be consulted if necessary;
- Fire extinguishers:
  - Use dry powder, carbon dioxide or foam.
  - Do not water jet.
- Oily waste water, such as that found in bunds and interceptors is hazardous waste and, unless the concentration of the oil is very low, will need to be dealt with by a specialist contractor and will need to be accompanied by consignment note;
- Segregate waste oil / grease from other wastes;
- Return empty drums to suppliers, if possible;
- Dispose of waste oil / grease and their containers as hazardous waste;
- No liquids, including oil, shall be sent to landfill disposal site.

Appendix A: Spill Response Instructions



Spill Response Instructions

Hitachi Zosen INOVA

If a spill occurs:

1. STOP!

- Raise awareness to those working nearby
- Switch all ignition sources off in area
- Isolate source if safe, e.g. close valve, turn off pump, plug hole etc.

2. ENSURE PERSONAL SAFETY

- Take precautions e.g. additional PPE
- Restrict access as required

3. CONTAIN

- Stop spill from entering drains, water body or stream using spill kit
- Prevent further spread using spill kit

4. NOTIFY

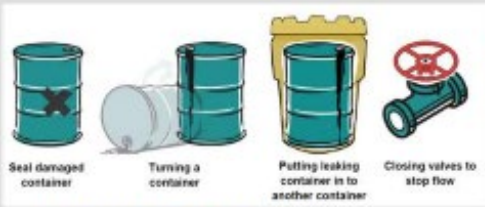
- Notify Supervisor to advise on clean up
- Notify HZI immediately

5. CLEAN UP

- Ensure a trained spill responder assists in clean up
- If raining, cover area until spill response team mobilised
- Ensure all contaminated waste is bagged and put in designated hazardous waste storage area
- Contact stores to replace used spill kit

Methods to Contain Spills

1. Control at Source



2. Contain Close to Source

3. Contain Spill on the Surface

4. Contain Spill on Water

Don't

- × ignore it – STOP WORK and act immediately
- × hide the incident – ensure it is reported to a supervisor and controls implemented
- × hose ANYTHING into surface drains or water courses

Appendix I
Complaints Procedure

Project Number	Issued by
Project Name Wealden 3Rs	**Hitachi Zosen Inova AG** Hardturmstrasse 127 CH-8005 Zurich www.hz-inova.com Tel. +41 (0)44 277 1111 Fax +41 (0)44 277 1313

Hitachi Zosen INOVA

Wealden Recycling, Recovery and Renewable Energy Facility

Former Wealden Brickworks

Langhurstwood Road

Horsham

West Sussex RH12 4QD

Rev	Author (Name, Date, Signature)	Reviewer (Name, Date, Signature)	Approver (Name, Date, Signature)	Short description of change
0.0	Astrid de Cosson 03.11.22			Combining Complaints Procedure labelled as Appendix E, Complaints Procedure as detailed in Dust Management Plan and Complaints Procedure as detailed in CEMP. All previously submitted to planning

DocType	JHS	HZI Doc No _ Rev
HZI	HZI	

External Stakeholder Complaints Procedure

Table of Content

1 Purpose

Britaniacrest Recycling Ltd and the Principal Contractor of the Wealden 3Rs Facility are committed to minimising any impact on local stakeholders through a robust Health Safety and Environmental Management System to manage all activities on site. Any complaints resulting from activities on and transiting the site, can have serious commercial and public relations implications.

This document describes our complaints procedure including how complaints can be made, how they will be handled, both the complainant and within the organisation, as well as associated response times.

2 Scope

The scope of this procedure is for any complaints received during the construction the facility, whether they are resulting from the activities relating to site or not.

This procedure is for complaints by external stakeholders. Any grievances by staff or workers shall be handled as appropriate either by internal human resources procedures (AA210 40) or the worker consultation and feedback procedures.

