New England Resource Recovery Centre

Outline Construction Environmental Management Plan

January 2010
SLR Ref: 402-0036-00350

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1.0 INTRODUCTION

If left uncontrolled the construction phase of the New England Resource Recovery Centre could have significant impacts on the environment and the local community. Both the commissioning client organisation and the construction contractor have key responsibilities in ensuring that these environmental impacts are controlled adequately. Environmental management during the construction works will be delivered through the development of a Construction Environmental Management Plan (CEMP). The CEMP will detail how construction works will be undertaken and managed in accordance with the Planning Application, Planning Conditions, contractual and legislative requirements and construction industry best practice.

This Outline Construction Environmental Management Plan forms part of the planning application documentation for the project and provides details on the requirements for the management of environmental impacts associated with the construction phase of the project together with a suggested framework from which the CEMP will be produced.

Due to the current stage of the scheme development the CEMP has not yet been formally adopted and further development and commitment to the CEMP will be undertaken following selection of Contractors and before commencement of site works.

The contract documentation for the works will include the outline CEMP (updated to take account of any commitments agreed to during the planning process) and will ensure that there is a requirement on the contractor to comply with the actions set out in the Outline CEMP and to demonstrate to the client how they intend to indentify further environmental impacts and implement the detailed mechanisms for managing the environmental impacts of works on site.

The CEMP will be developed by the contractor to meet the requirements of ISO 14001 and all site works should be undertaken in compliance with the CEMP. The CEMP shall include details of the topics listed below, further information on which is given in the following sections.

- Environmental Aspects Register;
- Project Organisation and Responsibilities;
- Project Communication and Co-ordination;
- Training;
- Operational Control;
- Checking and Corrective Action,
- Environmental Control Measures,
- Complaints Procedure.

The CEMP will be reviewed at least every twelve months during the construction process and will include information on the review procedures.

2.0 ENVIRONMENTAL ASPECTS REGISTER

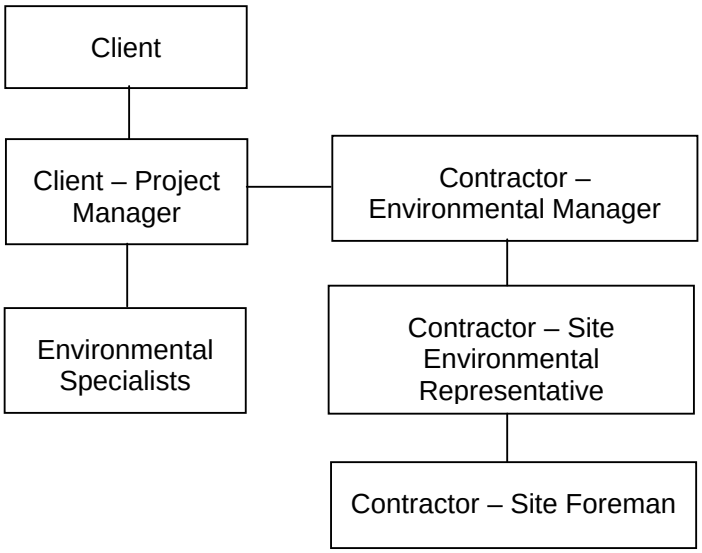
A register will be prepared to provide a record of sensitive environmental features which have the potential to be affected by the construction works together with details of commitments and agreements made within the ES, any conditions imposed by the planning authority, and with the Statutory Authorities with regards to mitigation of potential impacts.

The Environmental Aspects Register provides the relevant information for the preparation of construction method statements and will be regularly updated during the works.

3.0 PROJECT ORGANISATION AND RESPONSIBILITIES

The CEMP will clearly define the roles and responsibilities of the project team. Figure 3-1 details the management chain with descriptions of each team member being provided in the following sections.

Figure 3-1



3.1 Client Project Manager

The Client Project Manager would have overall responsibility for monitoring the performance of the project against statutory requirements and the agreed objectives and targets. The duties associated with this role include:

- review and approve the Contractor's CEMP together with any specialist procedures and identify the need for any improvements;
- identify the environmental competence of all contractors to be employed for the works;
- review construction method statements with regard to environmental aspects and advise of suggested improvements prior to works commencing, and
- provide main contact between contractor and Client's project team on environmental issues.

