

Berrys Lane Energy and Data Centre



CONSTRUCTION MANAGEMENT PLAN AND METHOD STATEMENT

Date: 16th May 2024

J Mould (Reading) Ltd
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Berrys Lane
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DOCUMENT CONTROL

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Issue	Date	Status
Draft 1	27 th May 2024	Draft for comment
Draft 2	14 th August 2024	Draft for submission

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1. INTRODUCTION

- 1.1. This Construction Management Plan (CMP) has been prepared by Vismundi Limited on behalf of J Mould (Reading) Ltd (Mould), the Developer, in discharge of Condition 6 stated in the Decision Notice relating to planning permission reference 20/02029/COMIND granted by West Berkshire Council (WBC) dated 2nd September 2022.
- 1.2. The Decision Notice grants planning permission (the “Planning Permission”) for the construction and use of an Energy Recovery Centre and associated infrastructure utilising thermal treatment of residual waste (the ‘ERC’) and a data centre (the ‘Data Centre’) including their access and landscaping works, together forming the total development (the “Development”).
- 1.3. The ERC is permitted and designed to receive up to 150,000 tonnes of non-hazardous waste each year, delivered to site in heavy goods vehicles (HGVs). The Data Centre will house computer systems, data storage and network linking along with supporting systems such as cooling capabilities, physical security, networking appliances, etc to provide remote access to cloud-based infrastructure.
- 1.4. The Development will be located on brownfield land located off Berrys Lane, Burghfield within the existing Reading Quarry site (the “Site”).
- 1.5. This document forms the one of two documents that define the management requirements to apply to the Site during construction, and along with the Biodiversity Construction Environmental Plan (BCEP)¹ (required by Condition 43) establishes the framework for identifying, planning and managing the environmental impacts associated with the construction activities of the proposed development and sets out the methodology of construction. The framework is based on a series of control measures required to ensure that the environmental impacts are minimised. These control measures include legislative requirements, and the environmental commitments identified in this report and other reports that supported the planning application. For the purposes of this document, “construction” extends from the enabling and preliminary works through the main construction and includes commissioning and testing of the facility. It concludes at Take Over when the Owner accepts responsibility for the facility from the Principal Contractor. During the construction period, the Site will fall under the Construction Design and Management Regulations 2015.
- 1.6. This CMP will form a specified requirement within the construction contract(s) to be agreed with the construction contractor(s) who will also hold responsibility under CDM Regulations for health & safety on the construction works as the Principal Contractor. It will also be the Principal Contractor’s responsibility to ensure the CMP is implemented and impose its requirements on contractor staff and its sub-contractors. It should be noted that the Principal Contractor may change as construction of the different phases of Development evolves, but there will always be one nominated Principal Contractor for each phase of construction.

2. SCOPE

- 2.1. This CMP applies to all construction activities relating to the Development constructed on the Site, as consented under 20/02029/COMIND. This includes site clearance and preparation, groundworks, construction of all buildings, and commissioning and testing of the ERC, and will apply until such time each of the ERC and the Data Centre enters

¹ Enzygo Ltd. Biodiversity Construction Environmental Management Plan.27 February 2024.

commercial operation (referred to below as “Take Over”). The framework and measures set out in this CMP will be adhered to and applied by all contractors undertaking work on the project.

- 2.2. Activities, controls and mitigation as referenced and required by the CMP will all take place within the site boundary.
- 2.3. The responsibility for implementation of the CMP will lie with the Principal Contractor, who will implement the requirements through its own staff and its sub-contractors. The CMP will, therefore, form a key document in the Engineering, Procurement and Construction Contract (EPCC), placed on the contractor(s) by the owners for the supply, construction, commissioning, testing and setting to work of both the ERC and the Data Centre. During construction, the CMP shall be implemented and controlled by the Site Managers, who will work in conjunction with other key personnel (including the construction management, sub-contractors, suppliers, etc.) to ensure it is implemented in full.
- 2.4. This CMP is considered to be a ‘live’ document and as such will be reviewed on a regular basis to ensure it remains appropriate and effective. To ensure that the plan remains relevant, it shall be the responsibility of the Principal Contractor to take ownership of the CMP and ensure its relevance to activities undertaken on site in light of any changes from the initial scope of the plan. This will require regular review, revision and updating as necessary.
- 2.5. Updates to the CMP 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.

3. THE DEVELOPMENT AND PROPOSED WORKS

- 3.1. The Site is located approximately 5km southwest of Reading, within an operational existing waste management facility, to the east, adjacent to a closed landfill site. The site location is indicated in Figure 1 below. An existing Tarmac Construction material site is located to the northeast of the Site and to the east and north of Berrys Lane lies several lakes and recreational water sport clubs. The M4 runs parallel to the southern boundary of the application site.



Figure 1 – Site Location

- 3.2. The Site comprises circa 6.4 hectares of previously developed land with a history of waste management activity, and benefits from an existing internal access route to the north-west (see figure 2 below). The access/egress route from Berrys Lane will be widened. For further information on this, please refer to the Site Construction Traffic Management Plan (Reference 1).



Figure 2 – Aerial view of the Site with access/egress route



Figure 3 – General Site Layout

3.3. The general layout of the Site is shown in Figure 3. The Development consists of two areas:

3.3.1. Energy Recovery Centre

This comprises a number of process and operational requirements which define the site layout, the building structure, scale and sizes of the various buildings, and access arrangements into and within the site boundary. These include:

- Waste reception hall
- Waste storage bunker
- Boiler hall
- Bottom ash collection hall
- Flue gas treatment (FGT)
- Turbine generator hall
- Air cooled condensers (ACC)
- Control room
- Reception area
- Offices and meeting rooms
- Staff welfare and changing facilities
- Chimney stack.
- Ancillary buildings and infrastructure including:
 - (a) A gatehouse incorporating weighbridge functional control equipment to control access and egress of traffic to and from the Site during operation;
 - (b) Weighbridges and a monitored bypass lane for outgoing vehicles;
 - (c) Staff and visitor car park (with cycle storage shelter);
 - (d) Hard standing areas for the manoeuvring of HGVs;
 - (e) Fire water storage tank and pump house;
 - (f) Electrical control room and switchyard.

The main building will also contain bottom ash storage and associated collection area, a range of workshops, stores, and electrical rooms. It will also include an administration wing. This will be made up of workshops on the ground floor, offices and meeting rooms, welfare accommodation, and the control room and associated functions.

3.3.2. Data Centre

This comprises a single building structure of three floors with an ancillary office adjacent to the northern wall and an electrical substation supplying power to the equipment within the centre. In construction terms, it is essentially warehouse containing information technology (IT) infrastructure and its supporting equipment.

Although furnishing it is a complex undertaking, the building is a relatively simple portal frame construction.

- 3.4. Traffic entering and leaving the Site will be subject to the Construction Traffic Management Plan ("CTMP")². Staff arriving in private vehicles will park on the Site within the designated area in the Construction Compound and Laydown Area. Welfare facilities and office accommodation will be available for staff at the Site and in the Laydown Area.

4. PLANNING PERMISSION AND CONDITIONS

- 4.1. This CMP is submitted to WBC for the discharge of Conditions 6 and 43 of the planning permission 20/02029/COMIND granted by Decision Notice dated 2nd September 2022.

- 4.2. Condition 6 states:

"Construction Method Statement

No development shall take place until details of a scheme (Construction Method Statement) to control the environmental effects of the demolition and/or construction work has been submitted to and approved in writing by the Local Planning Authority.

The scheme shall include: -

- (i) the control of noise*
- (ii) the control of dust, smell and other effluvia*
- (iii) the control of rats and other vermin*
- (iv) the control of surface water run-off*
- (v) details of excavation and dewatering methods to prevent silt pollution*
- (iv) the proposed method of piling for foundations (if any)*
- (vi) proposed construction and demolition working hours*
- (vii) hours during the construction and demolition phase when delivery vehicles, or vehicles taking materials, are permitted to enter or leave the site.*

The development shall be carried out in accordance with the approved scheme.

Reason: *To safeguard the amenity of adjoining land uses and occupiers, and in the interests of highway safety. This condition is imposed in accordance with the National Planning Policy Framework, Policies WLP27 and WLP30 of the Waste Local Plan for Berkshire 1998-2006, Policies OVS.5 and OVS.6 of the West Berkshire District Local Plan 1991-2006 (Saved Policies 2007) and Policy 26 of the West Berkshire Minerals and Waste Local Plan. A pre-commencement condition is necessary because insufficient detailed information regarding mitigation measures during the construction phase accompanies the application so it is necessary to approve these details before any development takes place."*

The objective of this document is to meet the requirements of this Condition 6.

Condition 43 states:

"Construction Environmental Management Plan (CMP)

No development shall take place (including demolition, ground works, vegetation clearance) until a Construction Environmental Management Plan (CEMP) has

² Vismundi Ltd. Construction Traffic Management Plan. 10 August 2024. Submitted under Condition 29 of planning permission 20/02029/COMIND 2nd September 2022.

been submitted to and approved in writing by the Local Planning Authority. The CEMP shall include the following:

- a) Risk assessment of potentially damaging construction activities.
- b) Identification of "biodiversity protection zones".
- c) Practical measures (both physical measures and sensitive working practices) to avoid or reduce impacts during construction (may be provided as a set of method statements).
- d) The location and timing of sensitive works to avoid harm to biodiversity features.
- e) The times during construction when specialist ecologists need to be present on site to oversee works.
- f) Responsible persons and lines of communication.
- g) The role and responsibilities on site of an ecological clerk of works (ECoW) or similarly competent person.
- h) Use of protective fences, exclusion barriers and warning signs; and
- i) Details of how the Local Wildlife Site and its associated species will be protected during the construction phase.

The approved CEMP shall be adhered to and implemented throughout the construction period strictly in accordance with the approved details, unless otherwise agreed in writing by the local planning authority.

Reason: To ensure biodiversity is protected during the construction phase of development. This condition is applied in accordance with the National Planning Policy Framework, Policy CS17 of the West Berkshire Core Strategy 2006-2026, Policies WLP27 and WLP30 of the Waste Local Plan for Berkshire 1998-2006 and Policy 20 of the West Berkshire Minerals and Waste Local Plan. A precomment condition is required because the CEMP will need to be adhered to throughout construction."

This Condition will be addressed by the Biodiversity Construction Environmental Plan (see paragraph 1.5 above).

4.3. There are other conditions, which relate to the construction of the Development that shall be adhered to during the construction phase as follows:

- Condition 5 requires that no material deliveries shall take place outside of the hours of Mondays to Saturdays: 06:00 to 19:00 unless agreed in writing with the Local Planning Authority. It should be noted that during commissioning, some continuous working is unavoidable. In the event deliveries to the Site are required outside the time limitations specified here, approval will be sought from WBC;
- Condition 7 states that the throughput associated with the Energy Recovery Centre shall not exceed 150,000 tonnes per annum;
- Condition 8 states:
"No waste shall be treated at the ERC other than residual waste which cannot be reasonably managed further up the waste hierarchy in accordance with a scheme approved from time to time under part (ii) of this condition;
(ii) The ERC facility shall not be brought into use until a scheme has been submitted
to and approved by the local planning authority in writing and which aims to minimise recyclable and reusable waste received at the ERC, showing:
(a) the sources and types of waste to be treated;
(b) the steps to be taken to ensure that (so far as practicable) there will have been prior treatment to ensure as much reusable and recyclable material is removed from that waste, and
(c) arrangements for the review of the scheme at not more than 3 yearly intervals.

