

**BERSHAM (GLENSIDE) LIMITED  
THE BERSHAM COLLIERY TIP  
RHOSTYLLLEN WREXHAM  
NORTH WALES**

**THE WORKING PLAN**

**HEALTH, SAFETY & ENVIRONMENTAL (HSE) PLAN**

**MAY 2023 (v3)**

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## **INTRODUCTION**

This construction phase earthworks plan (the Working Plan Volume 1) has been produced to assist the parties involved in the earthwork's construction phase of this project to identify and manage any risks to the health, safety and environmental issues for all persons and installations affected by the works.

The purpose of the Plan is to bring together health, safety and environmental information and procedures that arise from the relevant disciplines.

The Plan aims to identify, address, and mitigate all risks particular to this project for the competent contractor to reduce or manage.

Volume 2 of the working plan addresses the ecological surveys to be completed in advance of each phase of earthworks, the Arboricultural method statement, the detailed landscape plan and programme and the landscape after care and management plan.

### **Working Plan – Periodic Reviews**

Recognising the timescale for the operations at the site it is necessary to identify and establish a framework to undertake periodic reviews of the Working Plan.

Before 30 September of every year during the operational periods at the site, and not less than four weeks prior to entering the next phase of the development, a report shall be submitted by the developer to the Mineral Planning Authority.

The report shall include:

- a) Detail of the operations over the previous 12 months and set out the intended operations for the next 12 months.
- b) A review of the Working Plan as the project progresses to demonstrate planning, preventive actions and controls, and responsibilities, meet the required standards.
- c) Where the review in b) identifies the need for revision and/update this shall be included within the report for assessment and agreement by the Mineral Planning Authority.

## **1.0 Project Details**

### **Name and address of Client:**

#### **Bersham Glenside Limited**

Melbourne House  
14 King Street  
Smethwick  
West Midlands  
B66 2JN

Contact: Mike Killett, Technical Director

Tel: 0121 565 4500

Fax: 0121 565 0646

### **Name and address of Planning Supervisor Glenside**

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Melbourne House  
14 King Street  
Smethwick  
West Midlands  
B66 2JN

Contact: Mike Killett, Technical Director

Tel: 0121 565 4500

Fax: 0121 565 0646

### **Name and address of specialist Health & Safety Consultant**

A&H Safety Consultants Limited  
Unit A19, Bersham Enterprise Centre  
Plas Grono Road  
Rhostyllen  
Wrexham  
LL14 4EG

Contact: Tony Williams

Tel / Fax: 01978 353506

### **Name and address of Local Authority Wrexham County**

#### **Borough Council**

Lampit Street  
PO Box 1289  
Wrexham  
LL11 1WJ

Contact: Kevin Hughes

Tel: 01978 292400

Fax: 01978 292402

**Name and address of the Health & Safety Executive Health & Safety Executive**

Crown Buildings  
31 Chester Street  
Wrexham  
Clwyd  
LL13 8AN

Tel: 01978 316000  
Fax: 01978 355669

**Location of the Works The Former Bersham Colliery Tip**

Plas Grono Road  
Rhostyllen  
Wrexham  
North Wales

## **2. Purpose and Scope of the Restoration Works**

The purpose of the restoration works is to remove waste materials from site that have the potential to cause damage to the environment. In the past the material on site has combusted causing major adverse environmental impact on the surrounding area through widespread noxious emissions from combusting colliery spoil.

Historically, combustion has been evident on all four flanks of the main mound in addition to an area of lower-lying spoil to the southeast of the subject site.

It has been established that slope stability is of concern with unacceptable factors of safety applicable to steep high slopes with the potential for slippage into the Glan-yr-afon Brook on the northern boundary, onto Plas Grono Road on the western boundary and to the adjacent A483(T) Road on the western boundary.

The slopes are subjected to weathering and, if the tip is not reduced in level and should slippage occur, un-burnt colliery spoil including coal, would be exposed to the elements thereby providing the necessary conditions for spontaneous combustion to occur.

There are established methods for controlling excavation to manage the risk of spontaneous combustion and these procedures are included within this working plan.

The scope of the works includes the removal of colliery spoil from a maximum of approximately 50 metres above the adjacent highways and railway and the works necessary to complete the verification that all contaminated, and potentially contaminated, materials have been located and where necessary removed from the site in order to negate any and all future risks to the general public who will have access to the land.

### **The works include:**

- Site clearance of birch scrub;
- Formation of a temporary site compound;
- Establishment of environmental controls;
- Establishment of H&S monitoring procedures;
- Bulk excavation;
- In-situ processing by power screening;
- In-situ „campaign” crushing of any over-size material located;
- Disposal by heavy goods vehicles via the public highway;
- Disposal by rail freight;
- The importation and placement of inert fill material; □ The establishment of the approved landscape plan; □ Landscape after care and management.

## **Contamination**

Planning condition no.7 requires the provision of the desk study to identify any potentially unacceptable risks arising from contamination at the site. The desk study has identified the potential for spontaneous combustion, particularly where combustible materials are left exposed to the elements.

The phased site investigations, based on the results of the desk study, commenced in October 2010 and the results of the initial phase (Phase 1a) are included within Appendix 1 of this document. It has been agreed with the MPA that the phased investigations will be completed by a series of trial excavations and laboratory testing to provide the necessary information to progress the works. For reasons of health & safety during the works each phase will be completed in a series of sub-phases reducing the ground level in approximately 4 metre lifts. Consequently, the site investigation section of this plan consists of a living document" to be completed as restoration works proceed.

The future use of the land is for public amenity and given that the absolute content of the colliery tip has not been historically documented, it is necessary to prove that all risks associated with contamination have been addressed and removed.

Consequently, the completion of each phase will, where necessary, consist of excavation of any contaminated material to the interface with the underlying natural strata (boulder clay) at which time the requirement to provide a verification report will be satisfied. The verification report will confirm that the remediation measures have been completed in accordance with the method statement and that all potential risks in terms of contamination have been removed or managed.

Therefore, where excavation to clear material necessarily progresses below the designed finished level, inert fill material appropriate to the designed landscape plan, and in accordance with planning condition no.25, will be imported and placed in accordance with the approved waste acceptance criteria.

This process also necessarily applies to areas of landscape mounding whether for screening purposes (as adjacent to the A483(T) Road), or for the mound to be formed as a back-drop / setting for the adjacent colliery head gear on the site of the former Bersham Colliery itself, should it be necessary to remove contaminated material.

However, it is intended that the mound forming the backdrop or setting to the adjacent colliery head frame will be formed largely by retention of existing material.

**Anticipated start date: May 2023**

**Estimated duration of the contract: 9 Years**

**Projected maximum number of operatives: 10**

**F10 Issue Date: TBA**

**Plan prepared by:**

Michael Killett

**Supplementary H&S contribution by:**

A&H Safety Consultants Ltd

**Signed**

A handwritten signature in blue ink, appearing to read 'Michael Killett', is written over the printed name.

**Date:**

November 2010

### **3. Existing Environment**

#### **3.0 Topography (general description)**

The site is located at the site of the former Bersham Colliery Tip and consists of an abandoned colliery spoil heap located at National Grid Reference SJ 313 481, to the south of the village of Rhostyllen and some 2KM southwest of Wrexham Town Centre. The site location is shown on Figure 3.1 and access is from Plas Grono Road.

Part of the tip stands fifty metres above the Wrexham plain dominating the nearby village of Rhostyllen. In its terraced, flat topped, form it is largely unable to sustain a grass covering because of past sub-surface burning and the constituent materials.