3.2 Contractor Environmental Manager

The Contractor Environmental Manager will have responsibility for co-ordinating and managing all the environmental activities during the construction works. The duties associated with this role include:

- develop and review the CEMP, construction method statements, work instructions and other specialist procedures;
- identify environmental competence requirements for all staff and ensure delivery of environmental training to the project team;
- review and improve method statements for environmental aspects prior to works starting;

- monitor construction activities to ensure that identified and appropriate control measures are effective and ensure compliance with the CEMP;
- act as main point of contact between the regulatory authorities and the project on environmental issues;
- in conjunction with the site environmental representative, overall monitoring of the programme for the environmental works, and the provision of status reports as necessary;
- provision of advice and liaison with construction teams to ensure that environmental risks are indentified and appropriate controls developed which are indentified within method statements;
- assist with the development and undertaking of training for site staff;
- liaison with the Client Project Manager;
- management of the environmental monitoring programme, and
- environmental audit of any subcontractors and suppliers.

3.3 Contractor Site Environmental Representative

The Contractor Site Environmental Representative is directly involved in managing and co-ordinating the environmental activities on site which include:

- assist the contractor environmental manager in developing and maintaining the CEMP together with other documentation;
- monitor construction works to ensure any necessary control measures and in place an meet the requirements of the CEMP.
- carry out weekly site inspections and complete inspection report identifying any actions required;
- maintain training register and provide training where necessary;
- assist site foreman in maintaining environmental records;
- assist in responding to complaints;
- in the event of an environmental incident ensure correct procedures are adhered to; and
- provide information on waste management/reduction procedures to relevant staff.

3.4 Contractor Site Foreman

The site foreman will be responsible for the following:

- implementation and operation of environmental controls on site;
- respond to any environmental incidents such as spills;
- immediately report activities which have or could lead to an environmental incident;
- complete daily logs, and
- maintain waste register ensuring correct waste management procedures are being implemented.

3.5 Environmental Specialists

A team of experts would be available on an “as and when required” basis to support the project team. Their role would include the undertaking of any necessary watching briefs.

4.0 PROJECT COMMUNICATION AND CO-ORDINATION

Periodic meetings will be held between the team members to discuss performance to date, the need for improvements (if any), results of inspections and any complaints received. Upcoming work operations will be reviewed in order to plan any necessary actions to

mitigate risks and to disseminate information on best practice. If necessary, representatives of the Statutory Authorities may also be invited to attend such meetings.

5.0 TRAINING

A training plan will be developed and included in the CEMP which identifies competency requirements for all staff with environmental responsibilities and details the training needs to ensure that such requirements are met. Records of competence and training will be maintained and all site staff will be inducted on the environmental issues related to the project and the CEMP. Toolbox talks covering specific environmental aspects will also be undertaken as and when necessary.

6.0 OPERATIONAL CONTROL

Site works will be checked against the CEMP requirements. Any mitigation measures that have been agreed with the Statutory Authorities, or are part of planning conditions, will be put into place prior to the undertaking of the works for which they are required and all relevant staff will be briefed accordingly.

Method statements that are prepared for the works will be reviewed / approved by the Client Project Manager and were necessary the relevant Environmental Specialist.

A Quality Management System (QMS) will also be put into operation for the project. Document control will be in accordance with this QMS and copies of all audits, consents, licences, etc will be marinated by the Environmental Manager and his team and kept on site for review at any time.

7.0 CHECKING AND CORRECTIVE ACTION

Daily inspections of the site and the works will be undertaken to minimise the risk of environmental damage and to ensure compliance with the CEMP. Any environmental incidents are to be reported immediately to the Site Foreman. The Contractor Environmental Manager will undertake monthly inspections and complete an assessment of the projects environmental performance with regard to the relevant standards/legislation and the contents of the CEMP. Following these inspections the Environmental Manager will produce a report detailing the findings which will be provided to the Client Project Manager and reviewed at the monthly project meeting.

8.0 ENVIRONMENTAL CONTROL MEASURES

Specific procedures to manage the key environmental aspects of the project will be developed by the Contractor prior to work commencing which will include the following.

8.1 Highways

8.1.1 Construction Phase Traffic

In order to mitigate the impact of construction traffic during network peak hours, a Construction Phase Travel Plan will be developed and implemented by the successful contractor. In the absence of an appointed contractor, an indicative travel plan has been prepared in order to provide the framework of a more detailed site plan and this is included within the ES documentation. This plan will focus on the:

- co-ordination of car share for construction personnel;
- implementation of contractor operated mini bus service;

- restriction of unnecessary vehicle movements during the day; and
- co-ordination of deliveries to arrive outside of peak times where appropriate.