3 Abbreviations

CEMP	Construction Environmental Management Plan
CLG	Community Liaison Group
EPP	Emergency Preparedness and Prevention Plan

4 Further Applicable Documents

Doc. Nr.	Title
AA 426 04	Investigation and Reporting Procedure
November 2022	Construction Environmental Management Plan
AA210 40	UK Staff Handbook
50159403_2.0	Sample Emergency Preparedness and Response Plan

5 Roles and Responsibilities

5.1 Site Manager

The Site Manager shall be overall responsible for ensuring that all complaints are handled as per this procedure. The Site Manager shall typically in the first instance handle complaints and ensure that a record of all complaints is retained and that notifications to management are made.

6 Procedure

6.1 Making a Complaint

Complaints can be received in the following ways:

- Email
- Post
- Telephone (24 hour emergency number)
- In Person
- Via the www.britaniacrestrecycling.co.ukwebsite
- From Local Authority
- Through Community Liaison Group (CLG) Meetings

The contact email, telephone number and website for any complaints shall also be publicised:

- At community meetings organised by the Principal Contractor or Client
- On community mailings
- On signage provided at the entrance to site
- On the www.britaniacrestrecycling.co.uk website

Any urgent complaints outside of working hours should be communicated via the 24 hour emergency number that shall be manned out of hours. In the case of an emergency, the out of hours service shall notify the Principal Contractors nominated contacts, the complaint shall also be brought to the attention of the Site Manager or delegate by email.

6.2 Handling the Complaint

If in person, the member of public making the complaint should be directed to the most senior member of the Project personnel on site e.g. Site Manager or the Site HSE Manager.

If the complaint is received either by phone or in person (via the CLG or otherwise), the form contained in Appendix A shall be completed. The person receiving the complaint should get details about the issue, for example if it related to dust:

- Time and duration of event
- Weather conditions at the time of the event
- Colour / particle size of dust

Where limited information is provided (either because the complainant did not want to leave further details or only limited details were received then the details will be completed as much as possible, either using the form or in the register (Appendix B).

If possible, the nature of the complaint should be dealt with immediately. If not (further investigation may be required, e.g. to establish whether the nuisance / source of the complaint is attributable to the Wealden 3Rs Construction Site), the person making the complaint should be given a written acknowledgement and indication of when they will receive a response to their complaint within two working days (provided that contact details have been left by the complainant).

If the source of the complaint is deemed to be the construction activities, the information recorded should also assist in identifying any failure in the existing mitigation/control measures or the need for a new mitigation/control measure. If a new mitigation/control measure is required, the Site HSE Manager will update any relevant project documents (e.g. CEMP).

Whilst every endeavour shall be made to close out all complaints as soon as possible, all complaints should be closed out in writing (by email or letter) within a target of 30 days. Investigation may be required to ascertain the circumstances of a complaint. For example, if noise is an issue it may be necessary to carry out a noise survey.

Close out communication of complaints should include details of how the complaint was resolved and any additional details (e.g. potential for reoccurrence).

A record of close out details shall be noted in the Complaints Register (see Appendix B). The details of the complaint and the steps subsequently taken to resolve the complaint should be recorded on the Register.

6.3 Complaints via Regulatory Bodies

When complaints are received through regulatory bodies such as the Environment Agency, the Environmental Health Officer or the County Council Planning Authority, the Company will respond to such complaints in accordance with the protocol set by the regulator concerned.

It will, however, respond in a timely manner (which as a minimum shall be no longer than timescales identified above).

7 Communications

7.1 Community Liaison Group

The Client, and/or, the Principal Contractor will inform the Community Liaison Group (CLG) at each community meeting of any complaints issue and what it is doing to resolve it.

7.2 Regulator Enquiries

The complaint register will be made available to West Sussex County Council or Horsham District Council Environmental Health Department, the Environment Agency or any other regulatory bodies on request subject to maintaining data protection requirements.

7.3 Press Enquiries Concerning an Incident or Complaint

Any press enquiries concerning an incident or complaint shall be directed in the first instance to the Site Manager, who will in turn notify the Principal Contractor Communications Department, the Executive Assistant of the CEO and the Director of HSE.

8 Internal Monitoring

Separate from the procedural response to a received complaint is the monitoring of complaints levels and subject matters. Reliable complaints can be considered a form of monitoring and complaints should be treated as if they were monitoring data. Any complaints will be reported monthly to the Project Management Team in the Project Monthly Report.