##### **3.01 Previous land use**

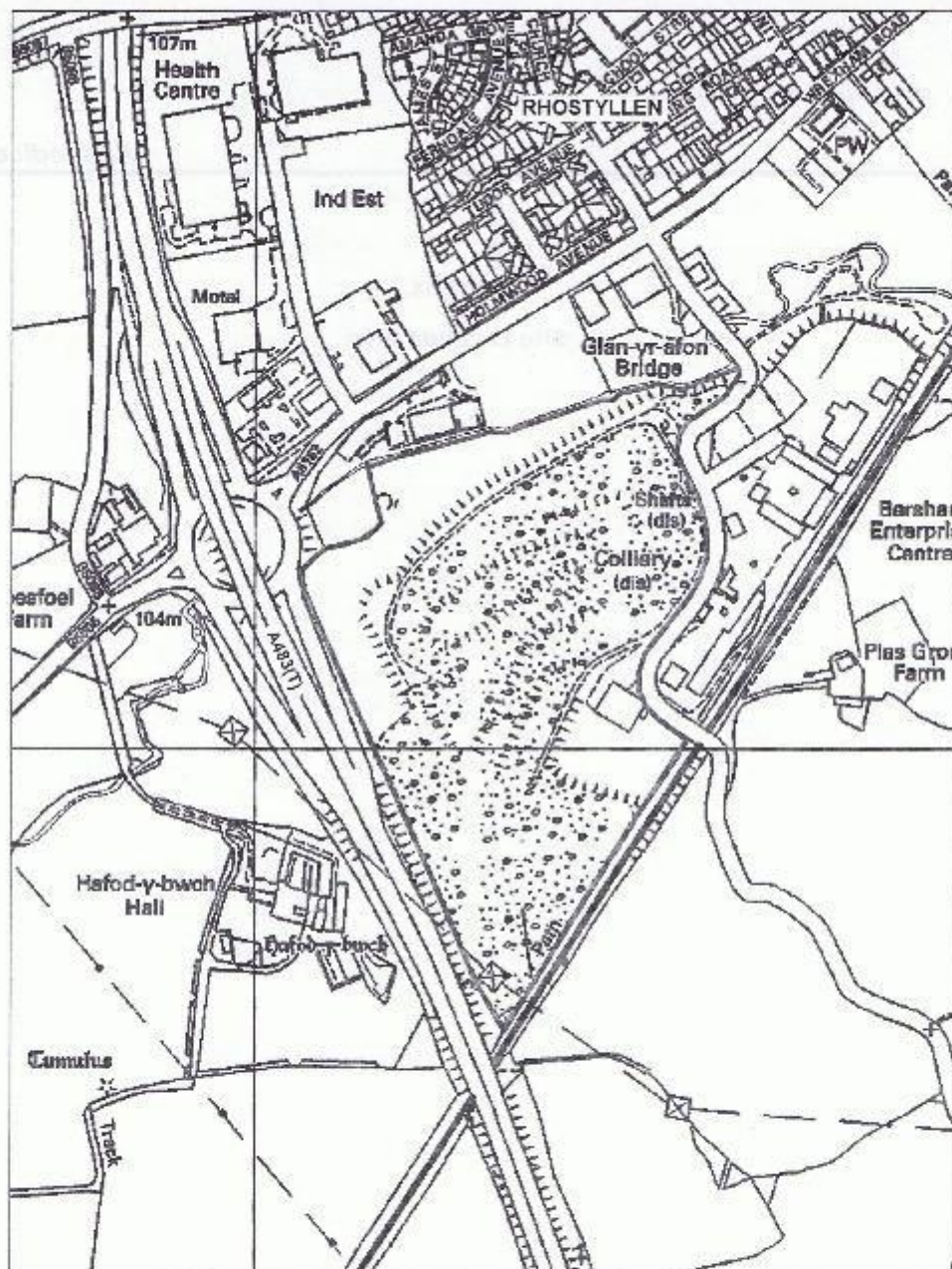
The Bersham Colliery Tip, known locally as Bersham Bank, consists mainly of colliery spoil constituting derelict land with potential significantly adverse environmental impact. Standing some 50 metres high the mound dominates the adjacent roundabout on the A483 Wrexham By-pass beneath it.

The spoil tip fills an area of land constrained on all sides by physical boundaries.

Glan –yr- Afon brook runs along the northern boundary; Plas Grono Road and the adjacent Enterprise Centre form the eastern boundary; The A483 Wrexham By-pass forms the western boundary.

The boundary is completed to the south by an adjacent railway line with an overhead high voltage cable installation in the extreme south-eastern corner.

### FIGURE 3.1 – SITE LOCATION PLAN

Hersham Colliery Tip  
Site Location Plan

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www.gps.illinois.gov  
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**Pegasus**  
Private  
Group

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## **4 Method of Work**

### **4.1 a) Reclamation Earthworks & Material Usage**

It is established that there is beneficial use for most of the tip material. The Phase 1a detailed site investigation of the upper +/- 5 metres of the site overall has established that a large element of the colliery waste consists of un-burnt colliery shale with gravel sized and fine coal. Following extensive historic, and more recent, site investigations consisting of field trials, materials sampling and laboratory analysis, beneficial use of both burnt and un-burnt colliery spoil has been determined.

The proposed extraction works will consist of the excavation, processing and disposal of a total quantity of approximately 5m tonnes of un-burnt & burnt colliery spoil. The material will be excavated and, where necessary, loaded on to dump trucks for transport to the processing area located within the southeast area of the site. The processed material will then be loaded on to 8 wheeled tipper lorries and/or articulated lorries for road haulage to the end users of the material. The completion of the phase 1 clearance works to the south and southeast section of the site will enable the construction of a rail siding. This will enable the removal of processed material by rail thereby mitigating the environmental impact of the restoration works.

The restoration works will be completed within a phased programme consisting of seven phases of earthworks combined with landscaping works as site clearance works progress.

### **4.1 b) How Existing Vegetation Would Be Used For Screening**

The operations at the site are to excavate and remove the colliery spoil material. In terms of the description of the site this material is located across the footprint of the site with self-established grass, shrubs and (small) trees located at selected areas of the spoil material. Vegetation growth upon the spoil material is limited due to the limited soil material present within the colliery spoil.

A direct effect of removing the colliery spoil material is that the (limited) vegetation present at the site will be removed to facilitate access to the spoil material. This is an action that will occur in all phases of excavation and reclamation. Therefore, during each phase of the operations there will be no vegetation to afford screening of the operations in that phase. Screening may be afforded by future phases that retain their scale, mass, and vegetation. However, ultimately these phases will also be excavated, and their vegetation removed.

The operations at the site will not retain vegetation and therefore it is not possible for onsite vegetation to afford screening. Off-site vegetation is able to offer screening of the site, and this includes mature trees / woodlands along the A483 (West of the site), Colliery Road (East of the site), and the Glanyrafon Brook (North of the site). This vegetation is located outside the site and therefore not within the control of the developer.

## **4.2 Earthworks Phase 1**

The plan area for Phase 1 is as shown on Figure 1.

Advance works will consist of the clearance of vegetation that includes mainly birch scrub. The resulting material will be either;

- a) exported from site to appropriate end users or;
- b) shredded and retained on site for use in future landscaping measures.

In order to comply with health & safety standards, it is necessary to determine existing ground temperatures in advance of excavation to avoid the potential for spontaneous combustion.

The excavation of phase 1 will proceed by reducing the existing ground level by approximately 4 lifts in each of a series of sub-phases. In advance of each sub phase, further investigation and ground temperature probing will be completed to the proposed depth of excavation.

If necessary, upon completion of the clearance of all colliery spoil to the interface with the underlying natural strata, and following verification of removal of all waste material, inert fill material will be imported and placed in order to create and sustain landscaping features in accordance with the approved landscape plans.

Any material found to be unsuitable for export to end users will, where appropriate, be incorporated within the screen bund to be located at the boundary with the A483(T) Road. The screen bund will be progressively constructed as indicated on figure 2.

Should material be encountered that is proven contaminated to an unacceptable degree then such material will be removed from site to an appropriately licensed landfill facility.

## **4.3 Earthworks Phase 2**

The plan area for Phase 2 is as shown on Figure 2.

Phase 2 will again be reduced over the plan area in a series of sub-phases of approximately 4 metres depth.

Site investigation and appropriate ground temperature probing will be completed in advance of each sub phase to the proposed depth of excavation.

Excavated material will be hauled to the processing area by dump truck over the defined haul route constructed and maintained to minimise dust emissions.

Any material found to be unsuitable for export to end users will be stockpiled for later incorporation within the screen bund to be located at the boundary with the A483(T) Road.

Should material be encountered that is proven contaminated to an unacceptable degree then such material will be removed from site to an appropriately licensed landfill facility.

#### **4.4 Earthworks Phase 3**

The plan area for Phase 3 is as shown on Figure 3.

Phase 3 will again be reduced over the plan area in a series of sub-phases of approximately 4 metres depth.

Site investigation and ground temperature probing will be completed in advance of each sub phase of excavation to the proposed depth of excavation.

Excavated material will be hauled to the processing area by dump truck over the defined haul route constructed and maintained to minimise dust emissions. During the latter stages of phase 3 and into phase 4 the screen bund at the boundary with the A483(T)Road will be formed. Any material found to be unsuitable for export to end users will be incorporated within the screen bund.

If necessary, upon completion of the clearance of all colliery spoil to the interface with the underlying natural strata, and following verification of removal of all waste material, inert fill material will be imported and placed in order to create and sustain landscaping features in accordance with the approved landscape plans.

Should material be encountered that is proven contaminated to an unacceptable degree then such material will be removed from site to an appropriately licensed landfill facility.

#### **4.5 Earthworks Phase 4**

The plan area for Phase 4 is as shown on Figure 4.

Phase 4 will again be reduced over the plan area in a series of sub-phases of approximately 4 metres depth.

Site investigation and ground temperature probing will be completed in advance of each sub phase of excavation to the proposed depth of excavation.

Excavated material will be hauled to the processing area by dump truck over the defined haul route constructed and maintained to minimise dust emissions.

During the latter stages of phase 4 and into phase 5 the screen bund at the boundary with the A483(T) Road will be formed. Any material found to be unsuitable for export to end users will be incorporated within the screen bund.

If necessary, upon completion of the clearance of all colliery spoil to the interface with the underlying natural strata, and following verification of removal of all waste material, inert fill material will be imported and placed in order to create and sustain landscaping features in accordance with the approved landscape plans.

Should material be encountered that is proven contaminated to an unacceptable degree then such material will be removed from site to an appropriately licensed landfill facility.

