

## **BAESLINE INVESTIGATION AND REPORT CHECKLIST**

### **1. DECIDING WHETHER A BASELINE REPORT IS REQUIRED**

#### ***1.1 Identification of the hazardous substances used, produced or released at the installation***

Operations carried out at The Recycling Village Ltd include the sorting and dispatch of hazardous Lead Acid and Nickel-Cadmium batteries for further materials recycling and recovery.

The wet batteries have the potential to leak sulphuric acid. During wet weather batteries are occasionally delivered to the site in containers that have accumulated rain water. Often the rain water becomes acidified due to interaction with the battery acid.

Discarded electrical and electronic equipment (television and PC displays) containing hazardous components i.e. leaded glass; phosphorescent dust containing an assortment of heavy metals; and mercury-containing fluorescent back lights, are manually dismantled and also dispatched for materials recycling and recovery.

Diesel and motor oil are used on site to operate forklifts, and trucks entering the yard to deliver or collect loads also contain diesel and motor oil, hence there is the potential for diesel and motor oils to spill in the yard. Hydraulic oil is also used on site to maintain machinery.

In summary, the hazardous substances which may be potentially released from operations on site at The Recycling Village Ltd are:

- Lead
- Cadmium
- Mercury
- Phosphorescent dust
- Diesel and hydraulic oil
- Sulphuric Acid (and/or acidified water)

#### ***1.2 Assessment to identify those hazardous substances that are capable of contaminating soil or groundwater (relevant hazardous substances)***

The hazardous substances identified at The Recycling Village Ltd are specified in List I and List II of *Council Directive of 4 May 1976 on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community*.

#### ***1.3 Identification of the possibility of the relevant hazardous substances actually causing contamination***

This section is dealt with in Appendix 1(Soil & Groundwater Baseline Report) *Section 2.3 – Existing Site Use*.

#### **1.4 Identification of any possible sources of historical contamination**

This section is dealt with in Appendix 1 (Soil & Groundwater Baseline Report) *Section 2.2 – Site Location & History*.

## **2. DETAILS OF DATA COLLECTION**

### **2.1 Existing data**

#### **2.1.1 Relevant plans of the installation (showing boundaries and key points of interest).**

Refer to Appendix 5 – *Site Plan – Emissions Monitoring (12039-LA-05)*

#### **2.1.2 Review and summary of previous reports, with report references**

This section is not applicable as there are no previous reports available regarding groundwater and soil contamination at the site.

#### **2.1.3 Summary of any risk assessment carried out at the site of installation relevant for baseline data collection**

Refer to Appendix 6 – *ISO 14001 Environmental Management System, Environmental Aspects Register 'Emissions to Groundwater' and 'Contaminated Land' sections*

### **2.2 Site Investigation**

#### **2.2.1 Rationale for investigation - may include list of potential contaminant sources relevant to each proposed investigation location**

- The Recycling Village Ltd deals with hazardous materials therefore 'Emissions to Groundwater' and 'Contaminated Land' were identified as potential issues during risk assessments carried out when preparing the Environmental Aspects Register (Appendix 6)
- As no previous survey had been carried out to determine the state of the underlying groundwater and soil, the survey was deemed important in order to establish a baseline of current conditions to ensure a clean closure at the end of the site commission.
- The company was requested by the Agency to carry out the baseline survey as part of the Industrial Emissions Licence application process, in accordance with Regulation 9(n) of the EPA (Industrial Emissions)(Licensing) Regulations, 2013

### **2.2.2 Constraints applicable to the placement of site investigation locations**

This section is not applicable as there were no constraints to the placement of site investigation locations. The placement of site investigation locations is dealt with in Appendix 1 (Soil & Groundwater Baseline Report) – Section 3.1.

### **2.2.3 Methods used for forming exploratory holes e.g. boreholes, trial pits, window samples**

This section is dealt with in Appendix 1 (Soil & Groundwater Baseline Report) – Sections 1.3 and 3.2.

### **2.2.4 Methods used for collecting, preserving and transporting samples to the analytical laboratory**

This section is dealt with in Appendix 1 (Soil & Groundwater Baseline Report) – Section 3.2.