Complaints are an important indicator of community dissatisfaction (although not the only one) and the technique of complaints monitoring is a powerful tool. However, it is important to bear in mind that complaints are only a symptom of annoyance or nuisance; there are various reasons why complaint level is not an exact indicator of dust annoyance or nuisance itself. Nevertheless, the collection, maintenance and analysis of complaints records is an important method of indicating the effectiveness or otherwise of measures implemented to reduce nuisance due to dust.

The Site Manager will implement a system of complaints monitoring and analysis. This data will be reviewed periodically to identify:

- Trends, in terms of the subject, cause or origin of complaints.
- Aspects experienced at one location that could apply to other locations.

Any improvement actions will be incorporated into the Principal Contractor HSE Management system to minimise the possibility of reoccurrence and share learnings with other sites.

Appendix A: Complaints Form

COMMENT/COMPLAINT FORM	
INFORMATION ABOUT THE PERSON SUBMITTING COMMENT AND/OR COMPLAINT **(Please leave blank if you wish to remain anonymous. Your comments/complaints will still be considered by Project)**	
Full Name:	
Date:	
Contact Information: (Please provide necessary information based on how you wish to be contacted) By mail ……. By phone ……. By e-mail……..	
Indicate your purpose: □ Comment □ Complaint **Recorded by:** □ Person submitting comment/complaint □ Other (please specify who)	**Signature confirming receipt of completed Comment/Complaint Form copy** ……..
INFORMATION ABOUT YOUR COMPLAINT / COMMENT	
Date of Incident Regarding Complaint □ One time incident/grievance (Date Time) □ Happened more than once (how many times?)	

□ On-going (currently experiencing problem)		
Any other data (e.g Weather Conditions, duration, photos etc.)		
This section will be filled by Principal Contractor Representative		
STATUS OF COMPLAINT / COMMENT		
Complaint Logged (Y/N)	**Date of submission:**	**Logged by:**
Date of Response sent:	**Complaint closed (Y/N):**	**Close out date and signature:**

Appendix B: Sample Complaints Register

Wealden 3Rs Construction Register								
Name	**Address**	**Contact Number / Email**	**Date of Complaint**	**Time of Complaint**	**Details of Complaint**	**Principal Contractor Representative**	**Other Comments**	**Written Resolution Sent (include date)**

Appendix J
Contaminated Land Procedure

Project Number	Issued by
Project Name Wealden 3Rs	**Hitachi Zosen Inova AG** Hardturmstrasse 127 CH-8005 Zurich www.hz-inova.com Tel. +41 (0)44 277 1111 Fax +41 (0)44 277 1313

Hitachi Zosen INOVA

Wealden Recycling, Recovery and Renewable Energy Facility

Former Wealden Brickworks

Langhurstwood Road

Horsham

West Sussex RH12 4QD

Rev	Author (Name, Date, Signature)	Reviewer (Name, Date, Signature)	Approver (Name, Date, Signature)	Short description of change
0.0	Astrid de Cosson 01.11.22			First Issue

DocType	JHS	HZI Doc No _ Rev	
HZI	HZI	# Procedure for Unforeseen Contamination	

Table of Content

1 Objective

The following procedure defines requirements to be followed by the Principal Contractor on discovery of any contaminated land during the construction of the Wealden Recycling, Recovery and Renewable Energy Facility (Wealden 3Rs) Plant.

Relevant requirements shall be communicated to Contractors via Construction Environmental Management Plan (CEMP) the Site HSE induction and other applicable method statements. The potential for unforeseen contamination shall also be covered in the Risk Assessment Method Statement (RAMS) for any excavations.

2 Background

A ground investigation study was undertaken for the Wealden 3Rs site in 2022 with the purpose of verifying the site conditions for the new development. A series of boreholes and trial pits were undertaken, samples from which were sent for geotechnical and geo-environmental testing.

Sample testing included assessment for asbestos, inorganic compounds, heavy metals, and hydrocarbons. The results for which can be found within Appendix E of document reference “14-K6082-GEO-R01 Phase 2 Ground Investigation Report Warnham Works”.