#### **4.6 Earthworks Phase 5**

The plan area for Phase 5 is as shown on Figure 5.

Phase 5 will again be reduced over the plan area in a series of sub-phases of approximately 4 metres depth with site investigation and ground temperature probing completed in advance of each sub phase of excavation to the proposed depth of excavation.

Excavated material will be hauled to the processing area by dump truck over the defined haul route constructed and maintained to minimise dust emissions.

During the latter stages of phase 5 the screen bund at the North-Western boundary of the site will be completed. Any material found to be unsuitable for export to end users will be incorporated within the screen bund.

Should material be encountered that is proven contaminated to an unacceptable degree then such material will be removed from site to an appropriately licensed landfill facility.

It is envisaged that the level to which the existing mound is excavated within this phase will be determined by the requirement to retain a part of the mound as a backdrop or setting for the adjacent colliery head gear.

Further site investigation is required at the appropriate time to confirm that retention of the existing material does not constitute an unacceptable risk to human health and/or the environment. Where possible all material will be retained in accordance with the approved landscape design.

As excavation proceeds within this phase advance investigations must be completed to ensure that all risks of future adverse environmental effects are either removed or managed. If proved necessary, the mound forming the backdrop and setting for the colliery headgear could be re-constructed using appropriate inert and/or fully combusted material.

#### **4.7 Earthworks Phase 6**

The plan area for Phase 6 is as shown on Figure 6.

Phase 6 will again be reduced over the plan area in a series of sub-phases of approximately 4 metres depth with site investigation and ground temperature probing completed in advance of each sub phase of excavation to the proposed depth of excavation.

Excavated material will be hauled to the processing area by dump truck over the defined haul route constructed and maintained to minimise dust emissions.

Any material found to be unsuitable for export to end users will be retained on site for use as fill material. No combustible material will be retained on site. Where necessary, upon completion of the clearance of all colliery spoil to the interface with the underlying natural strata, and following verification of removal of all waste material, inert fill material will be imported and placed in order to create landscaping features in accordance with the approved landscape plans.

Should material be encountered that is proven contaminated to an unacceptable degree then such material will be removed from site to an appropriately licensed landfill facility.

As with Phase 5, it is envisaged that the level to which the existing mound is excavated within this phase will be determined by the requirement to retain a part of the mound as a backdrop or setting for the adjacent colliery head gear.

Further site investigation is required at the appropriate time to confirm that retention of the existing material does not pose an unacceptable risk to human health and/or the environment. Where possible all material will be retained in accordance with the approved landscape design.

As excavation proceeds within this phase advance investigations must be completed to ensure that all risks of future adverse environmental effects are either removed or managed. If proved necessary, the mound forming the backdrop and setting for the colliery headgear could be re-constructed using appropriate inert and/or fully combusted material.

#### **4.8 Earthworks Phase 7**

The plan area for Phase 7 is as shown on Figure 7.

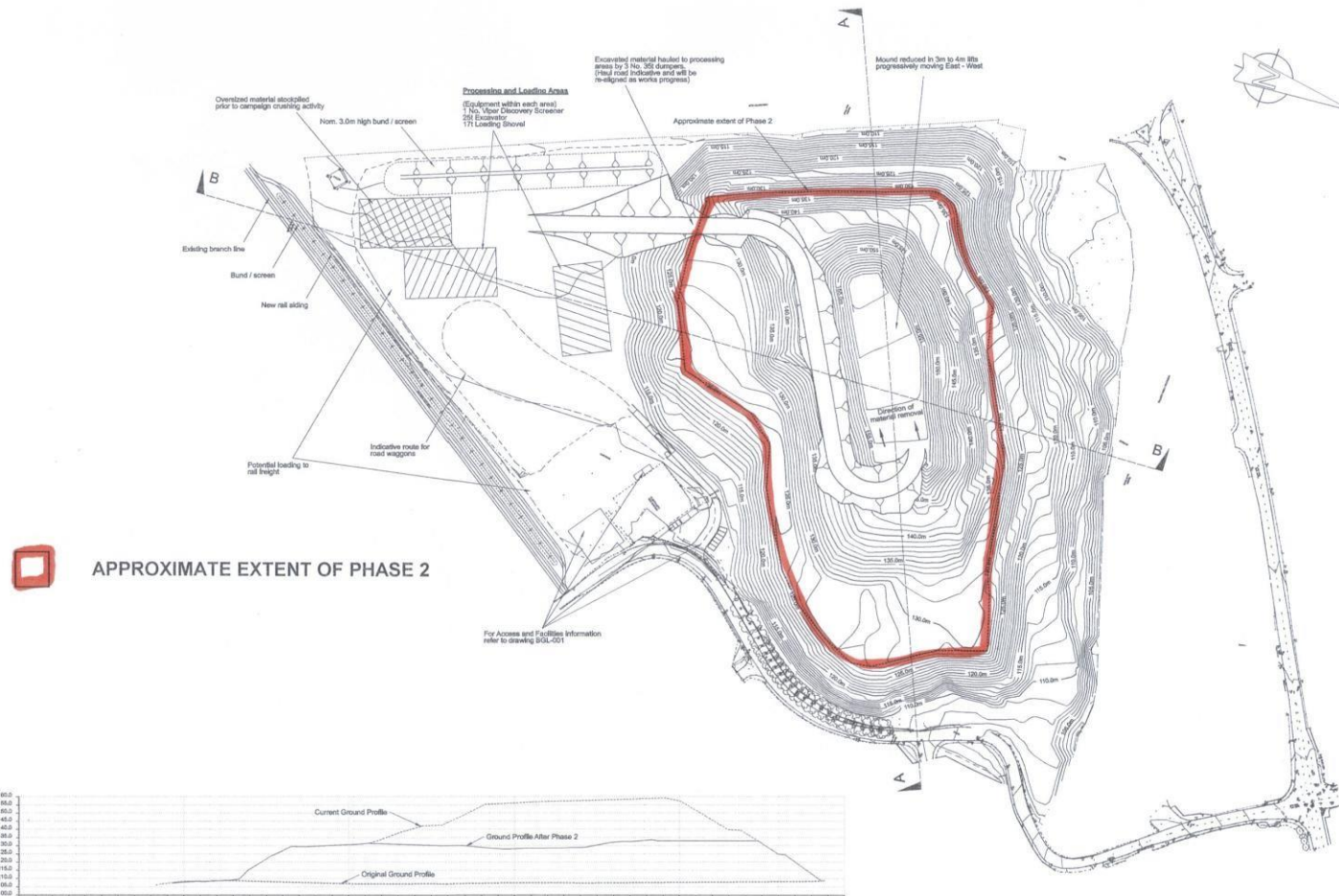
This phase of earthworks consists of the completion of formation of the earthworks profile forming the base for the landscaping features for the site. Details of the landscape finishing works are to be found in Volume 2 of the working plan.

## 4.9 FIGURES

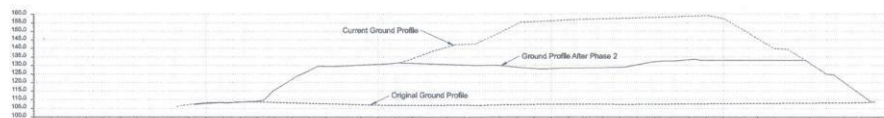
**FIGURE 1  
PHASE 1**



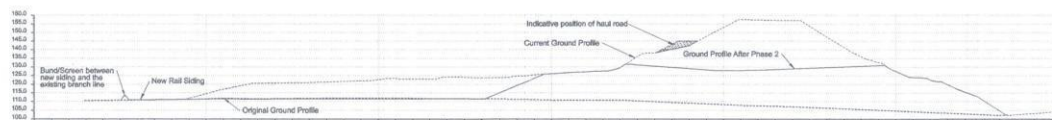
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|----------------|----------------------------------------------|-------|
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| Job Title      | Bersham Colliery Tip                         |       |
| Drawing Title  | Commencement of Phase 1<br>Plan and Profiles |       |
| Scale (A1)     | 1:1250                                       |       |
| Drawing Status |                                              |       |
| Date           | Drawing No                                   | Issue |