8.2 Air Quality

No specific mitigation, other that adopting best construction practices are proposed with regard to air quality. The CEMP will ensure that measures are in place to minimise dust during construction activities.

8.3 Noise and Vibration

The ES provides further details on issues associated with noise and vibration however a summary of the control measures to be adopted is given below.

8.3.1 Construction Noise

The assessment of construction noise has shown that the adopted criterion is unlikely to be exceeded at the nearby noise-sensitive receptors. The predicted increase in the ambient noise climate would lead to a minor, barely perceptible, impact at all locations assessed. Several safeguards exist to minimise the effects of construction noise and these will apply during the construction of the proposed development infrastructure. The safeguards include:

- the various EC Directives and UK Statutory Instruments that limit noise emissions of a variety of construction plant;
- guidance set out in BS5228:Part 1:1997, that covers noise control on construction sites; and
- the powers that exist for local authorities under Sections 60 and 61 of the Control of Pollution Act 1974 to control environmental noise and pollution on construction sites.

The precise noise mitigation measures to control noise from the construction works may require the agreement of the local authority prior to the works starting. Generic measures below are given to illustrate the range of techniques available. The adoption of Best Practicable Means, as defined in the Control of Pollution Act 1974 is usually the most effective means of controlling noise from construction sites. In addition, the following measures should be considered, where appropriate:

- phasing the works to maximise the benefit from perimeter structures;
- any compressors brought on to site should be silenced or sound reduced models fitted with acoustic enclosures;
- all pneumatic tools should be fitted with silencers or mufflers;
- deliveries should be programmed to arrive during daytime hours only. Care should be taken when unloading vehicles to minimise disturbance to local residents. Delivery vehicles should be prohibited from waiting within the site with their engines running;
- all plant items should be properly maintained and operated according the manufacturers' recommendations in such a manner as to avoid causing excessive noise. All plant should be sited to that the noise impact at nearby noise-sensitive properties is minimised;
- local hoarding, screens or barriers should be erected as necessary to shield particularly noisy activities; and
- problems concerning noise from construction works can sometimes be avoided by taking a considerate and neighbourly approach to relations with local residents. Works should not be undertaken outside if the hours agreed with the local authority.

Experience from other sites has shown that by implementing these measures, typical noise levels from construction works can be reduced by 5dB(A) or more. As construction works are temporary and noise levels have been calculated for a worst-case situation no further mitigation measures are considered necessary.

8.3.2 Construction Vibration

Vibration during construction operations is unlikely to be perceptible at any of the nearby vibration-sensitive receptors due to their distance from the site. It is however recommended that construction vibration levels are subject to a watching brief with vibration measurements taken as necessary.

8.4 Hydrology and Hydrogeology

The ES provides further details on issues associated with hydrology and hydrogeology however a summary of the control measures to be adopted is given below. These measures either reduce the likelihood of an event occurring, or reduce the magnitude of the consequences if the event does occur. A number of operational mitigation measures and best available techniques have been incorporated into the scheme design, which will reduce the potential risk to ground and surface water.

8.4.1 Pollution of Controlled Waters from use of Hazardous Substances

The relevant Pollution Prevention Guidelines listed below will be adhered to, to ensure construction works are undertaken in an environmentally responsible manner. Any environmentally hazardous material used will be kept in dedicated stores and storage tanks will have appropriate bunding.

- PPG1: General Guide to the Prevention of Pollution;
- PPG2: Above Ground Oil Storage Tanks;
- PPG3: Use and Design of Oil Separators in Surface Water Drainage Systems;
- PPG5: Works in, Near, or Liable to Affect Watercourses;
- PPG6: Working at Construction and Demolition Sites;
- PPG21: Pollution Incident Response Planning;
- PPG23: Maintenance of Structures over Water

8.4.2 Pollution of Surface Waters due to Earthworks

Earthworks will be undertaken according to the guideline given in PPG6: Working at Construction and Demolition Sites. The following measures will be implemented as required to prevent pollution from earthworks;

- erosion control measures – these aim to prevent runoff from flowing across exposed ground and becoming polluted with sediments;
- sediment control measures – these aim to slow runoff and allow for settlement of sediment as close to the source as possible; and
- site measures – these aim to provide end of pipe treatment for polluted water, for example reed beds or settlement ponds.

Attenuation ponds will be constructed in the north-western and southern parts of the application site to control surface water runoff from the operational development. These ponds will be constructed at an early stage in the construction programme and will be used to as a containment and settlement pond for runoff from the construction of the landfill and EfW. Other temporary ponds will be constructed as necessary to allow the settlement of sediment.