Analysis of selected soil samples did not indicate any elevated concentrations of contaminants when compared against screening criteria for commercial end use. Loose fibres of chrysotile asbestos were detected in one sample at 1.00mbgl. This was then scheduled for quantification testing which identified <0.001% asbestos.

Suspected asbestos cement sheeting formed part of the warehouse and was stored around the warehouse. An asbestos survey should be undertaken to positively identify any asbestos containing materials within the warehouse and other buildings on site.

It was recommended in the ground investigation study that a watching brief is maintained on site, particularly during the groundwork stage. During any ground works an appraisal of the exposed soils should be made by a competent person, such as the Civils Contractor Supervisor. If any material is noted to show visual and/or olfactory signs of contamination the soils shall be stockpiled separately and tested prior to its appropriate removal off-site or re-use. If soils suspected of being contaminated are encountered, it is recommended that a contaminated land specialist shall be consulted.

3 Abbreviations

ACM	Asbestos Containing Material
CDM	Construction (Design and Management) Regulations
CEMP	Construction Environmental Management Plan
HSE	Health, Safety and Environment
RAMS	Risk Assessment Method Statement
SWMP	Site Waste Management Plan

4 Further Applicable Documents

Doc. Nr.	Title
14-K6082-GEO-R01	Phase 2 Ground Investigation Report
50159403_2.0	Site Waste Management Plan
50159403_2.0	Emergency Preparedness and Response Plan

5 Roles and Responsibilities

5.1 Project Manager Civil

The Project Manager Civil shall ensure that this procedure is followed on site in the event of any unforeseen contamination. The Project Manager Civil will be the first person to be informed of any potential contamination and will decide on the level of competence required for dealing with the find.

For hydrocarbon identification and removal, the Project Manager Civil will establish the potential quantity and type and if the find is significant, will call in a geotechnical specialist from a ground investigation contractor as the competent person to take samples and establish a removal strategy.

For asbestos if small amounts of fibrous material are found in soil then the competent person will be a geotechnical specialist with asbestos awareness who can take contaminated soil samples. If large amounts of suspected asbestos is found the area, the material will be treated as stated in section 6.2 and a qualified asbestos sampler will be used to sample the material. The results of the sample will determine the removal strategy in accordance with section 6.2.

5.2 Construction Design and Management (CDM) Manager

CDM Manager shall ensure that relevant documents relating to contaminated land are included in the Site CDM Health and Safety File.

6 Protocol for Unforeseen Contamination

All personnel working on site will undergo a site induction and toolbox talks which will include references to potential environmental hazards such as contamination (see Section 7).

The following procedure will be briefed to personnel working on site and highlights the key steps to be followed should contamination be identified.

6.1 Discovery

Whilst undertaking any activities which involve breaking ground the following procedure should be followed in order to help mitigate risks and potential health hazards when working on site.

A competent Contractor Supervisor shall maintain a watching brief when undertaking any excavation activities and look to identify any unnatural looking materials within the strata.

Should any fibrous sheets, pipe lagging or materials which generate a strong smell of diesel or petrol be encountered parties involved in the tasks should;

- STOP activities at the point of work **IMMEDIATELY**;
- All non-essential personnel to vacate the area;
- Report the discovery to the Supervisor and the Site Manager;
- Assess required changes to PPE to make area safe;
- Working area to be made safe (see Section 6.2).

6.2 Making Safe

The following measures are to be considered when making safe the area around suspected ground contamination. The potential contaminated soil / material should not be touched or disturbed.

Any tools / equipment are to be decontaminated in a bunded area to prevent the spread of contamination. Any contaminated wash water, rags, or PPE shall be disposed of as hazardous waste.

Asbestos:

- If potential asbestos containing material (ACM) is uncovered during earthworks care must be taken to minimise damage to that ACM to minimise the potential for fibre release to air and prevent potential exposure and distribution;
- Provided there is no risk of exposure and where possible, the ACM should be covered and kept damp. This will further reduce the risk of fibres becoming airborne;
- The area containing the potential ACM must be cordoned off with either Heras fencing or fixed barriers. Signage must be clearly displayed warning of asbestos. The size of the exclusion zone will depend on the quantity and condition of the ACM;
- A sample of the potential ACM is to be taken by a competent person and bagged and labelled. The sample is to be analysed and this will indicate whether the ACM needs to be removed by a specialist contractor;
- If the sample result and quantity of asbestos indicates the find is notifiable, a licenced asbestos removal company will be used for the removal. If a specialist contractor is not used to remove non-notifiable asbestos a written risk assessment is required for any work involving ACM which will be written by a competent person who will manage the task..