## APPROXIMATE EXTENT OF PHASE 2



SECTION A:A



SECTION B:B

FIGURE 2  
PHASE 2

Client  
**BERSHAM GLENSIDE LTD**

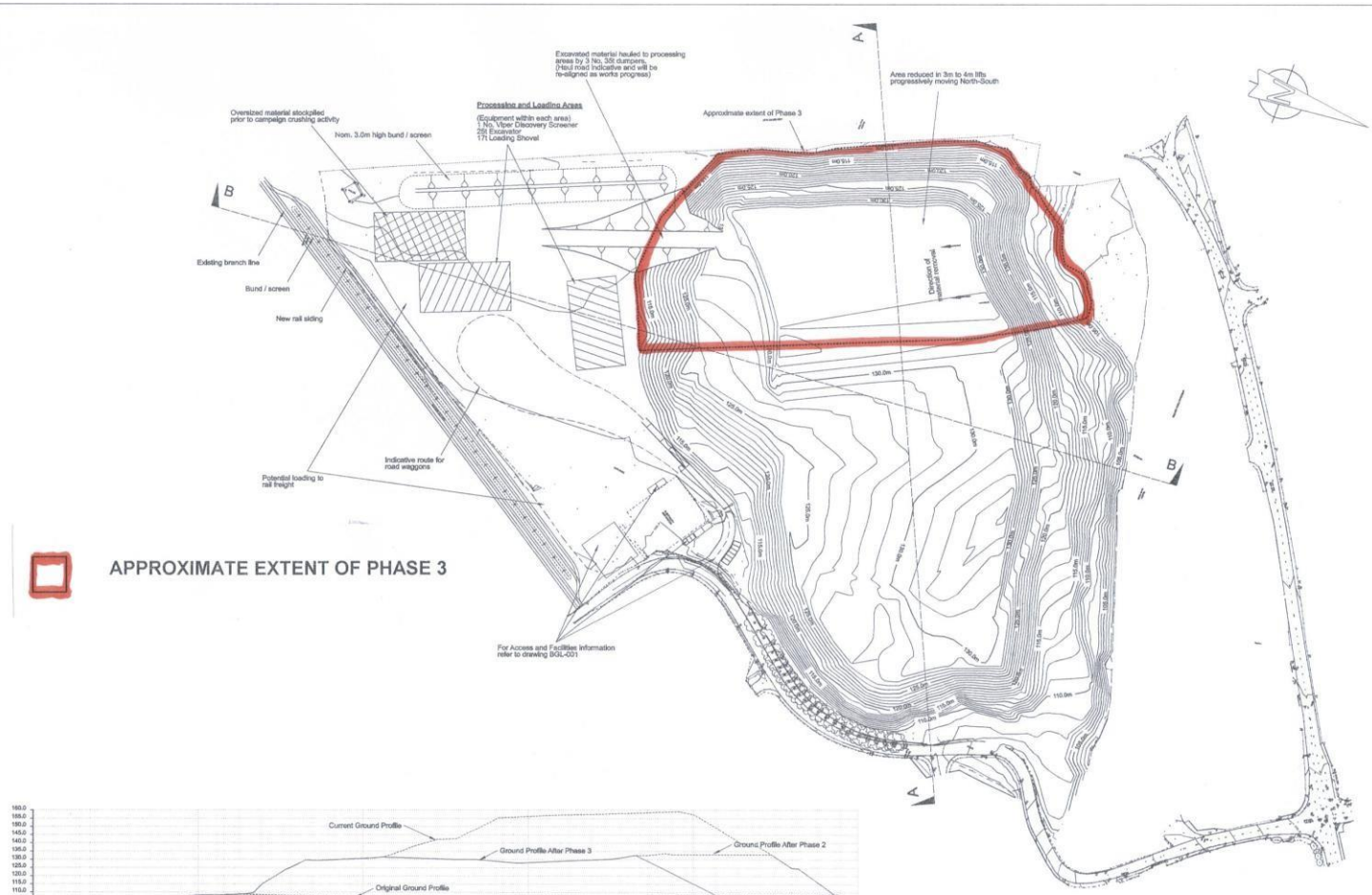
Job Title  
**Bersham Colliery Tip**

Drawing Title  
**Commencement of Phase 2  
Plan and Profiles**

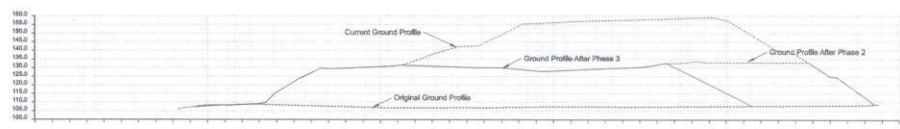
Scale of A1: 1:1250

Drawing Status

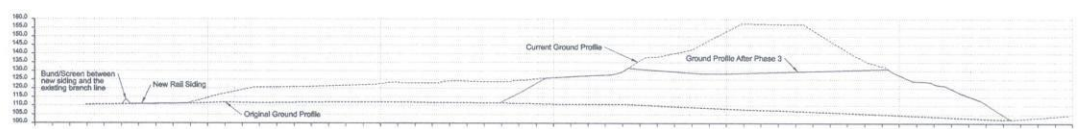
Date Drawing No Issue



**APPROXIMATE EXTENT OF PHASE 3**



**SECTION A:A**

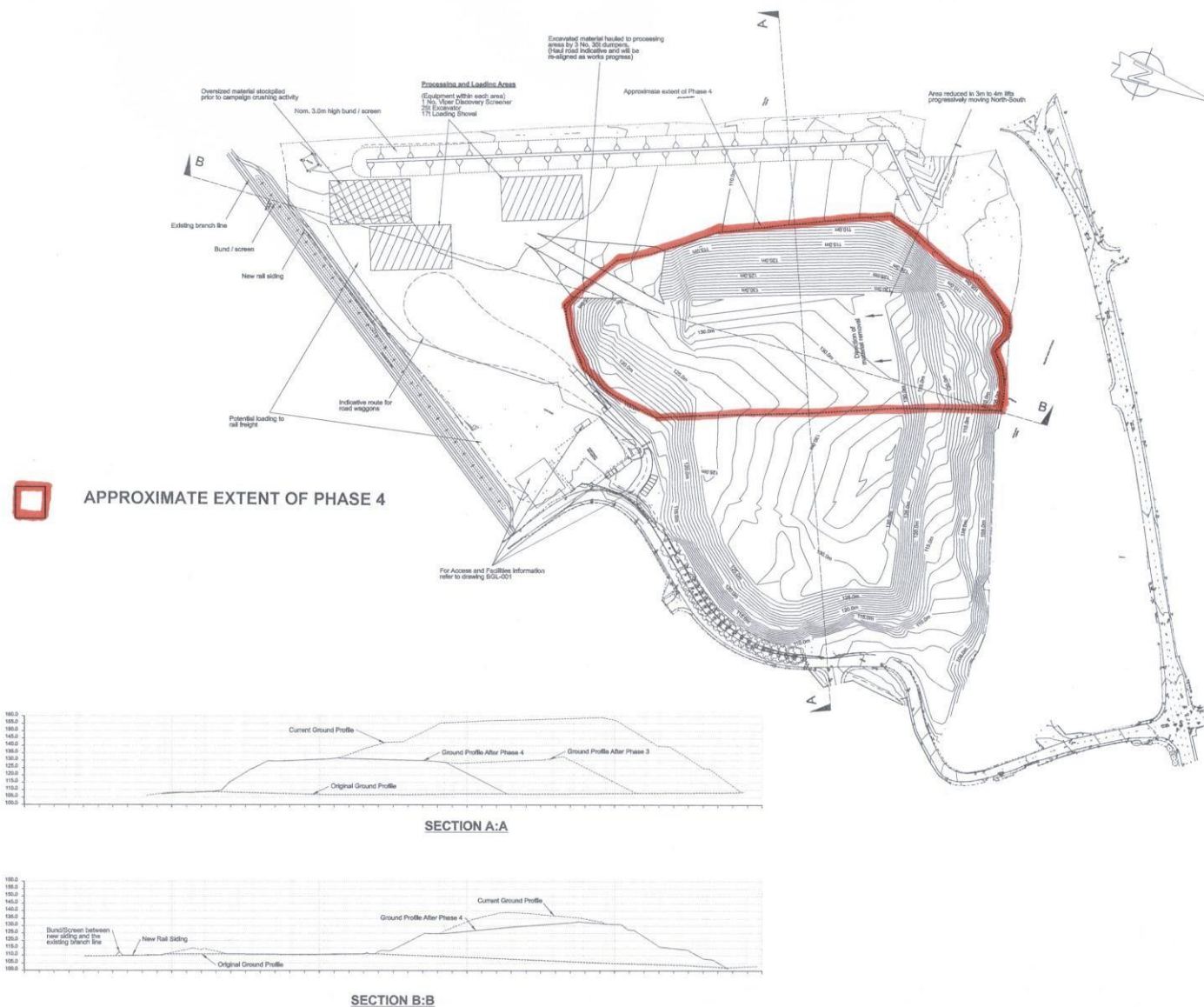


**SECTION B:B**

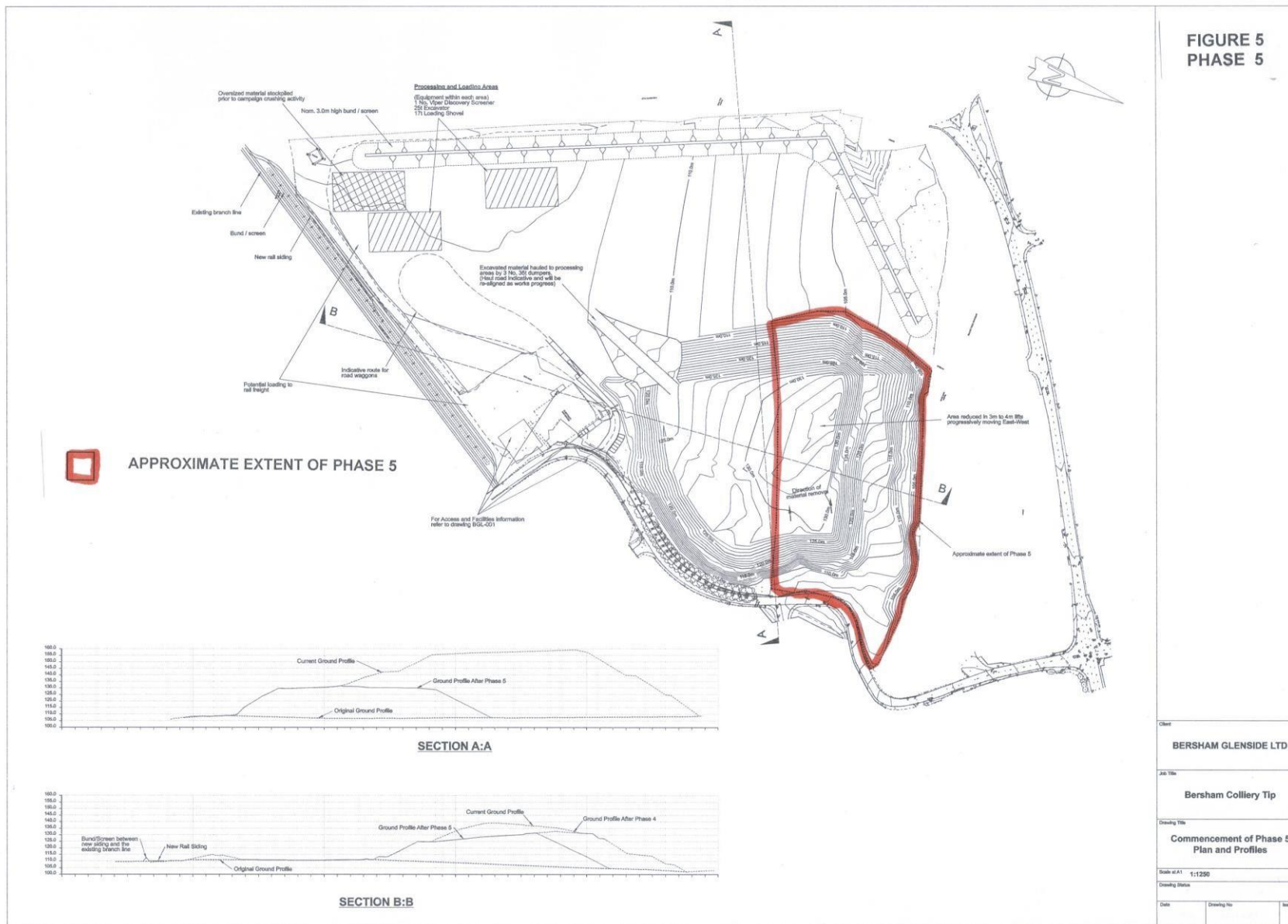
**FIGURE 3  
PHASE 3**

|                                              |            |       |
|----------------------------------------------|------------|-------|
| Client                                       |            |       |
| BERSHAM GLENSIDE LTD                         |            |       |
| Job Title                                    |            |       |
| Bersham Colliery Tip                         |            |       |
| Drawing Title                                |            |       |