(iii) Any scheme approved under part (ii) above shall be implemented in full during the period in which the ERC facility is operational until replaced by a subsequently approved scheme.”

and Condition 10 requires that no more than 130,000 tonnes of the annual throughput for the Energy Recovery Centre shall be sourced from locations other than the existing Waste Transfer Facility (WTF) at Reading Quarry. Condition 11 states that no waste shall be accepted at the site from members of the public.

These Conditions shall be adhered to from the receipt of first waste and throughout the commissioning phase of the Construction Contract and will be contractual requirements on the Principal Contractor.

- Condition 12 requires a record of the monthly receipt of waste (including source and volume) shall be maintained and shall be made available to the Local Planning Authority at any time upon request. to maintain records of all HGVs and collection vehicles entering the site and these records shall be made available for inspection by the Local Planning Authority within two working days of a verbal or written request. This condition shall, apply during construction, with the Construction Contractor maintaining the records concerned. All records will be handed to the Developer and retained for at least five years;
- Condition 13 All loaded (heavy) goods vehicles transporting waste entering/leaving the site shall ensure that the waste is netted, sheeted, or placed within containerised vehicles.
- Condition 15 requires that the ERC shall not be brought into use until the electric links from the ERC to the National Electricity Grid and/or the Data Centre have been constructed and are capable of transmitting the electrical power produced by the ERC. Thereafter, except during periods of maintenance and repair and unless required to do so by the National Grid, no waste shall be processed by the plant unless power is being generated.
- Condition 16 states that the ERC shall not be brought into use until a scheme detailing arrangements for the on-site use of a minimum of 2MW of heat from the ERC has been submitted to and approved in writing by the Local Planning Authority. Following approval, the scheme shall be implemented. Condition 17 requires a Combined Heat and Power (CHP) Feasibility Review, to be carried out before the ERC can be brought into use. Under the requirements of the Environmental Permit, the development will be required to be “CHP Ready” and the development shall be designed to allow heat export without major revision to the plant.
- Condition 18 requires solar panels to be installed and being capable of electrical production through the electrical connection to the Data Centre before the Data Centre is made operational.
- Condition 19 states that the Data Centre shall utilise the building methods for energy efficiency as prescribed in sections 6.1 and 6.2 of the Energy Statement by Stroma Built Environment, dated 05.05.2022. These require the following:

(a) the properties of the building fabric shall meet the requirements of Table 1 below:

Element	ADL2a: 2013 Limiting U- value (W/m ² .K)	Proposed U-value (W/m ² .K)	Improvement (%)
Ground floor	0.25	0.18	28%
External wall	0.35	0.26	26%
Roof	0.25	0.18	28%
Windows	2.20	1.60	27%
Doors	2.20	2.20	0%
Air permeability (m³/h.m² @ 50 Pa)			
Office area	10.0	5.0	50%

Table 1 – Building Fabric Specification

(b) The building services in the offices of the Data Centre shall meet the requirements of Table 2 below:

Element	Specification
Heating	VRF system – - ASHP heating COP = 450%; - ASHP cooling EER = 500%
Hot Water	Electric water heaters
Lighting	Lamp efficacy of 100 lm/W or greater
Lighting Controls	- Occupancy auto-on-off controls have been included to all areas. - Daylight dimming.
Ventilation	Mechanical Ventilation with Heat Recovery will be provided to above spaces with Specific Fan Power (SFP) of 1.1 W/l/s and heat recovery efficiency of 75%.

Table 2 – Building Services Specification

- Condition 20 requires that the Data Centre is not operable until the electrical and heat connections from the RC have been completed and are functional.
- Condition 21 states that all plant, machinery and equipment installed or operated in connection with the development shall be enclosed and/or attenuated that noise generated therefrom does not exceed 5dB[A] below the existing background noise level or 10dB[A] if there is a particular tonal quality [or is intermittent in nature] when measured in accordance with BS4142:2014 at a point one metre external to the nearest residential or noise sensitive property. The noise levels emitted by the ERC and the Data Centre shall be measure on completion of construction as part of the requirements of the construction contract, as required by Condition 22.
- Condition 23 states that notwithstanding any submitted details, the building envelope of the Energy Recovery Centre shall be constructed with "acoustic wall panels/sheets", in addition to acoustic louvres for openings. This requirement will be covered in the Specification to the Construction Contract.
- Condition 25 requires that external lighting shall be approved by WBC before being installed, and thereafter is installed in accordance with the approved scheme.
- Condition 26 requires that no fencing or other enclosure of the ERC shall take place except in accordance with a scheme that shall have been agreed with the Waste Planning Authority.
- Condition 30 states that *"prior to operation of the Energy Recovery Centre, wheel cleaning facilities shall be installed in accordance with details of design, specification and position which shall have been submitted to and approved in writing by the Local Planning Authority. All (heavy) goods vehicles/commercial vehicles leaving the site shall pass through and use the wheel cleaning/washing equipment immediately prior to exiting the site."* Wheel wash facilities shall be installed at commencement of

construction. The requirement for wheel wash once the ERC has been constructed will be discussed with the Waste Planning Authority, however, as this is considered by the Developer to be unnecessary.

- Condition 31 requires that any chemical, oil, fuel, lubricant and other potential pollutants shall be stored in containers which shall be sited on an impervious surface and surrounded by a suitable liquid tight bunded compound. The bunded areas shall be capable of containing 110% of the container's total volume and shall enclose within their curtilage all fill and draw pipes, vents, gauges and sight glasses. The vent pipe should be directed downwards into the bund. There must be no drain through the bund floor or walls. These requirements will be included within the Specification to the Construction Contract.
- Condition 32 requires that repair, maintenance and refuelling of plant and machinery shall, where practicable, only take place on an impervious surface drained to an interceptor and the contents of the interceptor shall be removed from the site. This requirement will be included within the Specification to the Construction Contract.
- Condition 33 requires that no development shall commence until a remediation strategy to deal with the risks associated with contamination of the Site has been submitted to, and approved in writing by, the local planning authority. Insofar as the Site is contaminated, this Condition will be discharged by the Developer prior to commencement of construction.
- Condition 35 states that no drainage systems for the infiltration of surface water to the ground are permitted other than with the written consent of the local planning authority. Any proposals for such systems must be supported by an assessment of the risks to controlled waters. The development shall be carried out in accordance with the approved details. Condition 36 requires that no development takes place until details of sustainable drainage measures to manage surface water within the site have been submitted to and approved in writing by the Local Planning Authority. These Conditions will be discharged by the Developer prior to commencement of construction and the approved schemes included within the Specification to the Construction Contract.
- Condition 37 prohibits discharge of water from the development except treated surface water from the outfall to Englefield Lagoon.
- Condition 38 states that no development on the Site shall be commenced until a pollution prevention plan and maintenance schedule for the septic tank has been submitted and approved in writing by the planning authority. The approved details shall then be fully implemented in accordance with the approved details throughout the lifetime of the development. The Developer will clarify the interpretation of this Condition with the Local Planning Authority and appropriate instruction included within the Specification to the Construction Contract.
- Condition 40 requires tree protection to be installed prior to commencement of construction. The principal Construction Contractor is required to maintain the tree protection during the construction period. In accordance with Condition 41, an arboricultural watching brief will be implemented following a written scheme of site monitoring, approved in writing by the Local Planning Authority.
- Condition 44 requires that prior to occupation of any buildings, a "lighting design strategy for biodiversity" shall be approved in writing by the local planning authority. The Developer will discharge the requirements of this Condition, and the lighting strategy incorporated into the Specification to the Construction Contract.
- Condition 45 limits the validity of ecological reports to 3 years and that on bats to 1 year. In view of the likely construction programme extending beyond these limitations, reviews of the reports will be carried out by the Developer as required during the construction period.
- Condition 46 requires that the assessable elements of the ERC and Data Centre

shall achieve “Very Good” status under BREEAM (or equivalent). The Construction Contractor shall cooperate with the Developer in obtaining the final certificate certifying that the BREEAM or equivalent rating of Very Good has been achieved.

- Condition 47 requires a schedule of the materials to be used in the construction of the external surfaces of the buildings to be submitted to and approved by the Local Planning Authority prior to commencement of construction. The Developer will discharge the requirements of this Condition, and the materials and colour schemes approved incorporated into the Specification to the Construction Contract.
- Conditions 48 and 49 state that construction cannot commence until a comprehensive Emergency Plan for the construction phase and an outline Emergency Plan (presumably for other activities) has been approved by the Local Planning Authority. The Emergency Plans will be submitted to the Local Planning Authority as a separate application to this CMP. The Construction Contractor will be required through the requirements of the construction contract to adhere to the requirements of the approved Emergency Plan and update it as necessary.
- Conditions 52 and 53 require details of the water supply to the Site (including fire hydrants to meet firefighting needs throughout the development and including the installation arrangements and the timing of such installation) have been approved in writing, by the Local Planning Authority and all water network upgrades required to accommodate the additional flows to serve the development have been completed; or development and infrastructure phasing plan have been agreed with the Local Planning Authority in consultation with Thames Water prior to the development being occupied. The Developer will discharge the requirements of this Condition, and the details of the water supply and any upgrades required incorporated into the Specification to the Construction Contract.
- Condition 54 requires a Local Liaison Group to be established for the ERC, as approved by the Local Planning Authority. This Group will be established by the Developer early in the construction phase and the construction contractor shall be required to cooperate in interfacing with the Liaison Group.

The Principal Contractor shall ensure that all the above Conditions are adhered to or have been discharged at the appropriate time in the construction programme, as required. No construction work will start on site until all “pre-commencement” Conditions have been discharged.

5. CONSTRUCTION MANAGEMENT CONSIDERATIONS

5.1. General

- 5.1.1. 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.

5.2. Method Statements

- 5.2.1. This CMP shall be agreed with WBC prior to construction works commencing, in accordance with Condition 6 of the planning consent. The CMP will be implemented through management plans (appended to the CMP) and guided by Good Industry Practice. Detailed method statements will be prepared for the key construction activities by the Principal Contractor and their Subcontractors.
- 5.2.2. The detailed method statements will describe how site preparation, excavation and construction activities will be undertaken (including construction methods and the types of plant equipment required) and will include risk assessments and the

associated environmental, and health and safety issues and mitigations. The method statements shall follow the principles set out within this CMP on environmental matters. A record of all risk assessments and method statements shall be kept on site for the duration of the construction period.

5.2.3. Those activities not covered by method statements shall still be subject to the principles and measures of the CMP and will be implemented through general working practices as directed by the Principal Contractor.

5.2.4. A Permit to Work system shall be applied for those activities where a safe system of work is required established and implemented by the Principal Contractor.

5.2.5. All construction staff working on the Site will be required to follow this CMP and implement the measures to control the environmental impacts during construction. The requirement to comply with the procedures of the CMP shall be included in the contract conditions for each element of the works.

5.3. Environmental Management

5.3.1. The Principal Contractor shall have an established Environmental Management System certified to ISO 14001, with as a minimum the following shall be in place prior to commencement of construction:

- a) An Environmental Policy – to be reviewed annually;
- b) A register of Site environmental legal requirements and other compliance requirements;
- c) Procedures and plans stating how key environmental risks shall be managed;
- d) A competence and training matrix on environmental matters;
- e) A schedule of inspection and monitoring to ensure compliance with this CMP and relevant legal requirements; and
- f) Record-keeping arrangements.