Hydrocarbon contamination

Small quantity:

- Work area to be securely isolated with sturdy fencing/barriers; and
- Signage should be fixed to the fencing to make workers aware of the potential ignition risk.

Large quantity (liquid present):

- Upgrade PPE as necessary – this might include disposable coveralls, washable footwear and respirators with an organic cartridge to mitigate odour nuisance and short-term reversible inhalation health effects;
- Approximate volume of liquid to be estimated – make note of colour;
- Spill response equipment to be deployed, e.g. booms/pads/granules;
- Work area to be securely fenced off with sturdy fencing / barriers; and
- Signage to be affixed to the fencing to make workers aware of the potential ignition risk.

Unknown Contamination:

- Material should be carefully replaced back where it was excavated;
- Work area should be secured with sturdy fencing / barriers;
- Signage should be fixed to the fencing to make workers aware of the potential contamination risk.

6.3 Mobilisation of Competent Person

Upon the discovery and subsequent reporting of potential ground contamination, a competent person shall be called to site to attend the work area to provide an initial assessment of the potential contamination and advise on how to proceed with its removal as follows:

Asbestos

In the event of the discovery of potential ACM, a qualified asbestos specialist shall attend site and take a sample of the material. This sample will be despatched to an approved and accredited laboratory for analysis. Upon receipt of the results, the Contractor, taking advice from the asbestos specialist, will determine the appropriate action. This may include all or any of the following:

- De-restriction of the area following a negative result from the laboratory;
- Suspension of the work in the area;
- Delineation of the potential lateral and vertical extent of the asbestos impact (most likely via trial pitting);
- Removal of the affected volume of material for suitable treatment and/or disposal; and
- Arrangements made for confirmatory air testing to be carried out if the material is to be moved – this should be in accordance with any regulator guidance for clearance testing.

Until receipt of the results of analysis and agreement of the way forward, all make safe procedures are to remain in place.

Hydrocarbon Contamination

In the event of the discovery of potential hydrocarbon contamination, a competent person (approved by HZI) will attend site and take a sample of the material.

The sample shall be despatched to an approved and accredited laboratory for analysis. Upon receipt of the results the contractor, taking advice from the competent person, shall determine the appropriate action.

Until receipt of the results of analysis and agreement of the way forward, all make safe procedures are to remain in place.

Unknown Contamination

In the event of the discovery of unknown potential contamination, a competent person will attend site and take a sample of the material.

The sample shall be despatched to an approved and accredited laboratory for analysis for a wide range of analysis to determine the composition of the contamination identified. Upon receipt of the results the contractor, taking advice from the competent person, will determine the appropriate action.

6.4 Notification and Follow Up

The Client shall be contacted within 30 minutes if it is suspected or likely that unforeseen contamination has been found.

The Client shall then contact the Regulator as required.

For such cases, a geotechnical report or asbestos clearance certificate will be issued to be retained and sent by Project Manager Civil to CDM Manager to include in the site CDM Health and Safety File

7 Equipment

Personal Protective Equipment (PPE) will be retained on site with spill response equipment. This shall contain Asbestos removal bags and labels. Hazardous waste bags (for contaminated PPE or disposals) shall also be kept on site.