| Commencement of Phase 3<br>Plan and Profiles |            |       |
| Scale at A1: 1:1250                          |            |       |
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| Date                                         | Drawing No | Issue |
|                                              |            |       |

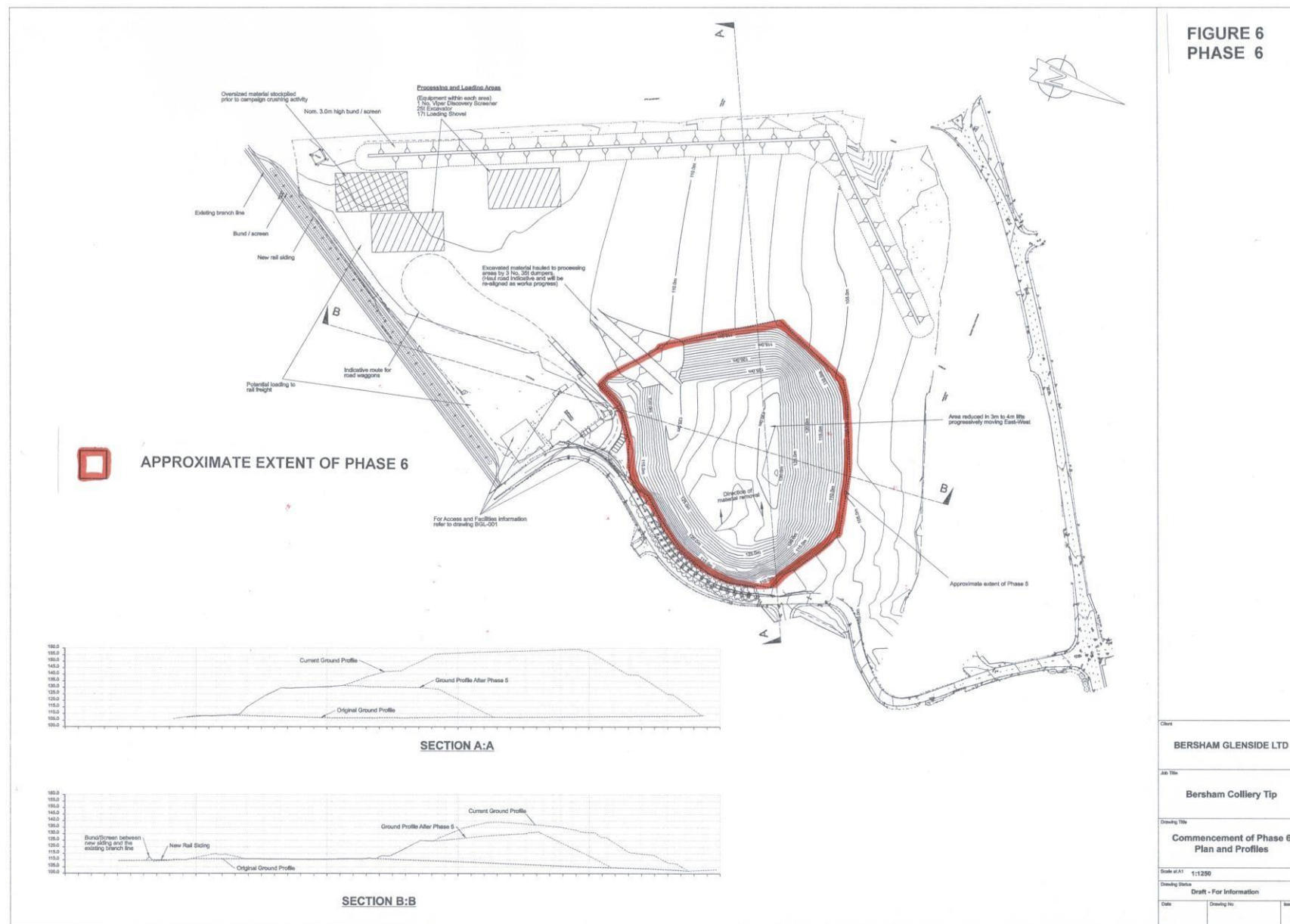
**FIGURE 4  
PHASE 4**



|                |                                           |       |  |
|----------------|-------------------------------------------|-------|--|
| Client         | BERSHAM GLENSIDE LTD                      |       |  |
| Job Title      | Bersham Colliery Tip                      |       |  |
| Drawing Title  | Commencement of Phase 4 Plan and Profiles |       |  |
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| Drawing Status |                                           |       |  |
| Date           | Drawing No                                | Issue |  |
|                |                                           |       |  |