5.3.2. The Principal Contractor shall plan works in advance to ensure they comply with the requirements of this CMP. Such planning shall be documented in method statements and risk assessments written for the key construction activities and where appropriate supplemented by checklists and written observations from site walkovers by Supervisors and the Site Management Team.

5.4. Relevant Environmental Matters and Impacts

5.4.1. The relevant environmental matters that apply to the Site and the impacts arising shall be assessed by the Principal Contractor prior to start of any construction work. This shall consider normal and abnormal operation, such as set-up, breakdown or emergency. The procedure to be undertaken is summarised in Appendix 5, along with an initial site construction environmental risk assessment.

5.5. Monitoring

5.5.1. The Principal Contractor and its sub-contractors on the Site shall include environmental matters in weekly inspections carried out on site.

5.5.2. The Principal Contractor shall prepare and implement an inspection schedule which will include weekly documented inspections. This may be combined with health & safety but shall contain specific inspections to ensure compliance with this CMP. A compliance review of each method statement and associated risk assessment shall be carried out within one week of the relevant construction task commencing to ensure mitigation measures are being implemented.

5.5.3. The Principal Contractor shall designate a person responsible for environmental matters – an “Ecological Clerk of Works” - (which, if appropriate, can be included within the Health & Safety remit), and shall periodically audit the Site to perform as a minimum an internal ISO 14001 compliance audit and carry out regular inspections to ensure compliance the requirements of this CMP.

5.6. Training & Communication

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

5.6.2. The Principal Contractor shall ensure that all subcontractors employ an appropriately qualified and experienced workforce.

5.6.3. The Principal Contractor shall also be responsible for identifying the training needs of personnel to enable appropriate training to be provided. Training will include daily site briefings and toolbox talks to provide the necessary knowledge on health, safety and environmental topics and control measures pertinent to the construction activities being carried out. Such briefings shall be attended by all personnel working on the Site at the time involved in relevant activities.

5.6.4. Comments, feedback, and suggestions from workers will be recorded and followed up using the Site Observation Report (SOR) system. Periodic environmental briefings shall be carried out by the person designated for environmental matters and other appropriate Corporate 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.

5.7. Environmental Documentation

5.7.1. All environmental documentation relevant to the construction 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.

5.7.2. Relevant documentation will include the following:

- Site Weekly Checklist;
- Environmental Matters and Impacts Register – based on outline register in the CMP
- Method Statements and Risk Assessment;
- Construction Environmental Management Plan;
- Site Waste Management Plan;
- Emergency Preparedness Plan;

- Training Matrix.

5.7.3. Weekly inspections shall take place on the Site by the Principal Contractor's representative. The findings of these inspections and any associated actions shall be appropriately documented.

5.8. Legal and Regulatory Requirements

5.8.1. A function of the CMP is to act as a reference point for construction staff of their legal duties and environmental responsibilities during the construction of the development. A list of applicable legislation is contained in Appendix 2. 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.

5.8.2. 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.

5.9. Best Practice Guidance

5.9.1. 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.

6. CONSTRUCTION METHODOLOGY

6.1. Demolition and Site Preparation

6.1.1. 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.

a) Survey of buildings and structures

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.

b) Isolation of all live services

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.

c) Isolate demolition areas

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.

d) Asbestos removal

All identified asbestos containing materials (ACMs), if any, 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 J Mould Ltd at the end of the project.

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.

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.

e) Removal of all soft materials (soft strip)

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 any soft furnishings, floor and ceiling coverings, timber fixtures and fittings. Where necessary to aid transportation of material offsite, recovered components shall be cut into manageable sizes.

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.

f) Removal of all existing, internal plant and equipment

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.

g) Structural demolition of existing structures

Demolition of any structures will be in accordance with an approved demolition method statement. Portal buildings 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 offsite 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.

Structures containing brickwork, structural timbers, joists and trusses will be removed for recovery, 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.

h) Crushing of concrete and masonry

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. Where crushing activities are undertaken, dust suppression measures will be undertaken, in line from the crushed product. Mobile crushers shall be operated in accordance with the Dust, Noise and Vibration Management Plan (DNVMP) presented 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. J Mould Ltd 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 the time.

i) Removal of materials from site

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.

6.2. Establishment of Levels

6.2.1. 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.

6.3. Hidden Services

6.3.1. Prior to excavation the 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.

6.4. Construction Method Statements

6.4.1. Prior to commencement of the works, a specific method statement and associated risk assessment shall be in place as per the Principal Contractor procedures. The method statement and risk assessments shall be updated as required as works progress.

6.4.2. Compliance with the method statement and risk assessment shall be checked regularly by the relevant construction supervisor for the works concerned. In addition, person responsible for environmental matters shall complete a compliance check within 7 days of the work commencing.

6.4.3. All method statements and associated risk assessments shall adhere to the principles within this CMP and associated documents.

6.5. Sequence of Construction

6.5.1. The construction of the ERC is significantly more complex than that of the Data Centre. This section of the CMP will, therefore, concentrate on the ERC, although the principles set out will apply to both. At time of writing this CMP, it is not clear on the timing of the construction of the Data Centre relative to the ERC. It is likely, however, that the Data Centre will follow the ERC.

6.5.2. An indication of the construction sequence is presented below together with an indicative timeframe. Some of the phases will overlap, however, and the programme is subject to change and finalisation when the Principal Contractor is formally appointed. The anticipated duration of the main construction of the ERC is approximately 22 months, with commissioning and testing taking the overall construction period to 36 months. It is of note that the Traffic Assessment³ submitted with the planning application considered the main construction only (Phases 1 and 2) as during the commissioning and testing period the facility will be virtually under normal operation with no construction HGV movements but will be accepting and treating wastes. This is also reflected in the CTMP.

6.5.3. The construction programme for the Data Centre is anticipated to take 20 months. It is possible that installation, commissioning and testing of some equipment will extend significantly beyond this timescale but will be carried out within the completed building and not require significant HGV traffic movements. It will be possible, therefore, for the Principal Contractor to hand over the facility to the owner and the construction period cease whilst equipment is still being installed. Indeed, it is

³ Key Transport Consultants Ltd. Proposed Energy Recovery Centre and Data Centre, Reading Quarry, Berrys Lane, Reading. Transport Assessment and Travel Plan Statement Addendum. December 2021.

possible that some equipment will not be installed under there is server demand for it, but this will not have any significant impact outside the building.

Construction Phase 1 – Enabling and Preliminary Works

6.5.4. Enabling works will be carried out prior to commencement of the main construction phase to ensure the main construction works can be undertaken without logistical restrictions. It is anticipated that these will take to between up to 5 months and comprise:

- Site surveys;
- Installation of tree protection and safety fencing;
- Clearance and re-profiling of the site for the new development;
- Connection of temporary services for use during construction;
- Remediation of the Site, if required;
- Creation of temporary compounds

6.5.5. Following removal of any hard surface, the site will be prepared to a level plateau. In the event there are excess soils, a cut and fill exercise will 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, surface water storage 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.

6.5.6. 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 Phase 2 - Main Civils, Mechanical and Electrical Construction

6.5.7. The indicative duration of Phase is from months 5 to 22 and will comprise:

- Piling (to form the waste bunker walls) 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.

6.5.8. In line with Conditions 7 and 33 of planning permission 20/02029/COMIND, a contaminated land assessment, associated remedial strategy and timetable of works, will have already been approved by WBC to the extent required.

6.5.9. Piling to form the support for the ERC sub-structure will be carried out by a suitably experienced contractor. Details of any penetrative method, piling or foundation works shall be submitted to and approved by WBC prior to such works taking place. It is unlikely that piling will be required for the Data Centre. Should this change, however, the piling strategy will be submitted to WBC prior to any penetrative works taking place.

6.5.10. In view of the water table, a secant pile wall may be required for the ERC waste storage bunker and boiler house excavations. The hard/firm secant pile wall will comprise primary female piles of a diameter to be determined using C8/10 concrete and formed by continuous flight auger (CFA) techniques. To ensure verticality over

the retained height hard secondary male piles will be cut into the female piles using rotary bored piling techniques. The secant pile wall will be supported at capping beam level by permanent double corrosion protection (DCP) ground anchors, being a diameter bore filled with a neat cement grout diameter drawn wire strands. The design ground to grout bond value to the soil will be calculated by empirical methods and reference to published data, validated by testing of preliminary sacrificial ground anchors in advance of construction.

6.5.11. 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 1.

6.5.12. The construction of the process buildings and installation of the necessary plant and equipment will comprise:

- the construction of reinforced concrete (RC) foundations, structures and buildings;
- the construction of the ERC concrete bunker;
- erection of tower cranes;
- creation of site roads / hardstanding;
- installation of the electrical substation and connection to the SSEN network;
- erection of steelwork;
- installation of process equipment and pipework;
- electrical installation including cabling and switchgear;
- installation of control equipment & instrumentation; and
- internal fit-out.

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

6.5.14. 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 WBC Planning Department and submit for approval a Method Statement describing the activity to be carried out, locations and the mitigation measures to be applied.

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

Phase 3 – Commissioning, Introduction of First Waste and Testing

6.5.16. Phase 3 of the construction will be carried out approximately between months 22 to 36 of the ERC construction programme and months 15 to 20 of the Data Centre construction programme.

6.5.17. Phase 3 works for the ERC comprise:

- commissioning and testing of components;
- boiler cleaning and steam blow;
- introduction of process chemicals;
- agreeing clearance of environmental permit pre-conditions with the Environment Agency;

- introduction of first waste;
- energisation of the plant;
- testing of systems, reliability runs and completion of the operating plant;
- take-over test, performance test and availability test.

6.5.18. In the case of the Data Centre, Phase 3 will consist of server systems start-up, functional testing and integration of the equipment and security systems.

6.5.19. Construction of each facility will be completed when that facility (ERC or Data Centre) is fully tested and taken over by the Owner in accordance with the relevant construction contract.

6.5.20. Much of the work during this phase will be within the building, nevertheless, the controls required by this CMP will continue to be applied until Take Over and the construction period is complete.

6.6. Plant and Machinery

6.6.1. A range of plant and equipment will be used for the main construction of the new development. An indicative range of plant and equipment is shown in Table 6/1:

Plant & Equipment	Piling & Foundation Works	Building and General Site Activities
Compressors	6	6
Hand Held Pneumatic Breaker	1	0
Dump Truck	5	1
Water Pump	2	2
80T Crawler Crane	3	0
Hand-Held Welder (welding piles)	1	0
Generator for Welding	1	1
Wheeled Backhoe Loader	0	2
Tracked Excavator	5	2
Concrete Mixer Truck	Utilised, not site based	Utilised, not site based
Truck Mounted Concrete Pump and Boom Arm	3	3
Concrete Pump	2	1
Poker Vibrator	0	1
Wheeled Mobile Telescopic Crane	4	4
Tower Crane	2	2
Lifting Platform	0	2
Fork Lift Truck	0	4
Mini Tracked Excavator	0	1
Electric Core Drill (Drilling Concrete)	0	1
Concrete Floor Cutter	0	1
Diesel Generator for Site Cabins	4	4

Diesel Generator for Site Lighting	2	2
Road Sweeper	1	1
Angle Grinder	1	1
Road Planer (road construction)	0	1
Vibratory Compactor (asphalt)	0	1
Asphalt Paver + Tipper Lorry	0	2
Electric Water Pump	2	2

Table 6/1 – Indicative Range of Equipment

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

6.7. Roles and Responsibilities

6.7.1. The roles and responsibilities of the key construction management personnel shall be as follows:

a) Project Manager

The Project Manager shall:

- Hold overall responsibility for Project Environmental and Health & Safety requirements and for the achievement of the Project objectives;
- Ensure that the Environmental and Health & Safety HSE Management Systems are implemented throughout all phases of the Project;
- Ensure that sufficient and competent resources, human and material, are allocated for all Environmental and Health & Safety requirements;
- Monitor the Project Environmental and Health & Safety performance.

b) Site Manager

The Site Manager has overall responsibility for the 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 CMP are implemented.