8 Training

All site-based staff shall be made aware of the following points relating to environmental awareness, during site induction during the early phases when earthworks are being carried out on site:

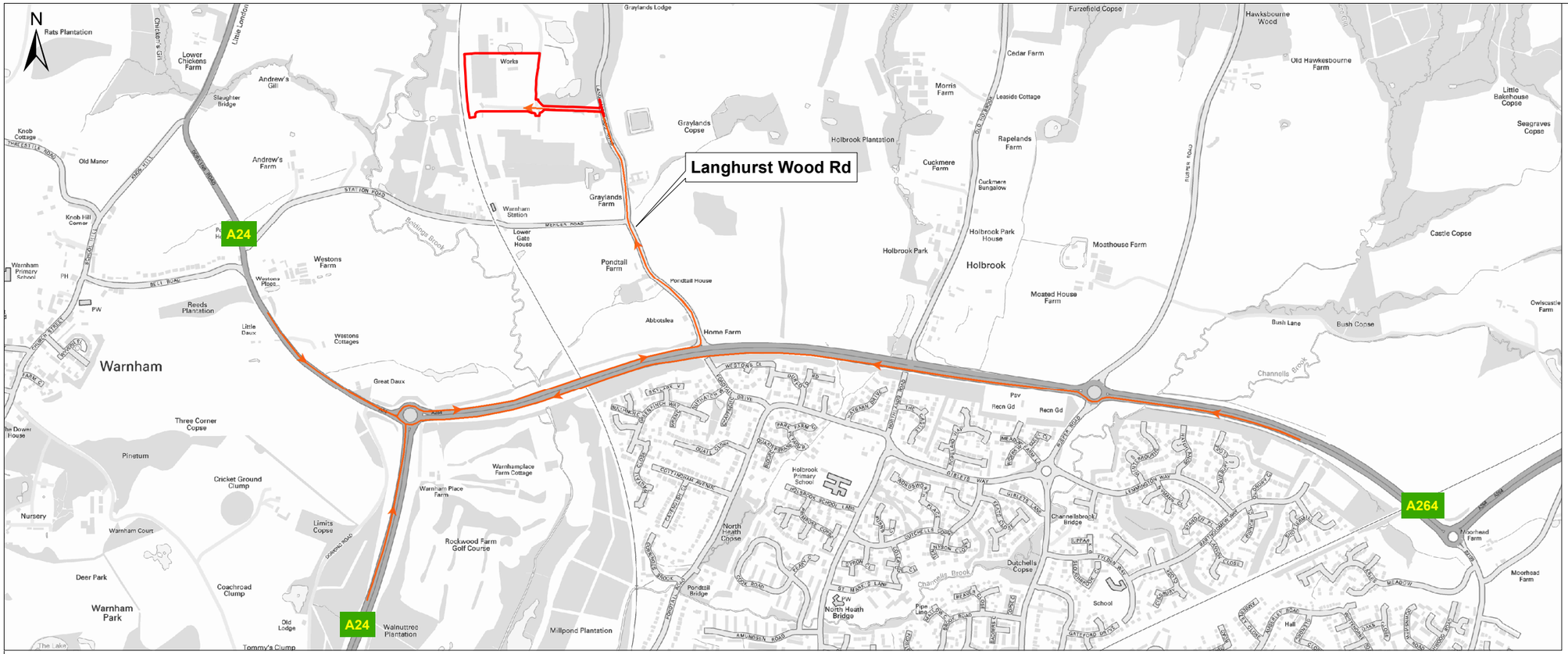
- The possibility of unforeseen contamination;
- Asbestos awareness; and
- The procedure to be followed in case unforeseen contamination is discovered.

Toolbox talks will be undertaken by the Project Manager Civil or deputy alerting site personnel of potential environmental hazards and what to look out for when undertaking activities which expose workers to materials within the ground.

9 Record Retention

All documents relating to contaminated land must be retained by Project Manager Civil on site and the CDM Manager is to be made aware to ensure that the documents are included in the Site CDM Health and Safety File.

Appendix K
Heavy Goods Vehicle (HGV) Routes



Legend

- Site Boundary
- Arrivals
- Departures

Rev	Description	Date	Initial	Checked

RPS

20 Western Avenue, Milton Park, Abingdon, Oxfordshire, OX14 4SH
T: +44(0)1235 821 888 **E:** rpsox@rpsgroup.com **F:** +44(0)1235 834 698

Client	Britaniacrest Recycling Ltd
Project	3Rs Facility, Wealden Brickworks, Horsham, West Sussex
Title	Heavy Goods Vehicle Routes

Status	Drawn By:	PM/Checked By
FINAL	CR	AR
Job Ref	**Scale @ A3**	**Date Created**
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