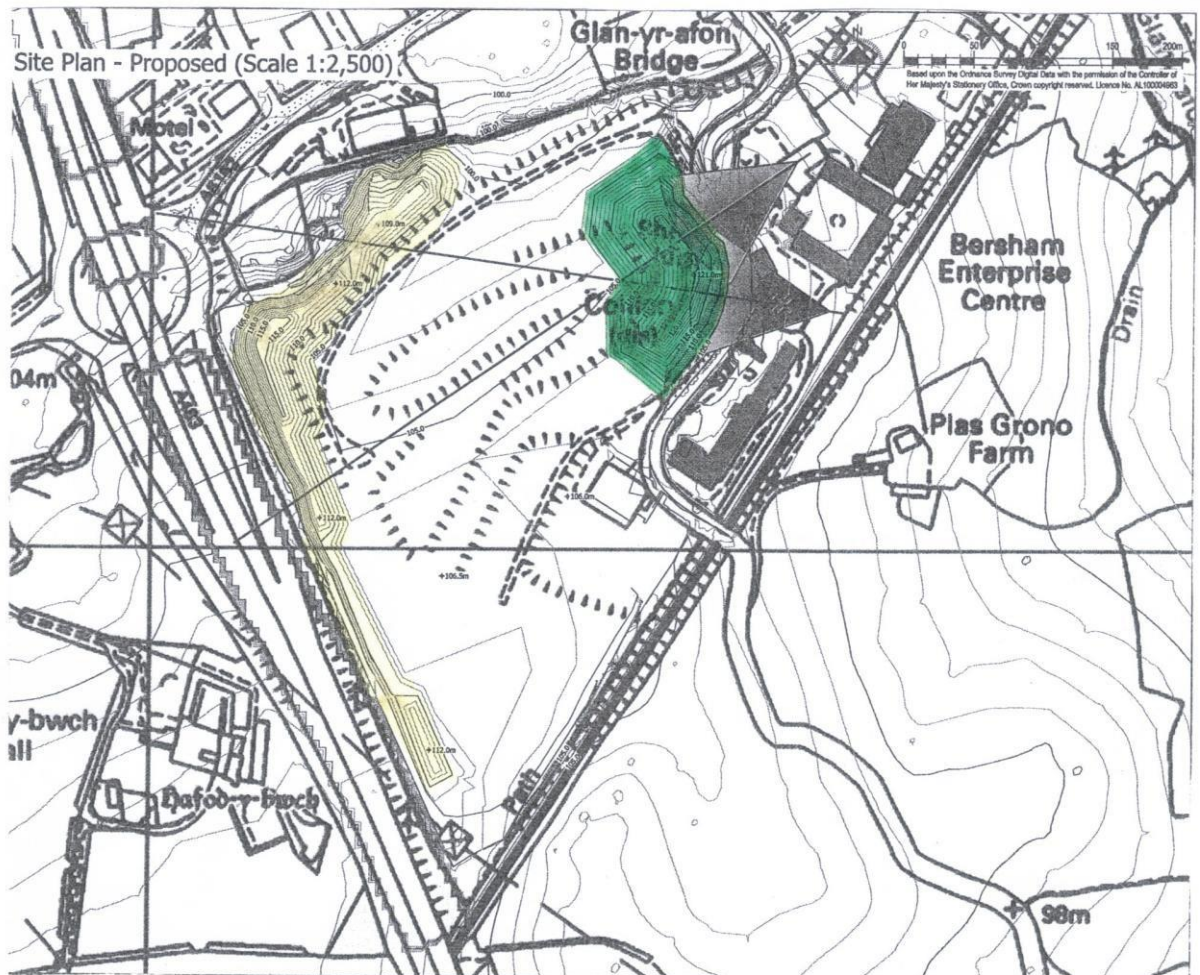


**FIGURE 6  
PHASE 6**



**FIGURE 7**  
**PHASE 7**

**FORMATION OF SCREENING BUNDING TO A483(T)**  
**FORMATION OF BACK-DROP SETTING TO COLLIERY HEAD-GEAR**



SCREEN BUND TO BOUNDARY WITH A483(T) ROAD



MOUND FORMING BACK-DROP SETTING TO COLLIERY HEAD GEAR

## **5 Existing Services**

Details have been obtained from the Public Utilities and plans are to be included in Appendix 2 showing the approximate locations of principle mains, pipes and cables in the vicinity of the spoil tip. As the body of the tip fills the majority of the land area, all the Public Utility Services run around the perimeter of the site.

The most significant Utility constraint is the electricity substation and the overhead power lines. The cables that formerly passed over the southern end of the tip were diverted, to run underground alongside the railway, to facilitate the removal of spoil for use as a fill material during the construction of the A483 Wrexham By-Pass.

## **6 Working Restrictions**

No working, except for essential repair and maintenance, shall be carried out outside the following hours, unless approved in writing in advance by the Minerals Planning Authority:

-0730 hours to 1730 hours (Monday to Friday)

-0800 hours to 1300 hours (Saturday)

No working shall take place on Sundays and Bank Holidays, except for essential repair and maintenance.

## **7. Site Establishment**

The welfare facilities provided will comply with the Construction (Health, Safety & Welfare) regulations.

The contractor's temporary accommodation will be to the standards detailed in the Fire Prevention on Construction Sites Joint Code of Practice and HSG 168 Fire Safety in Construction Work.

The site compound will be located to the south side of the existing electricity sub-station, and it will be screened from the Plas Grono Road by the existing retained vegetation.

A trained first aider will be on site during all working hours and a fully stocked first aid kit will be maintained.

The site office accommodation will include facilities for meetings so that regular progress and liaison review meetings may be held on the work site.

## **8 Site Parking Arrangements**

Designated car parking areas will be established within the site office compound area at the entrance to the site to provide adequate facilities for visitors and to avoid parking within the construction works areas.

## **9 Earthworks Monitoring Procedures**

### **9.1 Health & Safety**

A specialist Health & Safety Advisor has been appointed and the site-specific health & safety procedures have been established and all site staff will be duly inducted.

No personnel will be permitted on the site without first having been inducted in the Company and site-specific health, safety & environmental procedures.

The tip in all areas will be reduced in layers and in advance of the commencement of the bulk excavation of each layer trial holes will be excavated. At the surface of the plateau to be excavated, and within the trial holes, temperature and gas emissions will be determined.

#### **a) Temperature**

Determination of existing temperature at the surface and within the layer to be excavated will be by probe (Impact Searcher Bar) driven into the material as trial hole excavation progresses.

Additionally, routine surface temperature monitoring will be completed weekly.

#### **b) Gas Emissions**

A gas analyser (GA2000) will be used to measure emissions of CH<sub>4</sub>, CO<sub>2</sub>, O<sub>2</sub>, CO and H<sub>2</sub>S.

CO is an indicator of a fire and H<sub>2</sub>S is a gas emitted from burning coal. Methane provides the indication of combustible gases.

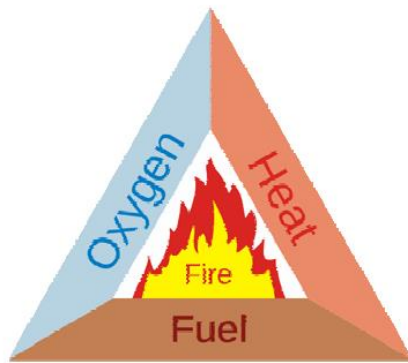
## 9.2 Spontaneous Combustion

The colliery spoil tip contains materials that have, in the past, burnt in-situ. Therefore, it is appropriate to address the potential for spontaneous combustion to occur during the bulk excavation works.

***It is noted that the extensive trial excavations carried out during the years 2005, 2006 and October 2010 have provided no evidence of combustion and it is considered that historical burning within the mound has ceased.***

### Principles of Spontaneous Combustion

Spontaneous combustion of coal is a fire initiated by the oxidation of coal. These types of coal fires require three basic elements to exist as shown in Figure 1:



**Figure 1: Fire triangle**

The process leading to spontaneous combustion can be summarised as follows:

- Oxidation occurs when oxygen reacts with the fuel, i.e. coal.
- The oxidation process produces heat.
- If the heat is dissipated, the temperature of the coal will not increase.
- If the heat is not dissipated, then the temperature of the coal will increase.
- At higher temperatures the oxidation reaction proceeds at a higher rate.
- Eventually a temperature is reached at which ignition of the material occurs.

Heat dissipation depends on the thermal conductivity of coal and the surrounding material, on convection processes caused by wind and barometric changes in the atmosphere and on the minor and major fracture density in the material mass. The tendency of coal to self-heat is a function of both intrinsic factors (coal type, geological setting, and environmental conditions) and extrinsic factors (mining related).

Combustible matter can interact with the oxygen in the air at ambient temperature releasing heat. Favourable conditions for spontaneous heating would be the accumulation of heat caused by a rise in temperature and hence an increase in the reaction rate. Although, at ambient temperature, the reaction can be so slow that it is unnoticed, when heat accumulates the temperature is raised and, according to the Arrhenius law, the reaction rate increases exponentially:

$$v = c_r \cdot c_o A \cdot e^{\frac{E_a}{RT}} \text{ ..... Equation 1}^1$$

Where:

$v$  = reaction (mol g<sup>-1</sup> s<sup>-1</sup>)

$c_r$  = combustible concentration (kg/m<sup>3</sup>)

$c_o$  = Oxygen concentration

$A$  = Arrhenius Frequency Factor (s<sup>-1</sup> or s<sup>-1</sup> C<sup>1-n</sup>)

$E_a$  = Activation Energy (kJ/mole)

$R$  = Universal gas constant = 8.314 J mole<sup>-1</sup> K<sup>-1</sup>

$T$  = Temperature (K)

An assessment of the self-ignition hazard can be undertaken for each phase of the site and circumstance.

The most important parameters involved in the heat balance, and therefore in self-heating are:

- Size of the coal particles
- Quantity
- Calorific value
- Heat conductivity
- Geometry and dimensions of the mining operation or coal storage facility
- Heat transfer coefficient on the outside surface of the bulk
- Ventilation
- Degree of compaction

#### Primary Causes of Spontaneous Combustion

The historic surface operations relating to underground and surface coal mines have associated problems with the stockpiling of coal, or waste dumps containing rejected coal material, in unconsolidated heaps where oxygen can come into contact with the coal and heat cannot dissipate. The problem is compounded when rainfall causes erosion, thereby progressively exposing more coal to the oxygen in the atmosphere. Very high ash carbonaceous shales will also spontaneously combust under the right conditions, particularly if they contain high levels of kerogen (a mixture of organic chemical compounds that make up a portion of the organic matter in sedimentary rocks).