8.4.3 Derogation of the Quality of River Yealm due to Discharge of Quarry Void Water

A water sampling programme will be undertaken prior to the dewatering of the quarry void to confirm that the water is uncontaminated and suitable for discharge to the River Yealm. This will include the collection of samples from the full depth of the water column. Treatment will be provided if the quality if found to be an unacceptable for discharge. The most likely problem will be low dissolved oxygen content at depth. If this is the case the water will be aerated prior to its discharge to the River Yealm.

8.4.4 Increased Risk of Flooding Due to the Dewatering of Quarry Void

Dewatering will be undertaken when flows in the River Yealm are low. The CEMP will include a system for monitoring the flows in the River and/ or using the Environment Agency flood warning system to ensure the discharge is reduced or stopped when flows in the river are high and there is a risk of flooding

8.5 Land Quality

The presence of naturally occurring asbestos within the quarry has been identified as an issue where further data is required via detailed inspection. To date it has been confirmed that naturally occurring asbestos is present within the Dolerite intrusion. This in itself may not pose an unacceptable risk, however actual risks will depend on the extent to which the material is prone to fugitive fibre release, aggressive activities in the area where the material is located and the location of exposure points on site. The key issues are likely to be associated with the need to disturb/remove natural materials from the quarry face that contain asbestos and the extent to which quarry waste on the surface of the site also contains this material.

In practice the issues surrounding naturally occurring asbestos are a management and health and safety consideration rather than a pure contaminated land issue. It is proposed that a detailed assessment is undertaken at the detailed design stage and suitable mitigation measures put in place going forward. With respect to the later there are many likely suitable forms of mitigation that range from isolating the issue, to providing asbestos air monitoring PPE and decontamination facilities, to the careful management of soils. At this stage it is too early to state what measures (if any) are likely to be required, however the key point is that these risk mitigation measures do exist and are relatively simple to implement.

8.6 Ecology

This ES provides details of the mitigation measures that have been incorporated into the scheme to minimise identified impacts and it also describes those ecological enhancements or compensation measures that have been incorporated into the scheme design. The large range of ecological receptors and mitigation measures required throughout the development lifetime, full details with regards to timescales, methods and responsibilities for implementation will be provided in a detailed mitigation and management plan which should be submitted and approved by the Local Waste Authority prior to commencing development.

8.7 Archaeology

The ES provides further details on issues associated with archaeology however a summary of the control measures to be adopted is given below.

Direct adverse impacts will occur to known archaeological sites, and potentially to as yet unidentified remains within green field areas, as a result of the design. It is therefore

proposed that a programme of archaeological works is undertaken prior to, and during construction, of the scheme to mitigate the effects of the impact through archaeological investigation and recording. Detailed method statements will be written and agreed with the planning authority and their archaeological advisors for each stage of works.

Site investigation consisting of geophysical prospection and trial trenching would be conducted at the northern end of the access road and its junction with the A38, within the fields west of New England Quarry where water attenuation lagoons are planned, and on Swainstone Hill in advance of final design from landscaping and tree planting, so that the extent of buried archaeological features can be traced and their potential significance evaluated. A predictive model of sub-surface remains can then used to assist final planting and landscaping design to avoid disturbance to archaeological remains where practical, and archaeological excavation and recording would be implemented on any remains that would be destroyed in implementation of the scheme.

Archaeological excavation and recording would also be undertaken in advance of the road construction through the parish boundaries within the Yealm valley, at Southwood and Strashleigh Hams. This would ensure that an appropriate record is made of these archaeological features so that any damage to the sites is mitigated.

A final phase of archaeological work consisting of analysis and reporting would be implemented on conclusion of all site investigations and archaeological excavations, to ensure that a published account of the results is made available for the public benefit.

9.0 COMPLAINTS PROCEDURE

It is important that members of the public or interested parties are able to make valid complaints about the construction works. Such complaints can provide a valuable feedback mechanism to which helps to reduce potential impacts on sensitive features and will also allow the construction techniques to be refined and improved.

The CEMP will contain details of the complaints procedure and a monitoring system will be implemented to ensure that any complaints are addressed and a satisfactory outcome achieved for all parties.

10.0 SUMMARY

This CEMP is indicative only, however, it is expected that the final CEMP that will be prepared by the Contractor will incorporate the items outlined above and other requirements that the Local Planning or Statutory Authorities may set during the planning process.

11.0 CLOSURE

This report has been prepared by SLR Consulting Limited with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

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