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.

c) Environmental and Health & Safety Manager(s)

A full time Health & Safety (HSE) Manager will be employed on site. Responsibility for implementing and enforcing environmental matters may be delegated to the HSE Manager or such person nominated by the

Principal Contractor. The assistance of the specialist advisor(s) may be used as required. The responsible person shall:

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

d) Supervisors

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.

e) Corporate Environmental Manager

A Corporate Environmental Manager shall be engaged with the construction with the following responsibilities:

- 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 CMP and other Project compliance requirements; and
- Ensure any actions resulting from such inspections will be tracked and closed out in a timely manner.

f) Environmental Specialist

In the event specialist environmental support is required and an external consultant is appointed, the Principal Contractor shall ensure that suitably qualified and experienced specialists are engaged.

g) Logistics Manager

A Logistics Manager shall support the implementation of the relevant sections of the traffic management plan to ensure that transport is managed appropriately on site. The logistics Manager shall ensure that movements of vehicles to site comply with the routing requirements and that deliveries are managed properly in accordance with the CTMP.

6.8. Working Hours

6.8.1. 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 the 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.

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

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

6.8.4. 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 WBC. Whenever possible, agreement will be sought at least one month in advance, unless associated with an emergency.

6.8.5. Where required, a Section 61 consent application, will be submitted to WBC as the applicable authority, or a method statement agreed in line with the Control of Pollution Act 1974.

6.8.6. Notices shall be posted on the Site boundary to advise local businesses and residents of such exceptional works to be carried out.

7. LAYDOWN AND WELFARE FACILITIES

7.1. Laydown Area and Construction Compound

7.1.1. Adequate open area is required for the laydown of equipment prior to installation, and facilities for local fabrication. In addition, an area is also required for the accommodation of construction staff (construction management offices, operational staff, car parking, welfare, canteen, drying rooms and visitors).

7.1.2. Land area in addition to the Site will be procured by the developer, suitable for housing these activities. The arrangement for the Laydown Area and Construction Compound is described in the CTMP and will generally be set out as follows:

- Cabins for staff and visitor accommodation will consist of multiple storey prefabricated cabins. Once welfare facilities are in place, a cleansing subcontractor shall be engaged to clean them on a daily basis.
- Once the number of workers on site exceeds a threshold (typically 100 workers) a canteen shall be provided serving hot and cold food and a medic will be present on-site during daytime working hours.
- Construction laydown and fabrication shall be allocated to optimise safe offloading as indicated in the CTMP. Pedestrian routes shall exist between the construction office area and the laydown and fabrication areas.
- Local laydown on the Site, close to immediate works shall also be used.

8. GENERAL SITE LAYOUT AND GOOD HOUSEKEEPING

8.1. Good Housekeeping

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

- All working areas shall be kept in a clean and tidy condition;
- Adequate welfare facilities shall be provided for all construction staff;
- Smoking shall not be permitted within the construction site;
- Wheel washing facilities shall be provided at an appropriate location close to the exit from the Site and will be maintained to ensure it remains effective;
- Open fires on Site are prohibited at all times;
- All necessary measures shall 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 Appendix 3).

8.2. Site Entry and Exit

8.2.1. Immediately following mobilisation of the Principal Contractor, the entry to the Site shall be controlled and security shall operate 24 hours per day. Security personnel, when present, shall also undertake periodic perimeter patrols at agreed intervals.

8.2.2. The control of traffic entering and exiting the Site is described in the CTMP. 24-hour security shall be positioned at the Site entrance to ensure that no unauthorised vehicles/personnel can enter the construction Site. A similar situation shall apply to the Laydown Area and Construction Compound.

8.2.3. Vehicles shall not be permitted to block the entrance way or queue on the highway.

8.3. Site Security and Fencing

8.3.1. The site boundary will be securely fenced with palisade fencing. This shall be maintained through the construction programme until replaced. Due to the context of the site, additional hoarding is not considered necessary.

8.3.2. The access will be gated and secured. Plant and machinery shall be immobilised overnight and stored appropriately.

8.4. Lighting

8.4.1. 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.

8.4.2. External lighting of the construction area shall be designed and positioned to:

- Provide the necessary levels of light for safe working;

- Enable lighting to be switched off when not required for safety purposes;
- Keep 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.
- In accordance with the Bat Conservation Trust recommendations, lighting will be directed away from features with potential for roosting, foraging and commuting bats.
- Lighting during construction will take into account 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.

8.5. Management of Wastes

8.5.1. Waste shall be managed in accordance with the principles of the waste management hierarchy (i.e. avoid, reduce, reuse, recycle, recover, disposal). A preliminary Site Waste Management Plan is provided in Appendix 3 stating how waste shall be managed on site.

8.5.2. All waste shall be transported, recycled and disposed of by appropriately licenced contractors and subject to Duty of Care.

8.6. Pest Control

8.6.1. Although it is unusual for pest infestation to occur on construction sites, risk of pests and vermin infestation shall be reduced by ensuring that food waste (from the welfare facilities) or other putrescible waste is stored appropriately and is collected regularly (at least weekly), and effective preventative pest control measures are implemented. Should such infestation occur, it shall be dealt with promptly and notified to the local authority as soon as practicable.

8.6.2. In order to complete commissioning of the ERC, waste will need to be imported into the Site and stored prior to being burnt in the furnace. At this point the Pest Management Plan shall be implemented by the Principal Contractor in accordance with, and as approved under planning permission Condition 24.

9. CONSTRUCTION STAFF

9.1. General

9.1.1. The number of construction staff employed on the Site will vary throughout the construction period, depending on the activities being carried out on Site in accordance with the construction programme.

9.1.2. In addition to day-to-day variations in staffing demand, different construction contract elements or “trades” on site will operate different staff shift patterns within the working hours day-time construction window. Such operation will allow for the ‘spreading’ of construction travel demand and thereby reduce the impact during maximum ‘network peak’ background demand periods. Typically, however, most construction staff will operate an early start operation (with most staff members being at work before 08:00).

9.1.3. Traffic control and anticipated vehicle movements in and out of the Site are described in the CTMP. The construction manager shall ensure that all construction staff are made aware of the CTMP and its objectives in enhancing safety and minimising impacts on the environment. HGV deliveries shall be strictly controlled to ensure deliveries are only made during times stipulated above and have taken into consideration the requirements of the Construction Environmental Management Plan

9.2. Emergency Planning and Procedures

9.2.1. Emergency procedures shall be developed by the Principal Contractor considering the anticipated hazards of the construction site consistent with the Emergency Plans agreed with WBC under Conditions 48 and 49 of the Planning Permission. 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.

9.2.2. The construction emergency plan shall 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 shall be communicated to all personnel during induction.

9.2.3. General control measures shall 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.

9.2.4. 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.

9.2.5. The Construction Emergency 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.

9.3. Communications

9.3.1. As part of the environmental management system, communication and engagement of communities, neighbours and interested parties shall be implemented 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.

9.3.2. A site notice board shall be erected close to the Site entrance that meets statutory requirements and sets out key facts about the construction programme, where further information can be found and the contact details for the key members of the construction team;

9.3.3. Occupiers of nearby properties shall be informed through letter-drops 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.

10. ENVIRONMENTAL CONTROL PLANS

10.1. Ecological Enhancement and Landscape

10.1.1. Prior to commencement of the construction works the Principal Contractor shall familiarise himself with the requirements of the Landscape and Ecological Management Plan (LEMP) and BCEP, approved by WBC under Conditions 42 and 43 respectively of the Planning Permission 20/02029/COMIND and any associated documents.

10.2. Water Management and Protection of Watercourses

10.2.1. The Principal Contractor shall implement working methods to protect surface and groundwater from pollution and other adverse impacts including change to flow volume, water levels and quality. 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'.

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

10.2.3. All hazardous substances (both liquids and solids) shall be stored within impermeable, bunded areas, to remove the risk of migration to groundwater or nearby watercourses. The measures proposed will assist in avoiding or minimising the potential for contaminants and suspended solids to migrate to surface and groundwater, reduce localised flood risk, and protect water quality and the ecosystems the water resources support.

10.2.4. Protection measures to control the risk of pollution to groundwater shall be consistent with the Environment Agency's "Approach to Groundwater Protection" February 2018 version 1.2.

10.2.5. Where reasonably practicable, the use of materials that could pollute groundwater shall be avoided. This includes special consideration for the use of substances contained within List I and II of the Groundwater Regulations SI 1998/2746 (Groundwater Directive: 80/68/EEC). the Principal Contractor shall develop and implement pollution control procedures in line with the regulations and guidance, and appropriate training for all construction staff. The following measures shall be put in place to prevent pollution and conform to best practice:

- the handling, use and storage of hazardous materials to be undertaken in accordance with:
 - [Pollution Prevention and Control Act 1999](#);
 - [Control of Major Accident Hazard Regulations 1999](#);
 - Environment Agency “Protect groundwater and prevent groundwater pollution” 2017.
- adequately bunded and secure areas with impervious walls and floor shall be provided for the temporary storage of fuel, oil and chemicals on site during construction;
- any containers of contaminating substances on site shall be leak-proof and kept in a safe and secure building or compound from which they cannot leak, spill or be open to vandalism. The containers will be protected by temporary impermeable bunds with a capacity of 110% of the maximum stored volume. Areas for transfer of contaminating substances will be similarly protected;
- drip trays shall be used to collect leaks from diesel pumps or from standing plant;
- oil interceptor(s) shall be fitted to all temporary discharge points and for discharge from any temporary oil storage/ refuelling areas;
- provision of spill containment equipment such as absorbent material on site;
- restrictions on use of machinery near adjacent water bodies;
- the treatment of any runoff from development areas with elevated suspended solids prior to discharge. Approval will be obtained from the EA and Independent Drainage Board for any discharges to controlled waters. Treatment measures could include perimeter cut-off ditches, settlement lagoons, overland flow and/or settlement tanks;
- wheel wash facilities to be provided for vehicles moving to and from the Site at all entry and exit points. Silty water from wheel-washes will require appropriate disposal to prevent unacceptable levels of suspended solids entering any nearby surface water bodies. Wheel washing facilities should be located as far from surface waters as possible;
- if dewatering is required in any part of the construction Site, pumped groundwater will be disposed of appropriately according to the Environment Agency Pollution Prevention Guidelines;
- the reseeded of cleared land as soon as practicable, to minimise exposed land and the entrainment of sediment by overland flow; and this can be managed by ensuring construction plant/ materials are stored on hard-standing surfaces where possible. Where this is unavoidable, the Contractor will ensure any compacted soil is loosened as soon as possible following completion of the works;
- attenuation tanks for drainage catchment shall be constructed early in the construction programme and used to attenuate and store run-off from the Site during construction to prevent contamination of surface and ground waters;
- within site accommodation, taps shall be switched off when not in use and all staff shall be made aware of water saving techniques. Every effort to ensure reduction in water use shall be implemented where available;
- the Site Manager appointed Ecological Clerk of Works shall assure themselves

that this CMP is being effectively implemented by carrying out a monitoring programme. This monitoring shall be as follows:

- a. Short term surveillance monitoring shall be undertaken in advance of construction in order to establish a baseline. The short-term surveillance monitoring shall include specific water quality monitoring for shallow groundwater and surface water and assessment of existing Water Framework Directive data regarding the ecological status of the watercourse;
 - b. Further surveillance monitoring shall then be undertaken during construction. Regular weekly monitoring and water sampling shall be undertaken at specific points. These inspections shall include as a minimum visual reference, turbidity and pH levels;
 - c. In addition to this, during the more environmentally risky operations such as piling or concrete placement, any streams shall be continually visually monitored for turbidity and any impending risk of contamination. Plant maintenance checks shall also be increased in frequency during these operations;
- In periods of heavy rainfall or excessive vehicle movements within the vicinity, monitoring shall be increased to reduce risks of pollution incidents;
 - Construction of concrete structures during the construction phase shall be monitored to prevent associated contaminated material entering any watercourses. Pre-cast work or permanent formwork shall be used where possible to reduce the amount of in situ concreting required adjacent to and above the watercourses. Washing out of concrete wagons or other equipment used in concreting operations shall only be undertaken in designated contained washout areas. These shall be located away from all watercourses and drains and shall be impermeable to prevent infiltration to ground;
 - Prior to commencement of piling activities, a foundation works risk assessment shall be prepared by the Contractor to confirm that the risk of contamination of any aquifer is negligible;
 - Where over pumping is required, the water shall be put through an appropriate sized settlement tank, the flow rate set up shall allow appropriate timescales for settlement. If the discharge is still showing as heavily silted, then one or more 'Silt buster' settlement tanks shall be used with flocculants if appropriate;
 - Permission for any dewatering activities shall be sought from the EA in advance of the dewatering activity commencing;

10.3. Drainage

10.3.1. The drainage strategy for the Site is set out Enzygo drawing CRM 1144.010-101-P06 (Surface and Foul Water Drainage Strategy). Site drainage, including surface runoff and dewatering effluents, shall be managed in accordance with the Drainage Plan.

10.3.2. The general control of Site drainage shall meet the requirements of the relevant sections of BS6031:2009 "Code of Practice for Earthworks".

10.3.3. During construction protection measures to control the risk of pollution to surface

water shall be adopted, including:

- All refuelling, oiling and greasing shall take place above drip trays or on an impermeable surface which provides protection to underground strata and watercourses and away from drains as far as reasonably practicable. Vehicles must not be left unattended during refuelling;
- Only construction equipment and vehicles free of oil/fuel leaks which could cause material contamination will be permitted on site. Drip trays will be placed below static mechanical equipment;
- All wash down of vehicles and equipment shall take place in designated areas and wash water will be prevented from passing untreated into watercourses and will comply with Pollution Prevention Guidance;
- As far as reasonably practicable, only biodegradable hydraulic oils shall be used in equipment working in or over watercourses;
- Appropriate measures will be taken to protect erodible earthwork surfaces.

10.3.4. The Principal Contractor shall adopt the following pollution control measures:

- Areas with prevalent run-off shall be identified and drainage will be actively managed, e.g. through bunding and/or temporary drainage;
- Machinery shall 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.
- Storage areas of hazardous substances (including oils and chemicals) shall be bunded to minimise the risk of hazardous substances entering the drainage system or the local watercourses. Additionally, the bunded areas shall 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.
- Designated areas for the unloading, storage and handling of materials (including the storage of oils/fuels/chemicals) shall be sited away from surface watercourses. Storage containers will be appropriate for the materials being stored and all products will be clearly marked.
- Any leaks or spillages of potentially polluting substances shall 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.
- Surface water run-off on site shall be controlled. Silty water shall be managed to allow suspended solids to settle out if required to prevent silty water discharge to sewer. Treatment is likely to include settlement tanks (e.g. siltbuster) or lagoons or a combination of both.
- Washing out concrete shall only take place in dedicated areas on the site: the wash out areas will be bunded and the water removed for treatment.

- Site wheel washing facilities shall be located away from watercourses and any waste water will undergo settlement and taken off site as waste.
- No direct discharges of liquids or materials into the nearby watercourses shall be permitted.
- In the event contamination is found, measures shall 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.

10.4. Refuelling of Plant and Vehicles

10.4.1. The Principal Contractor shall install a central fuel point for the use be all contractors on Site or in the Construction Compound. This shall be on a concrete base for contractors to store their double banded bowzers or fuel cubes. Any fuel bowzers utilised for refuelling large plant equipment such as cranes shall be limited to 2000L to ensure that the fuel spillage and fire risk profile is not elevated during construction.

10.4.2. Refuelling activities shall adhere to the following:

- A risk assessment shall be developed and implemented for refuelling using mobile bowzers, fixed installations and 'jerry can' type containers. Only proprietary fuel bowzers 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 shall be 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 trays 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.

10.5. Dust, Noise and Vibration

10.5.1. The construction activities on the Site may lead to potential creation of dust and be the source of noise and vibration. A Dust, Noise and Vibration Management Plan has is presented in Appendix 1 based on the guidance from the Institute of Air Quality Management.

10.5.2. Good construction practices, in accordance with Best Practicable Means of Section 72 of the CoPA 1974 (as amended) will be applied to minimise noise and vibration emissions during the construction of the REC. The measures will include:

- the use of quieter alternative methods, plant and equipment, where reasonably practicable;
- plant, ancillary plant, equipment, site offices, storage areas and worksites will be positioned away from existing noise sensitive receptors, where reasonably practicable;
- portable acoustic enclosures/screens will be used for static activities where necessary and practicable;
- all construction plant and equipment will comply with noise emission limits;
- machinery in intermittent use will be shut down in the intervening periods between works or throttled down to a minimum;
- no plant or machinery engines will be left running unnecessarily;
- materials will be handled as carefully as possible when loading lorries and skips to minimise noise;
- as far as reasonably practicable, the noise from reversing alarms will be controlled and limited (e.g. setting reversing alarms to the minimum output noise levels required for health and safety compliance);
- all vehicles, plant and equipment will be maintained and operated in an appropriate manner, to ensure that extraneous noise from mechanical vibration, creaking and squeaking is kept to a minimum; and
- as far as reasonably practicable, any plant or machinery fitted with noise control equipment found to be defective will not be operated until repaired.

10.5.3. Detailed design and initial site investigation have confirmed that percussive piling is not required to construct building foundations, therefore, a piling methodology is not required.

APPENDIX 1

BERRYS LANE ENERGY RECOVERY CENTRE

NOISE, VIBRATION AND DUST MANAGEMENT PLAN

1. Introduction

1.1. Purpose

- 1.1.1. This document sets out a Plan for the management of Dust, Noise and Vibration (the “Plan”) during construction activities at the Berrys Lane Energy Centre, including both the Energy Recovery Center (ERC) and the Data Centre.
- 1.1.2. It 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 Centre and uses good industry practice. This document also outlines monitoring to ensure that the mitigations and controls are in place and effective.
- 1.1.3. This Plan should be read together with the Construction Environmental Management Plan (CMP) and shall form and be covered by the Site Environmental Management System under ISO14001: 2015.

1.2. Scope

- 1.2.1. The Principal Contractor as well as any contractors, and their subcontractors working on site shall comply with the requirements set out in this document.
- 1.2.2. This document applies to the management of the construction Site and the Construction Compound and Laydown Areas.

1.3. Working Hours

- 1.3.1. Core working hours shall be as set out in the CMP, with some continuous processes or non-intrusive and internal activities such as fit out, radiography testing and commissioning to be undertaken outside these hours.
- 1.3.2. In the event that works are required outside of core working hours e.g. for the continuous concrete pouring or boiler cleaning, this shall be notified to WBC prior to commencement of the activity, where practical, one month in advance.

2. Legal and Other Requirements

- 2.1. This Dust, Noise and Vibration Plan 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);

3. Sensitive Receptors

- 3.1. The construction site is located on Berrys Lane, Burghfield, adjacent to other industrial sites and bordered on its southern boundary by the M4 motorway.
- 3.2. 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.

- 3.3. 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.
- 3.4. On this basis, to ensure a worse-case scenario, consideration shall be given to sensitive receptors within 350 m of the Site being the area within the red square indicated on Figure A1.



Figure A1 – Area for sensitive receptors of the construction site

4. Roles and Responsibilities

- 4.1. It is the responsibility of all site personnel to reduce potential nuisance from the Site by following the mitigation measures detailed in this Plan. In addition, the following responsibilities shall apply to the following personnel appointed by the Principal Contractor:

Site Manager

- The Principal Contractor's Site Manager shall be responsible for:
 - Ensuring a system is implemented that identifies and manages 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 Authorities; and
 - Shall ensure an appropriate representative from Principal Contractor organisation attends Community Liaison Meetings.

Site HSE/Environmental Manager

- The Site HSE/Environmental Manager shall be responsible for:
 - Ensuring nuisance monitoring is carried out on site as per this Plan;
 - Ensuring any complaints or incidents relating to nuisance are reported and handled as per the Complaints Procedure and this Plan;

- Raising concerns or opportunities for improvement with management team; and
- Ensuring induction and awareness training is carried out as detailed in this Plan.

Site Supervisor

- Each Site Supervisor shall be responsible for ensuring work and Subcontractors within their scope comply with the requirements of this Plan;
- 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;
- Maintain a bowser / water cannons on site to dampen down any dust.

5. Noise and Vibration

- 5.1. Noise emissions are likely to be highest at the earlier stages of works i.e. during site preparation (including demolition), civils works and during steel erection, and will decrease during the fit-out stages. During the commissioning there will be steam blows (through a silencer) to clean the boiler for operations.
- 5.2. For the majority of the construction period, plant on-site will consist of 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.
- 5.3. Depending upon the method used, piling has the potential to cause vibration that would be noticeable on-site. Vibration effects shall be minimised where possible. Where there is any change to the proposed method of foundation construction (involving more piling or vibro-compaction) which is likely to transmit vibration, WBC will be consulted with the potential changes.
- 5.4. There will be very little change to the evening, night-time and weekend baseline noise conditions as most construction activities will be outside of these more sensitive periods.
- 5.5. Potentially high noise generating activities such as steel erection shall be limited to the core work hours. Quieter activities such as internal fit-out and any radiographic testing can be undertaken outside of core hours.
- 5.6. Activities such as Concrete slip forming for the bunker may require a continuous pouring of concrete (24 hours) and will therefore require to be undertaken outside of core construction hours. Best practicable means as advised in BS 5228:2009 shall be utilised for this process to minimise the noise impact from these activities when required.
- 5.7. 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:
- 5.8. In the event a complaint of excess noise is received, the incident shall be thoroughly investigated and appropriate mitigation measures applied.

Fixed and Mobile Plant

- 5.9. All vehicles, plant and equipment shall be maintained and operated in an appropriate manner, to ensure that extraneous noise from mechanical vibration, creaking and squeaking is kept to a minimum.
- 5.10. Use of quiet working methods and the most suitable plant shall be adopted where reasonably practicable;
- 5.11. Where the noise emitter cannot be sufficiently distanced from a sensitive receptor, acoustic screens, enclosures or acoustic attachments to machinery shall be used;
- 5.12. Where practicable, mobile plant that is known to emit loud noise shall be oriented fixed in the optimal direction away from sensitive receptors;
- 5.13. Reversing of mobile plant shall be minimised as much as practicable for example by use of a one-way system to reduce noise from reversing alarms. If necessary, white spectrum / low noise reversing beacons, shall be used and acoustic covers to engines shall be closed when the plant is in use;
- 5.14. Machinery shall be switched off when not in use.