### Preventing Spontaneous Combustion

Spontaneous combustion is a time-dependent phenomenon. Early attention to the potential sources of problems may prevent occurrences of heating progressing to full-scale spontaneous combustion. Examples of commonly used methods of dealing with spontaneous combustion in different circumstances are detailed below.

- *Tailings (plant rejects) – Tailings dams should be capped with at least one metre of inert (non-carbonaceous) material, topsoil should be added and the whole area revegetated.*
- *Coarse reject (discard) – Problem material should be placed in layers and compacted using a roller, particularly on the edges of the dump, so that the infiltration of oxygen is minimal. The total layer thickness should be no greater than 5m and each layer should be covered by a 1m thick layer of inert (non-carbonaceous) material. The final landform should be such that erosion and runoff is minimised, and new areas of discard coal are not exposed to the atmosphere.*
- *Spoil heaps in strip-mining – The sequence of spoiling should result in accumulations of coal material, particularly if pyritic, being buried under inert spoil.*
- *Product (coal) – Product stockpiles and coal inventory in the cut should not be left longer than the incipient heating period. There is considerable variation in the time taken for heating to occur, but most mines have an understanding, based on experience, of the time limits for their product.*
- *Shape and orientation of stockpiles and dumps – The height of stockpiles and dumps may be a critical site-specific consideration. When the technique is feasible, considerable benefit can be obtained by building dumps in relatively thin compacted layers. Longer-term stockpiles, particularly of product coal, can be further safeguarded by spraying the surfaces with a thin (bituminous) coating to exclude air.*

### Detecting Spontaneous Combustion

Spontaneous combustion fires can be detected fairly early in their development, i.e. before any obvious smoke and/or flame. Any of the following may assist in early detection, depending upon the particular circumstances.

- *Temperature difference – Heat haze and “steam” plumes may be observed on cold mornings and in times of high humidity. Hot spots may also be detected by infrared monitoring instruments or photography. Routine surveying of stockpiles using infrared scanning devices is an excellent precaution in situations where spontaneous combustion may be likely to occur. Efflorescence caused by the decomposition of pyrites and sublimation of sulphur is a strong indication of heating in pyritic (high sulphur) coals.*
- *Smell – Mine fires are readily recognisable by their distinctive smell. Oxidation of the coal causes a release of large volumes of noxious and flammable gases.*

Notable gases produced by spontaneous combustion include:

- *Sulphur dioxide  $\text{SO}_2$*
- *Oxides of nitrogen  $\text{NO}_x$ ,*
- *Hydrogen sulphide  $\text{H}_2\text{S}$  (also flammable)*
- *Carbon monoxide  $\text{CO}$  (also flammable).*

Explosive gases that are most likely to be present during a heating and that are flammable are:

- *Methane  $\text{CH}_4$*
- *Hydrogen  $\text{H}_2$*
- *Carbon monoxide  $\text{CO}$*

Other gases, all of which are flammable that act as indicators of fire may also be present in small amounts. They may be detected by gas monitoring tubes and include:

- *Ethane  $\text{C}_2\text{H}_6$*
- *Ethylene  $\text{C}_2\text{H}_4$*
- *Acetylene  $\text{C}_2\text{H}_2$*

### Controlling Spontaneous Combustion

Effective control of spontaneous combustion can be achieved by using a combination of techniques, these can be listed in three groups:

Control measures to reduce or eliminate oxygen from the process:

- *Sealing agents*
- *Dozing over*
- *Buffer blasting*

Control measure to reduce the temperature and hence the reaction rate:

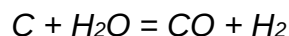
- *Water cannons onto noted areas of potential combustion*
- *Nitrogen injection into old workings*
- *Carbon dioxide injection into old workings*

Removal of the fuel:

- *Excavation of hot or burning material.*

Small-scale fires in stockpiles or areas exposed by mining may be extinguished or controlled by flooding with water or by removing the burning material.

In attempting to control heating by spraying or injecting water, it is possible to produce water gas, which is a mixture of carbon monoxide and hydrogen. Both these gases are flammable and are produced in the reaction between hot carbon and water. The chemical reaction for this is:



Because of the nature of water gas, the nature of carbon monoxide, and the presence of a source of ignition, production of water gas should be avoided where possible. Therefore, water should only be used to control heating if the heating can be inundated rapidly, limiting the amount of water gas produced and excluding air.

A more widely accepted method is for the material to be spread out to cool and the ash disposed of in a manner suited to its chemical and physical properties (i.e. used as construction material or buried).

Speed and safety are essential in such operations. Protective clothing and breathing apparatus will be provided and the equipment shall be suitable for the particular work (i.e. no rubber tyres or petrol driven equipment).

## **Summary**

It was previously noted that the extensive trial excavations carried out during the years 2005, 2006 and October 2010 have provided no evidence of combustion and it is considered that historical burning within the mound has ceased.

In terms of the operational matters relating to the potential for spontaneous combustion these are set out in the previous sections of this chapter, these demonstrate the professional and competent knowledge on the professional consultants in these matters.

## **10 Environmental Considerations**

### **10.1 Sources of concern**

There are three main sources of concern when assessing the effects of the excavation and removal of the materials within the proposed project on the surrounding environment;

- (i) Dust emissions from the area of the works;
- (ii) Noise emission from the area of the works;
- (iii) Increased traffic generation on surrounding roads.

### **10.2 Dust Emissions**

The Bersham Bank generally contains large quantities of both un-burnt and burnt shale, waste coal and fine coal. A feasibility study carried out by WS Atkins (Wales) in 1990 indicated that, historically, the tip was burning below the surface for as long as 70 years. There is unconfirmed evidence that the core of the tip is not hot but does contain much friable, dry ash.

It is considered that during the course of excavation temperatures are not likely to be elevated and the buoyant rise of pollutant plumes in dust form will not be an issue. Therefore, dust emissions are unlikely unless prolonged periods of dry weather occur. In any event the dust management scheme includes dust suppression measures.

The fact that trees and vegetation to the northern & north eastern boundaries of the site will remain intact for much of the project will assist in acting as a barrier to any errant dust emissions from the Work area that may occur during high wind speeds from the south and south west.

### 10.3 Dust Emission Risk Assessment

The degree of risk of an adverse impact for a particular target has been assessed by reference to the sensitivity of the target to dust deposition together with existing natural barriers and contractor deployed dust suppression measures. The potential impacts involve either nuisance in residential / commercial areas or damage to vegetation or watercourses. Hence, the potential targets and their likely impacts are summarised as:

| Location<br>Risk                | Type        | Mitigation                         |
|---------------------------------|-------------|------------------------------------|
| Glan-yr-Afon<br>Low             | Brook       | Physical barriers/Site Suppression |
| Enterprise Centre<br>Med / High | Commercial  | Physical barriers/Site Suppression |
| Railway<br>Low                  | Commercial  | Physical barriers/Site Suppression |
| Plas Grono Farm<br>Med / Low    | Residential | Physical barriers/Site Suppression |
| A483 By Pass<br>Low             | Traffic     | Physical barriers/Site Suppression |
| Croesfoel Farm<br>Med / Low     | Crops       | Physical barriers/Site Suppression |
| North of Brook<br>Med / Low     | Residential | Physical barriers/Site Suppression |
| North of Brook<br>Low           | Commercial  | Physical barriers/Site Suppression |

It should be noted that the level of risk to particular areas will be variable and dependent upon the phase under way at any particular time. Works will be programmed with consideration of likely weather conditions in that sensitive areas will be targeted for excavation / disposal during potential periods of damp or wet weather conditions (ie winter months) to further mitigate the possibility of dust generation.

### 10.4 Dust Management Scheme

Details of the dust management scheme are included in Appendix 4 within this document.

### 10.5 Dust Monitoring Scheme

Details of the dust monitoring scheme are included in Appendix 5 within this document.

### 10.6 Noise Monitoring

Details of the noise monitoring scheme are included in Appendix 8 within this document.

## **10.7 Traffic Generation**

The extent of traffic generation clearly depends upon the means by which the materials are removed from site. When rail transport is used then traffic generation will be significantly mitigated.

For end-users, if road transport is necessary, the vehicles will leave the site and join Wrexham Road at its junction with Plas Grono Road. It will then travel westwards to the roundabout on the A483.

Hence, the only residential areas that would be affected would be the western end of Holmwood Avenue and the residential development on Wrexham Road opposite Holmwood Avenue (west). It is considered that the effect of the increased traffic will be minimal. Restrictions will be imposed to ensure that the traffic leaves the site between the reasonable hours of 0730 to 1630hrs.