## **2.3 Sampling & Monitoring**

### **2.3.1 Rationale for sampling strategy e.g. if targeted rationale of targets; if non-targeted justification for spacing and layout**

- Locations were chosen based on the direction of groundwater flow to extract samples upstream and downstream of the groundwater flow through the facility.
- The Recycling Village Ltd, after discussion with Environmental Consultancy WEML, felt it was necessary to get a soil profile through each borehole (surface, middle, bottom), to determine whether pollutants were leaking through the yard surface, percolating through the soil and affecting the groundwater in the various strata.

### **2.3.2 Description and explanation of monitoring programmes for groundwater and surface waters**

- Baseline surveys have been completed for both underlying groundwater (March 2014) and the receiving surface waters, the River Nanny (September 2013). Both surveys concluded that there is no evidence of contamination in either the groundwater or receiving surface water from activities carried out at The Recycling Village Ltd.
- Future monitoring programmes for both groundwater and surface water will be based on the Industrial Emissions Licence requirements.

### **2.3.3 Details of monitoring and sampling including locations, depths, frequencies**

This section is dealt with in Appendix 1 (Soil & Groundwater Baseline Report) – Section 3.1.



## **2.4 Analysis**

### **2.4.1 Rationale for selection of analytical methods**

- The laboratory (FitzScientific, Drogheda, Co. Louth) analysed the soil and groundwater samples using accredited laboratory methods (Appendix 3).
- The analytical suite performed on the samples was based on information received from the EPA in relation to baseline surveys for waste facilities.
- For details of the analysis and the results, refer to *Section 3.3* in Appendix 1, Soil & Groundwater Baseline Report, and Appendix 2 – *Laboratory Certificates*.

### **2.4.2 Description and performance of analytical methods**

Refer to Appendix 2 – *Laboratory Certificates* and Appendix 3 – *Laboratory Accreditations*.

## **3. PRESENTATION & INTERPRETATION OF DATA WITHIN TEXT OF REPORT**

### **3.1 Description of conditions encountered at the site, including groundwater regime and surface water features**

This section is dealt with in Appendix 1 (Soil & Groundwater Baseline Report) – *Section 2.1*.

### **3.2 Summary tables of chemical analyses and site monitoring**

This section is dealt with in Appendix 1 (Soil & Groundwater Baseline Report) – *Section 4.0*.

### **3.3 Description of type, nature and spatial distribution of contamination, with plans where appropriate**

This section is dealt with in Appendix 1 (Soil & Groundwater Baseline Report) – *Sections 5.0 and 6.0*.

No evidence of significant soil or groundwater contamination was encountered in the investigation.

### **3.4 Analysis of the data set and derivation of representative concentrations for individual contaminants to a suitable level of significance**

This section is dealt with in Appendix 1 (Soil & Groundwater Baseline Report) – *Sections 4.0, 5.0 and 6.0*.

### **3.5 Evaluation of site investigation results against the outline conceptual model**

There was no conceptual model produced as part of this site investigation.

## **4. PRESENTATION OF RAW DATA (ANNEX TO REPORT)**

### **4.1 Plan showing monitoring and sample point locations**

This section is dealt with in Appendix 1 (Soil & Groundwater Baseline Report) – *Figures*.

### **4.2 Description of site works and on-site observations**

This section is dealt with in Appendix 1 (Soil & Groundwater Baseline Report) – *Appendices*.

### **4.3 Exploratory borehole, core or drilling logs**

This section is dealt with in Appendix 1 (Soil & Groundwater Baseline Report) – *Appendices*.

### **4.4 Details of response zone and other construction details of borehole monitoring installations**

Construction details are shown in the borehole logs in Appendix 1 (Soil & Groundwater Baseline Report)

### **4.5 Monitoring results**

This section is dealt with in Appendix 1 (Soil & Groundwater Baseline Report) – *Section 4.0 – Tables 2, 3, 4 and 5*; and in Appendix 2 – *Laboratory Certificates*.

### **4.6 Description of samples submitted for analysis**

This section is dealt with in Appendix 1 (Soil & Groundwater Baseline Report) – *Section 3.3*

### **4.7 Relevant Quality Assurance/Quality Control data — this may include accreditations of staff, calibration certificates of equipment, laboratory accreditations (national and international standards)**

Refer to Appendix 3 – *Laboratory Accreditations*

**4.8 Laboratory analytical reports, completed in accordance with the relevant QA/QC data, including relevant international analytical or test method standards.**

Refer to Appendix 2 – *Laboratory Certificates*

**4.9 Chain of custody records for sample and data collected**

Refer to Appendix 4 – *Chain of Custody Records*

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