Piling

- 5.15. Although piling on the Site will be limited, lower low vibration piling shall be used if practical, (eg. Continuous Flight Auger (CFA) piles) in preference to impact piling;

Slip-forming

- 5.16. During concrete pouring of the bunker 24-hour working may be required and a separate request shall be made to WBC for written consent prior to work.
- 5.17. Where noisy work is to be undertaken outside the permitted working hours the Principal Contractor shall use best practicable means as advised in BS 5228:2009 for this process to minimise the noise impact from these activities when required. All Principal Contractor and relevant Subcontractor personnel shall be instructed on these measures to reduce noise and vibration as part of their Slipform induction. As a minimum, the mitigations detailed below shall be implemented:
 - Equipment shall be well-maintained and used in a mode of operation that minimises noise;
 - No rattle guns or grinders will be used after 20.00 hrs, after which bolts shall be manually torqued;
 - Works shall be staggered so that noisy operations are carried out where practicable during daytime hours;
 - Plant and equipment shall be shut down when not in use;
 - Semi-static equipment shall be sited and orientated as far as is reasonably practicable away from occupied buildings and will be fitted with suitable enclosures where feasible;
 - Materials shall be handled in a manner that minimises noise as far as reasonably

practicable;

- Letter drops shall be made to neighbouring businesses when abnormal hours works are to be carried out;
- If possible, electric power shall be taken from mains supplies to reduce use of diesel generators.

6. Dust

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

- 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.

6.2. 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.

6.3. The main effect of any dust emissions, if not mitigated, can be annoyance due to soiling of surfaces, particularly windows, cars and items stored outside.

6.4. Potential sources of dust created by construction and the methods of mitigation that the Principal Contractor shall take to reduce these impacts, are detailed below.

- 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.
- Continuous dust level meters to be set up on boundary fence to monitor PM2.5 and PM10 levels 24 hours per day;
- 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;
- Prior to any scabbling of concrete, debris shall be removed / swept from surfaces;
- Minimising drop heights when unloading materials.

Construction Traffic

- Laying tarmac or stoning areas near public roads shall be carried out as soon as practicable to minimise trafficking of mud or dust off site;
- All loads entering and leaving the site with potential to generate dust during transport shall be covered;
- A wheel wash for all vehicles leaving the site where mud or dust risks being entrained on the shared access / public road shall be maintained at least until all vehicle routes around the Site are hard surfaced. The effectiveness of the wheel wash shall be monitored to ensure it remains effective and sediment shall be removed from the sump on a regular basis;
- Water assisted sweeping of Sandall Stones Road shall be carried out as necessary to maintain it in a clean condition. Site roads shall be dampened down and maintained in a condition such that no dust nuisance occurs;
- Unnecessary idling of vehicle engines shall be prohibited.

Stockpiling

- No stockpile shall be higher than 4 metres;
- Stockpiles of potentially dust creating materials shall be damped down along with other dust-generating works where practicable during dry and windy conditions. Dust creating materials shall be covered to prevent dust migration as an integral part of stockpile management and offsite transportation of dusty materials;
- Exposed soils shall be covered or re-vegetated as soon as practicable;
- Any stockpiles of earth likely to be retained on site for longer than five months shall be grass seeded;

7. Reporting

- 7.1. The Principal Contractor shall address any complaints relating to noise, dust or vibration. Where requested, corrective actions shall be communicated or agreed between the Principal Contractor and the WBC Environmental Health Officer.

APPENDIX 2**APPLICABLE LEGISLATION****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 3

BERRYS LANE ENERGY CENTRE

SITE WASTE MANAGEMENT PLAN

1. PROJECT INFORMATION

1.1. Project Name

Berrys Lane Energy Centre

1.2. Location

Reading Quarry
Berrys Lane
Burghfield
Reading
RG30 3EY

1.3. Nature Of Project

The construction and commissioning of (a) a new combustion Energy from Waste combustion and electrical generating plant, consisting of a single line and (b) a Data Centre. Each to be constructed and operated independent from, but adjacent to, each other.

2. OBJECTIVE OF THE SWMP

2.1. In accordance with the requirements of the Construction Environmental Management Plan (CMP), the purpose of this construction Site Waste Management Plan (SWMP) is to improve resource efficiency on the construction sites by reducing the overall amount of waste produced and to recover as much as possible of the remainder. It seeks to do this by encouraging the construction activity to:

- using less material;
- avoiding and reduce waste;
- reusing materials;
- recovering wastes by recycling into new products or applications;
- selecting manufactured products with recycled content.

2.2. In the design phase, all reasonable steps shall be taken to eliminate waste during construction. For example, access roads shall be defined and hard-standings identified for waste segregation and storage.

2.3. This plan shall be implemented by the Principal Contractor and followed by all personnel working on the construction Site. Compliance with the SWMP shall be included within the conditions of contract agreed with the construction contractor.

3. SCOPE

3.1. This SWMP provides the following information:

- the general principles to be followed by the construction contractor regarding waste management on the construction site;
- general site information, including nomination of responsibility for the SWMP;
- an outline of the type of wastes that will be created by the construction, including identification of the potential for the wastes being re-used, recycled or disposed and the details of typical waste carriers to be used to remove the waste from site; and

- the activities, processes and procedures required to ensure responsible and sustainable waste management practices are deployed throughout the construction and commissioning phase of the plant development;
- general details about waste storage and location of waste records,

4. SITE MANAGEMENT

4.1. The Principal Contractor's Site Manager shall be responsible for the implementation of the SWMP and for ensuring it is complied with throughout the construction phase. The responsibilities of the Site Manager with regard to environmental management on the Site are described in Section 4.1 of the CMP.

4.2. The Site Manager shall appoint a site Waste Manager with responsibility for waste management on site prior to commencement of site works. The responsibilities of the Waste Manager shall include, but not be limited to;

- Ensuring that all staff and contractors are aware of site requirements for management of waste. All staff and subcontractors shall be required to attend a short introductory session on waste management principles;
- Monitoring of material and waste tonnages;
- Liaison with waste contractors regarding removal of waste from site;
- Identifying and dealing with any hazardous wastes that may be generated;
- Liaison with the design team and the Project Manager to ensure that materials are managed in the most sustainable manner possible;
- Ensuring that a weekly log is completed of the quantity and type of all materials that enter and leave the site, and that reports are received from waste contractors who remove waste from the site.

5. COMMUNICATION OF THE SWMP

5.1. A copy of this Plan shall be retained within the Site and be freely available at the Site Office at all times.

5.2. The Site Manager shall ensure that as a minimum, the following hold copies of this Plan:

- the Client;
- the Construction Supervisors;
- all Subcontractors;
- the Owner under the EPC Contract Management .

5.3. Distribution of the amended SWMP shall be undertaken every time the plan is updated.

6. INSTRUCTION AND TRAINING

6.1. The Principal Contractor shall provide on-site instruction and toolbox talks to construction

6.2. Toolbox talks shall be carried out every month. Attention shall also be drawn to the SWMP during induction training. This will ensure that everyone feels they are included and that their participation is meaningful.

7.1. During the construction the construction contractor shall maintain a record of the following:

- A register of Waste Carrier Licenses and Permits for all carriers of waste from the site;
 - The destination of wastes exported from the site;
 - Details of each load of waste removed from site.
- 7.2.** Waste transfer notes shall be in accordance with The Environmental Protection (Duty of Care) Regulations 1991 as amended by the Waste (England and Wales) Regulations 2011. A copy of each waste transfer note shall be held on site (either electronically or in paper format) and shall retain them for at least two years following Acceptance of waste at the Facility.
- 7.3.** The Site Waste Manager shall complete a record of waste produced during the construction similar to that shown in Figure 1. The Principal Contractor shall retain the record for a period of at least two years after Acceptance of the Facility by the Owner.

Project:	Berrys Lane Energy Centre						
Location:	Berrys Lane, Burghfield, Reading, RG30 3EY						
Date:							
Site Waste Manager: (Name)							
Person Completing Form: (Name) (Job Title) (Company)							
Material	EWC Code	Reused on site	Reused off-site	Recycled for use on-site	Recycled for use off-site	Sent to exempt site	Sent for disposal
Totals							
Target							
Totals / Target							

Figure 1 – Record of Waste Arisings

8. WASTE MANAGEMENT LEGISLATION

8.1. Waste management is a highly regulated activity and there are many Acts and Regulations governing it. Key items of legislation particularly relevant to the construction site waste management activities are:

- Environmental Protection Act 1990;
- Controlled Waste Regulations 1992;
- Hazardous Waste (England and Wales) Regulations 2005;
- List of Wastes (England) Regulations 2005;
- Waste Management (England and Wales) Regulations 2006;
- Waste (England and Wales) Regulations 2011;
- Revised Waste Framework Directive (rWFD).

This list is not exhaustive.

8.2. Wastes, including those classified as being hazardous, shall be classified by a code reference number set out in the European Waste Catalogue (EWC). Chapter 17 of the EWC covers wastes from construction and demolition and Chapters 17, 18 and 20 those arising from the welfare facilities. Figure 2 summaries the probable waste codes concerned. A more comprehensive list is shown in Appendix WP1.

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 08 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)

Figure 2 – EWC waste codes

9. WASTE MANAGEMENT ON SITE

9.1. Site waste management philosophy and the hierarchy

9.1.1. Surplus or waste materials arise from materials imported to the site and generated on site:

- Imported materials are those, which are brought to the project for inclusion into the construction works.
- Generated materials are those, which exist on the project such as topsoil, sub-soil, trees and materials from any demolition works etc.

9.1.2. 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 (illustrated in Figure 3). 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.



Figure 3 - Waste Management Hierarchy

9.1.3. The first priority in the Waste Hierarchy is to minimise the quantity of wastes produced in the first place. 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 for rectification;
- waste minimisation opportunities shall be identified through Design Reviews and Annual Waste Reviews;
- subcontractors shall be required to identify materials to be brought on site and identify
- opportunities for waste minimisation (particularly packaging) and encouraged to use of materials with recycled content; and

- communications, toolbox talks and training to reduce spoiled goods and increase reuse.

9.1.4. To reduce the amount of waste and surplus materials, the following actions shall be encouraged:

- locate wash-down points for concrete carrying wagons in a suitable location so that the washed-out aggregates form part of the fill;
- when concrete bases are being poured, have other bases excavated so that any surplus concrete can be utilised as blinding or use as hard stand for fuel area or waste area;
- unload materials that arrive on pallets as soon as possible and store and remove the pallets 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;

9.1.5. Material and goods suppliers shall be instructed to ensure that packaging is minimised whilst ensuring adequate protection of said goods and materials.

9.1.6. Where loose materials are purchased, quantities shall be controlled by contractors to ensure that only the amount required is brought to site.

9.1.7. 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.

9.1.8. 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.

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

9.1.10. 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.

9.1.11. Where possible materials that would otherwise be disposed of as waste on site shall be re-used in preference 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 or other roads on site or in the Construction Compound;
- 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;
- use of re-usable eating utensils (plates, cups, cutlery, drinking bottles, etc.) eating only in the canteen or a designated area.
- 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.

9.1.12. Wastes generated during the construction process shall be segregated into waste types to facilitate off-site recycling. The layout of the Site shall be designed to allow sufficient space for separate containers of key waste materials to be stored. These containers shall be clearly labelled, and construction staff shall 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 the waste management company to separate waste at a later time should be considered.

9.1.13. Where waste cannot be reused or recycled, the material shall be sent for disposal at an energy recovery facility, avoiding landfill whenever possible.

9.1.14. Where hazardous wastes are generated on site they shall be managed and disposed of separately to other wastes at a suitably licensed facility. During construction of the site it is not anticipated that hazardous waste will be generated in any appreciable quantities (other than as a result of vehicle maintenance), however where it does arise, it shall be segregated from other wastes, quarantined and clearly identified. The regulations regarding the handling, storage, transportation and disposal of hazardous wastes shall be followed at all times.

9.2. Procurement Policy

9.2.1. The construction contractor shall undertake a purchasing policy that addresses the requirements of this SWMP with a view to promoting more sustainable products and materials.

9.2.2. Unless stated otherwise the construction contractor shall carry out the following:

- Procure timber from Forest Certification (PEFC) approved sources;
- Use only approved first tier suppliers;
- Where practicable, seek alternative materials incorporating higher proportions of recycled materials;
- Use materials that require little or no alteration prior to installation, thus minimising waste;
- Use materials which can be readily re-used or recycled upon reaching the end-of-life;

9.3. Duty of Care

9.3.1. Duty of Care places a duty on any person who imports, produces, carries, keeps, treats or disposes of controlled waste or, as a broker, has control of such waste:

- To prevent the unauthorised or harmful deposition, treatment or disposal of waste;
- To prevent the escape of waste from his control or that of any other person;
- To ensure the transfer of waste is:
 - only to an authorised person or to a person for the purposes of authorised transportation;
 - recorded with a written and numeric description of the waste in order that other persons can avoid a contravention of the relevant Act and to comply with the duty with respect to the escape of waste;

9.3.2. For each transfer of waste, a Waste Transfer Note (WTN) shall be completed in accordance with the regulations. This can be in electronic form.

9.3.3. For each transfer of hazardous waste a Consignment Note (CN) shall be completed for hazardous waste in accordance with the regulations. The construction contractor shall keep copies of CNs for a period of 3 years.

9.4. Waste Storage

9.4.1. Waste shall be correctly segregated and stored prior to disposal to ensure that the potential for waste to escape is minimised and the cost of disposal controlled.

9.4.2. One or more dedicated areas shall be provided for waste storage and waste retained on-site for the minimum amount of time taking account of the transport logistics of exporting the waste off-site.

9.4.3. Waste streams shall be segregated on site to avoid cross-contamination and the construction contractor shall take care when storing waste on site to ensure that:

- containers and skips are maintained in good condition;
- applicable containers are adequately covered and protected from rain – especially those containing hazardous wastes - to prevent accidental

spillage or leakage of waste;

- the integrity of containers and skips is maintained, ensuring no escape of wastes;
- that waste is not scavenged by vandals, thieves or animals;
- that no waste is 'fly-tipped' or waste is disposed of by third parties in the site waste management containers;

9.5. Waste Carriers & Waste Disposal Contractors

9.5.1. Waste disposal contractors shall only be appointed if they are registered Waste Carriers and have valid and verified registration documents.

9.5.2. Waste shall only be transferred to a site that is licensed and fully regulated by Environment Agency or SEPA (if sent to Scotland) to take that specific type of waste. All destinations for waste will be verified by the site Waste Manager.

9.5.3. If waste is removed from site by an organisation that is exempt from the Waste Carrier registration – such as a registered charity – then the site Waste Manager shall ensure and check that the organisation is bona fide and is registered with the EA as waste transporters.

9.6. Hazardous Materials

9.6.1. It will be necessary for some hazardous material handling on site and some hazardous waste may be produced during construction. It is the duty of the construction contractor, however, to ensure that the quantity of hazardous waste is minimised;

9.6.2. The construction contractor will be obliged to brief and train staff on the importance of notifying management if the presence of harmful or hazardous material is suspected or encountered during activities on the site.

9.6.3. All hazardous wastes removed from the site shall be consigned in accordance with the regulations and sent to an appropriately licenced site for disposal.

9.7. Monitoring

9.7.1. The site Waste Manager shall be responsible for monitoring of waste management practices on site and for the review of the SWMP.

9.7.2. All waste containers shall be monitored to ensure that contamination of segregated wastes does not occur.

9.7.3. A continuous review shall be carried out of the type of surplus materials being produced and changes made to the site arrangement to maximise on-site reuse or recycling of the wastes produced.

9.7.4. In accordance with the CMP, weekly site construction meetings shall be held to review the SWMP. A checklist of items for review shall be compiled and this reviewed at the meeting.

9.7.5. A weekly log shall be maintained recording the type and quantity of all wastes produced on the site. A report shall also be required from each waste disposal company deployed to remove waste from the site, stating the amount and type of

waste materials removed or accepted at their premises, along with details of how much was reused, recycled or disposed.

9.8. Reporting

- 9.8.1. The Principal Contractor shall ensure all subcontractors provide monthly reports to Principal Contractor's delegate that include quantities and types of all wastes generated and the route of disposal / recovery that month and a summary of total waste to date. These monthly waste figures shall be distributed to Project Management and the Principal Contractor
- 9.8.2. Records of the types and quantities of waste taken off site (e.g. Waste Transfer Notes, consignment notes etc.) 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.
- 9.8.3. Waste Carrier details shall also be recorded and saved on the Principal Contractor's document control system.

APPENDIX WP1
WASTES LIKELY TO BE GENERATED ON SITE

Waste Type	Product Source	EWC Code	Action
Office Waste	Paper, printer cartridges, cans, foodwaste, plastic bottles	200101 200102 200139	Separated into designated bins/skips on site for recycling
Soils Excavated materials	- Groundworks & foundations - Site levelling	170504	- Design to minimize quantities produced. - Segregate re-usable material. - Balance earthworks design to minimize excess. - Re-use muck in landscaping.
Timber	- Materials incorporated into building structure. - Shuttering - Temporary use timber	170201	- Off-site fabrication - Accurate cutting lists - Segregation - Reuse - Recycle
Concrete	Surplus material following pour	170106 170107	Avoid over-ordering
Bricks, blocks, masonry	Excess to requirement	170106	- Reuse - Build to standard sizes - Proper storage
Mortar	Excess to requirement	170106	- Mix only required quantity - Dry mortar silo - Reduce use of coloured mortars
Plasterboard	- Damage due to becoming wet - Excess to requirement	170802	- Adequate protection from weather - Optimise cutting lists - Rationalise types (i.e. fire resistance, sound, impact etc)
Packaging – plastic & cardboard	Protection on materials delivered to site	150101 (paper & cardboard) 150102 (plastic) 150103 (wooden packaging)	Subcontractor/Supplier Partnerships/Agreements on Waste (inc. packaging, collection and reuse of own waste)
Water	- Used for cleaning or washing - Latrines	200304	Reuse waste water for non-critical use - eg wheel wash water, check supply pipes for damage
Insulation materials	Excess to requirement	TBA	- Correct dry storage - Correct quantities to

			workface
Metals	• Off-cuts • Excess to requirement	170407	• Reuse • Segregation on site • Recycle
Ceramics	• Excess to requirement • Damage during erection	170103	• Correct quantities to workface • Protect final installation
Cladding	• Excess to requirements • Off-cuts • Damage during erection	170402	• Standardise panel sizes, • Use click lock
Partitions (Non-hazardous)	• Excess to requirement • Off-cuts	170802	• Standardise ceiling heights • Consider offsite construction of plasterboard modules, • Agree supplier take-back scheme • Reuse off-cuts.
Steelwork	• Excess to requirement • Off-cuts	170405	• Review design & cutting lists • Recycle
Tarmac	• Road planings	170301	• Excess quantity • Reuse to resurface
Hazardous Waste	• Excess to requirement of: ○ Asbestos (bonded) ○ Paint ○ Plasterboard (Gypsum) ○ Heavy metals ○ WEEE ○ Lubricants • ○ Cleaning chemicals ○ Bituminous materials ○ Acids ○ Soil • Effluent from cleaning	170605* 200127* 170801* 170802* TBA 160210 160215 160215* 100122* 170901* 170301* 170503* TBA 170503* 100122*	• Avoid use of asbestos-bearing materials • Select non-hazardous or less hazardous alternative materials or components • Change design of products or processes to eliminate use of hazardous materials • Review quantity offtake to avoid surplus material • Implement effective quality control to reduce defective products thrown away • Store all hazardous materials safely and securely • Minimise use of cleaning chemicals through better working to reduce quantity effluents produced • Separate waste to prevent contamination and prevent making other wastes hazardous. • Take WEEE to a collection point or return to supplier
Mixed	• General surplus of mixed non-hazardous materials	004	• To be avoided • Disposal by EFW or landfill

APPENDIX 4

METHOD STATEMENT FOR REASONABLE AVOIDANCE OF INVERTIBRATES, REPTILES AND AMPHIBIANS DURING CONSTRUCTION

Introduction

The primary objectives of this method statement are to ensure that any works or operation during the construction proposed will preserve a favourable conservation status of invertebrates, reptiles and amphibians and ensure no offence is committed under the Wildlife and Countryside Act 1981.

The following sets out the reasonable avoidance measures to be followed during the construction period and operation of the Berrys Lane Energy Centre development.

The site is located approximately 5km south-west of Reading, within an existing waste management facility, adjacent to the western boundary of a landfill site. Tarmac construction material site is located to the northeast of the application site and to the east and north of Berrys Lane lies several lakes and recreational water sport clubs. The M4 runs parallel to the southern boundary. The site is open and relatively flat, comprising brownfield land and prior to development of the Energy Centre contains a recycling facility for inert wastes and ancillary buildings, typically hosting stockpiles of inert material and ongoing waste and aggregate related activities.

Prior to implementing this method statement, reference should be made to the Landscape and Ecological Management Plan submitted to WBC under Condition 42 of Planning Permission 20/02029/COMIND, which describes the ecology on the Site prior to commencement of construction and the ecological enhancements that are to be implemented during the construction phase.

Reasonable Avoidance Measures During Construction

Prior to any works commencing on site, all staff working on site shall be made aware of the potential presence of amphibians and reptiles on or surrounding the site and their respective status as potential UK and European Protected Species. The recommended mitigation measures will therefore reflect this.

Whilst there is little vegetation on the Site and no water bodies, it is possible that invertebrates, reptiles, and amphibians from the verges, or drain gullies may come onto the Site. Any vegetation cleared on Site should be checked prior to clearance. If reptiles or amphibians are present, they should be encouraged to move out of the working area.

If clearance of large areas of vegetation is required, this work should take place between March and October to ensure the amphibians are at their most active. The boundaries where there is long vegetation should be developed in accordance with the LEMP.

An area has been identified for retention and ecological enhancement described in the LEMP. The Principal Contractor shall familiarise himself with the plan prior to site clearance commencing, staff briefed through toolbox talks appropriately, and the area marked as such on the ground (cordoned off with Heras Fencing or similar barrier which is still permeable to reptiles). Any piles of debris or scrub in this area should be retained as habitat.

For any storage of materials, the following measures shall take place:

- Wherever practical, materials due to be stored on ground will be stored in skips, pallets or raised off the ground.

- Where off ground storage is not feasible, materials will be stored on site for a minimum amount of time possible and placed on sheeting.
- All transport/spreading or bunding of topsoil shall be carried out during daylight hours only.
- Trenches or other holes in the ground which have the capacity to trap amphibians/reptiles should be covered before darkness.
- All materials when transported on site are to be lifted rather than dragged along the ground.
- In the event of large areas of vegetation (in excess of 10 sq metres) requiring to be cleared follow the procedure in Appendix A4/1 of this method statement.

APPENDIX A4/1**Procedure when clearing large areas of vegetation.**

1. Reduce potential reptile and invertebrate habitat stepwise and gradually, in order to encourage natural reptile dispersion from the location. Reduction in reptile habitat must only take place between March-October, when reptiles are active to allow them to relocate successfully.
2. Remove carefully by hand all potential reptile refugia currently on site (e.g. stones, brick piles, brash piles etc.).
3. Gradually reduce grassland and scrub vegetation by cutting one third of the area at a time, as follows:
 - Reduce (using handheld machinery) height of vegetation to 30 cm.
 - Leave undisturbed for 5 days.
 - Further reduce height of vegetation- to ground level.
 - Repeat for each third of the grassland area.
 - Maintain grassland at ground level height via regular cutting/trimming or chemical treatment.
 - Remove all cuttings ('arisings') from the site - to prevent them becoming new refugia.
4. All potential refugia shall be removed, and grassland reduced to ground level, prior to commencement of any demolition or ground works (including investigative bore holes).
5. Once all excess material has been removed and reduction of vegetation complete, construction works may commence.

APPENDIX 5

ENVIRONMENTAL RISK ASSESSMENT PROCEDURE AND CONSTRUCTION ENVIRONMENTAL RISK MATRIX

1. The manager responsible for environmental matters on the Site shall organise a formal review meeting to which representatives from site management, supply management, and relevant subcontractors shall be invited.
2. The manager responsible shall issue terms of reference for the meeting to all attendees prior to the meeting including:
 - a. Scope of the meeting
 - b. Time and place of the review
 - c. Documentation required
 - d. The review methodology
3. The review shall identify the environmental matter that apply to the site including but not limited to the topics listed in Table A4/1 below:

	Topic	Impacts
Emissions to air	• Combustion emissions (mobile and static sources) • Volatile organic compounds • Particulates • Steam • Halogenated hydrocarbons • Ozone depleting substances	• Climate change • Acidification • Particulate generation • Ozone layer effects • Pollution
Emissions to water	• Water extraction & discharge • Contamination of water bodies from spillages of diesel, lubricants or chemicals • Firefighting water, foam, and chemical suppressants • Sedimentation • Cooling water • Storm water • Hydraulic testing	• Impact on aquifer and water quality • Aquatic flora and fauna • Nutrient enrichment • Eutrophication • Increase biochemical oxygen demand • Effects on other users of water supply
Ground conditions	• Ground contamination • Soil handling and compaction	• Ground contamination due to improper storage, use or disposal of materials • Damage to soil quality • Reduced drainage capability
Resource use	• Fossil fuels • Water • Non-reusable raw materials • Electricity • Land use	• Depletion of natural resources
Waste	• Solid, liquid & gaseous	• Contamination of land and

	wastes • Hazardous wastes • Radioactive substances	water • Waste minimisation • Reuse • Recycling • Responsible disposal
Ecology	• Disturbance of habitats • Disturbance of flora and fauna • Protected areas	• Loss of biodiversity
Nuisance	• Odour • Noise and vibration • Dust	• Nuisance to local community
Miscellaneous	• Cultural heritage • Visual impact • Loss of amenity	• Loss of cultural heritage • Nuisance to local community

Table A4/1 – Environmental Matters and Impacts

- The review shall assign each topic a risk ranking by assessing the potential severity and likelihood (or probability) and the risk of the construction activity assessed as described in paragraphs 5. to 8.) below.
- Severity levels shall be determined using the classification in Table A4/2.

Severity	Environmental Descriptor	Weighting
Negligible	Small or contained environmental impact with slight or no effect but requiring corrective action. No offsite impact.	1
Minor	Minor localised contamination or environmental impact but easily recoverable and no offsite impact	2
Significant	Contamination or environmental impact but recoverable. Offsite impact	3
Serious	Extensive but eventually reversible impact, on species, habitat ecosystem Clean up may require external support Multiple breach of permit or regulations	4
Extreme	Major pollution event leading to long-term widespread damage.	5

	Major environmental impact causing significant loss of protected species, habitat or ecosystem. National/international support to rectify	
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Table A4/2 – Severity Weighting

6. The likelihood or probability of the event occurring shall be determined using Table A4/3:

Likelihood/Probability	Event Descriptor	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
Likely on occasion	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

Table A4/3 – Likelihood/Probability Weighting

7. The risk represented by the construction activity shall then be calculated using the matrix shown in Table A4/4. The actions described in paragraphs d), e), f) and this paragraph g) shall be carried out for the unmitigated risk (i.e., where nothing is done to minimise it) and again for the mitigated risk to show the residual risk that remains. Any mitigation proposed must be in place prior to the construction activity taking place.

	Risk Assessment Matrix	Severity Level				
		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

Table A4/4 – Risk Calculation

8. The actions to be taken arising from the residual risk calculation shall then be implemented in accordance with Table A4/5. Actions, together with the identity of the persons responsible for carrying at the Action and the date for completion shall be recorded in an Environmental Actions Register and tracked by the manager on Site responsible for environmental matters until closure.

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.	

Table A4/5 – Action Table

INITIAL CONSTRUCTION ENVIRONMENTAL RISK ASSESSMENT

Item No.	Environmental Aspect	Hazard	Likelihood	Severity	Risk	Control Measures	Residual Risk after Control Measures
1	Contamination from metals, petroleum, polychlorinated biphenyls, acid soils and other substances from historical fly-tipping and waste disposal on site.	Skin contacts between site users and areas of contamination. Lateral migration of substances via Surface-water runoff Vertical infiltration of substances from the surface water to groundwater Adverse health impacts to site users (including workers engaged in site clearance and construction work) and neighbouring sites.	Improbable - 1	Serious - 4	Low - 4	Implement measures in the CMP including the following: • Storage of hazardous materials; • Storage and Handling of Flammable and Combustible Liquids; • Training of personnel in implementing safe work practices to minimise risks and impacts of spillage of fuels, chemicals, and other contaminants. • Incident reporting and emergency management procedures and encourage the reporting of issues and near misses. • Ensure personnel have access to spill kits that contain an absorbent material, clearly marked oily waste disposal drum and a shovel. • In the event of a chemical or hazardous substance spill, containment measures to be enacted. • All contaminated soil and absorbent to be stored in a chemical waste disposal drum and disposed of by a licenced waste contractor.	Low

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2	Asbestos contamination from historical waste disposal and fly-tipping.	Risk to human health – especially on-site personnel.	Improbable - 1	Serious - 4	Low - 4	No indication of asbestos found to date in soils. In the event of asbestos being found, a Contaminated Site Management Plan will be produced for clean-up of the site and removal, transport and disposal of asbestos will be carried out using licensed specialists, as required.	Low
3	Leaks and spills of chemicals and fuel during construction and operational activities such as petrol, oil and lubricants used during construction.	Adverse health impacts to site users and flora & fauna. Contamination of surface and groundwater. Pollution of aquifer with adverse impacts to wider area human health, flora and fauna.	Probable - 3	Serious - 4	High - 12	Implement mitigation measures identified in the CMP, CEMP & LEMP including: • Storage of hazardous materials; • Storage and Handling of Flammable and Combustible Liquids; • Training of personnel in implementing safe work practices to minimise risks and impacts of spillage of fuels, chemicals, and other contaminants. • Incident reporting and emergency management procedures and encourage the reporting of issues and near misses. • Ensure personnel have access to spill kits that contain an absorbent material, clearly marked oily waste disposal drum and a shovel. • Any spillage of wastes, contaminants or other materials shall be cleaned up as quickly as practicable using procedures that prevent contaminants or	Medium

						material being transferred to the stormwater drainage system. • In the event of a chemical or hazardous substance spill, containment measures to be enacted. • All contaminated soil and absorbent to be stored in a chemical waste disposal drum and disposed of by a licenced waste contractor. • Record and report all chemical and hazardous substance spills. • The stormwater system for the site shall be inspected regularly to identify any failures and, if necessary, repairs shall be undertaken. • Keep site free from build-up of waste materials by directing regular clean ups. • Avoid storing large volumes of materials on site. • Ensure herbicides used for weed control are registered and are only applied by appropriately trained personnel. Chemical storage and handling areas shall be bunded and have drainage lines separate from the stormwater drainage, to reduce the likelihood of chemical contamination of stormwater.	
	Disposal of wastes from construction works not carried out correctly.	Littering, reduction in visual amenity, contamination of	Probable - 3	Significant - 3	Medium - 9	Implement the Site Waste Management Plan (Appendix 3 of the CMP).	Low

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		ground and reduction in water quality.				Suitable waste receptacles to be positioned on Site. Where possible, wastes should be segregated on Site (ie. recyclable materials separated from residual wastes). A licensed waste carrier to be engaged for removal of wastes and duty of care notes retained. All waste skips to be sheeted when leaving site to assist containment. Regular inspections of worksite to be carried out to monitor and maintain housekeeping standards. Regular food waste removal from welfare area.	
4	Combustible materials catching alight.	Fire, damage to property and risk to human health	Probable - 3	Significant - 3	Medium - 9	Implement Fire Protection Plan.	Low
5	Construction activities leading to the creation or spread of dusts.	General nuisance. Risk to human health from respiratory diseases, asthma and lung cancer.	Certain - 5	Significant - 3	High - 15	Implement Noise, Vibration & Dust Plan (Appendix 1 of the CMP). Maintain dust all controls. Site roads to be surfaced as early as practicable to provide good running surfaces, and 'wet swept' with sweepers. Concrete breaking out / cutting operations to be undertaken using water as a suppressant. Mortar to be provided from a silo in wet state, wind direction to be monitored.	Low

						If required, implement a monitoring regime to measure and formally record dust levels. Toolbox Talks to include briefings on dust management.	
6	Re-suspension of dust from road surface, when vehicles leave site.	General nuisance.	Certain -5	Significant - 3	High - 15	Installation of vehicle wheel wash in accordance with CMP and Construction Traffic Management Plan (CTMP). Controlling the speed of vehicles within and leaving the site. Maintaining the condition of the road, and take due care and attention of trafficking conditions. Regular cleaning of road surfaces.	Low
7	Site groundworks and addition of EfW foundations.	Alteration of surface hydrology (flow paths, volume and velocity). Increased volume of surface water runoff. Site flooding Adverse impact on aquifer.	Unlikely - 2	Serious - 4	Medium - 8	Minimum as possible intrusive piling to be carried out.	Low
8	Site construction works, including clearing of vegetation and earthworks for site preparation endangering flora and fauna.	Risk to plants. Risk to the wellbeing of nesting birds, reptiles, invertebrates, and amphibians.	Unlikely - 2	Significant - 3	Medium - 6	Follow procedures set out in the LEMP and CEMP.	Low

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9	Smells and odours arising from construction activities.	General nuisance	Unlikely - 2	Minor - 2	Low - 4	Follow procedures set out in the CMP and implement the Noise, Vibration and Dust Management Plan (Appendix 1).	Low
10	Noise and vibration arising from construction activities.	General nuisance. Risk of damage to railway property.	Probable - 3	Significant - 3	Medium - 9	Follow procedures set out in the CMP and implement the Noise, Vibration and Dust Management Plan (Appendix 1). Procedures agreed with Network Rail. Minimal piling required on Site.	Low
11	Traffic movements	General nuisance. Dust and debris on roadway.	Probable - 3	Significant - 3	Medium - 9	Implement requirements of the CTMP.	Low