**BERSHAM (GLENSIDE) LIMITED**  
Melbourne House, 14 King Street,  
Smethwick, West Midlands, B66 2JN

## **HEALTH, SAFETY & ENVIRONMENTAL POLICY**

| <b>Date of Issue</b> | <b>Comments</b> | <b>Revision Nos.</b> | <b>Authorised by</b> | <b>Revision Date</b>     |
|----------------------|-----------------|----------------------|----------------------|--------------------------|
| 12.01.2011           | Draft           | D                    | Tony Williams        | -                        |
| 14.01.2011           | Final           | F1                   | Mike Killeth         | 3 <sup>rd</sup> Jan 2012 |
|                      |                 |                      |                      |                          |
|                      |                 |                      |                      |                          |
|                      |                 |                      |                      |                          |

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## **11.1 INTRODUCTION**

Effective management considers all the possibilities on site to ensure suitable precautions are taken to minimise the chance of having an unplanned event. Procedures must be in place and followed in order to swiftly deal with an incident, should one occur, to minimise the effects. The prevention of accidents and ill-health is one of the most important functions of our company.

- We do not want any employee or other person to suffer a result of our work.
- We recognise that accidents and unsafe and unhealthy working conditions can be a considerable drain on the financial resources of a Company and demonstrate a lack of efficient management.
- We intend to comply with all health and safety legislation.

This document has therefore been prepared to define the way that this Company intends to manage Health and Safety and to meet the requirements of Section 2(3) of the Health and Safety at Work etc Act 1974 which requires an employer to prepare a statement of general policy with respect to the health and safety of employees and the organisation and arrangements set up to carry out the policy.

The Company Safety Management System is based on the principles laid down in the Health and Safety Executives guidance document HS (G) 65 "Successful Health and Safety Management".

## **11.2 HEALTH, SAFETY & WELFARE POLICY STATEMENT**

The Company's Policy of Health, Safety & Environment Statement

In addition to the moral and commercial obligations to prevent harm to persons, the company has to meet specific legal requirements for Health, Safety Welfare & the Environment.

The general duties of an employer are defined within The Health & Safety at Work Act 1974, The Environmental Protection Act 1990, The Environment Act 1995, The Road Traffic Act 1991 and are expanded upon within The Management of Health & Safety Regulations 1999, The Workplace (Health, Safety and Welfare) Regulations 1992, The Road Vehicles (Construction and Use) (Amendment) (No. 4) Regulations 2003 and all other relevant Statutory Provisions and associated Codes of Practice and Guidance Documentation.

The Company Managing Director, Mr. Killett will ensure compliance with all Health, Safety and Environmental Legislation that is applicable to the business operations.

It is therefore the Policy of The Company, where reasonably practicable, to develop, introduce and enforce the following.

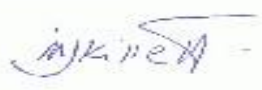
- Safeguard the Health, Safety & Welfare of all employees, sub-contractors and the general public whilst at work by appointing Health and Safety Advice and Guidance from an external consultant, seeking and sharing knowledge with the Health and Safety Executive (HSE), European Directives, British Industry Standards and Guidance, introducing Statutory Instruments, Guidance and Advice Notes.
- Ensure that persons who are not in their employment, but who may be affected by their work activities, are protected e.g. members of the public, school children, other workers, self-employed persons, visitors, and others etc.
- Provide safe plant and equipment for use at work and to ensure its proper operation, inspection, maintenance, and test.
- Ensure the operation of safe vehicles.
- Identify hazards associated with work activities, assess the risks and define the control measures required to eliminate or minimise the risk.
- Provide the necessary information, instruction, training and supervision for all employees, contractors and others who may be affected by hazards associated with The Company's work activities.
- Ensure that the workplace, access to it and egress from it, is safe and without risk to health.
- Ensure that any substance, chemical, oil, grease, gases etc. which are to be used as part of the work process, are assessed for their possible effect on the health and environment and that the appropriate safe systems of work are adopted for their safe transportation, storage, use and disposal, ensuring that dust, fumes, noise and other occupational hazards, are controlled within safe limits.
- Ensure that no adverse environmental impact results from the work activities.
- Ensure that provision is made for adequate health and welfare facilities for employees, sub-contractors and others.
- Involve the workforce in all aspects of Health, Safety & Welfare and solicit their full co-operation and assistance to create a safe working culture.

- Ensure that formal monitoring arrangements are adopted to identify hazards and to check on control measures and their enforcement.
- Ensure that consideration is given to dealing with accidents, incidents and emergencies and contingency arrangements are specified.

Health, Safety & Environmental issues rank equally with The Company's other objectives and observance of them is recognised as being consistent with the achievement of successful company performance.

One of the key elements to the achievement of any Health and Safety Management System is the allocation of suitable and sufficient resources; to this end The Company is fully committed. The Company will allocate suitable and sufficient resources to aid that development in the interest of Health and Safety Management.

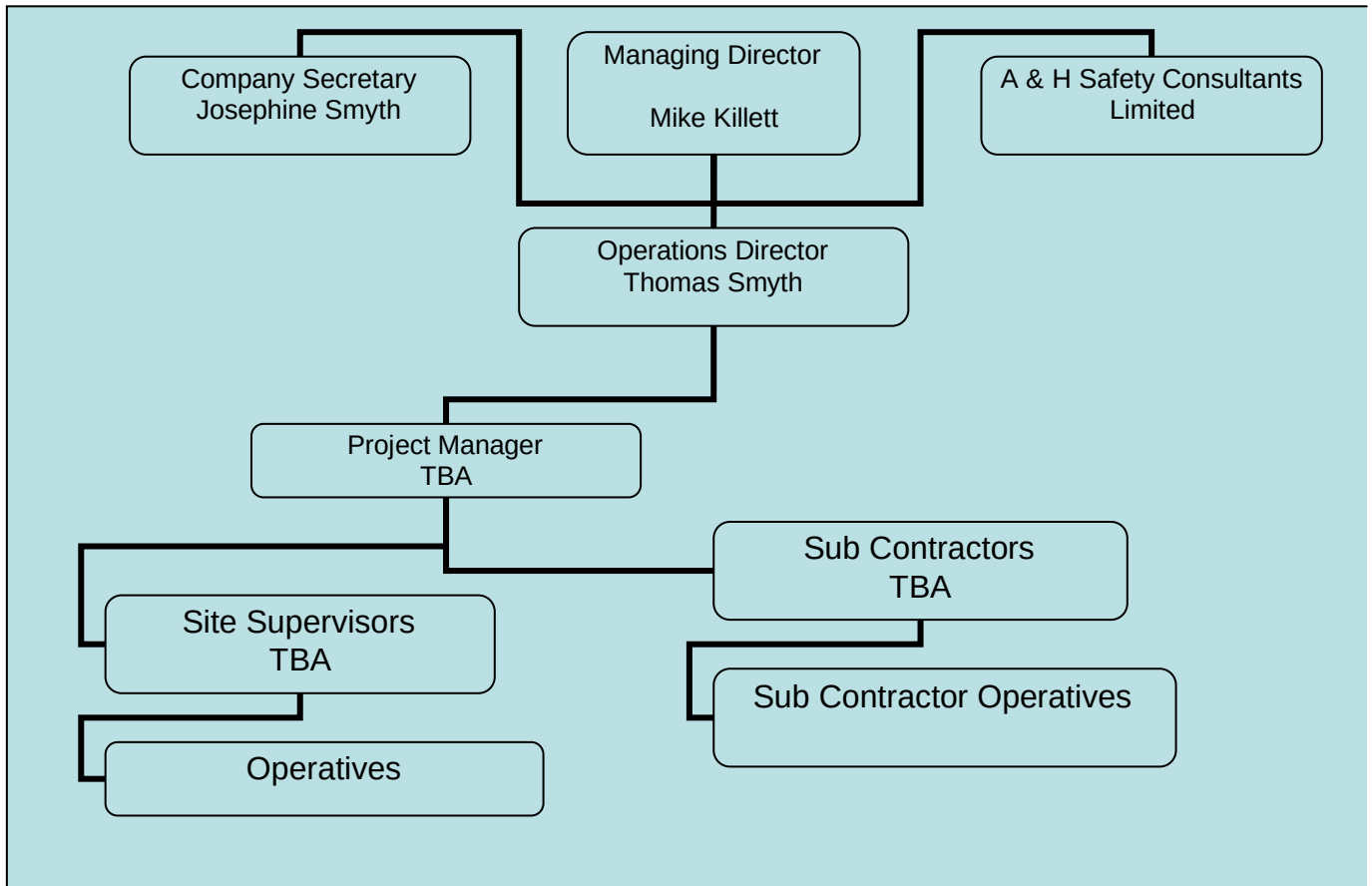
The key elements of The Company Safety Management System to address the above issues are shown in the following flow chart;

|           |                                                                                     |
|-----------|-------------------------------------------------------------------------------------|
| Name:     | Mike Killett                                                                        |
| Signed:   |  |
| Position: | Managing Director                                                                   |
| Date:     | 14th January 2011                                                                   |

Next Review Date: 3<sup>rd</sup> January 2024

## 11.3 Organisation to Implement the Policy

### Organisational Flowchart



#### 11.3(1) Managing Director:

The Managing Director is responsible for all matters relating to Health and Safety.

It is the responsibility of the Managing Director to ensure the following:

- Ensures the appointment of a suitably trained and competent Director to be responsible for the Health and Safety Management of the company.
- Provide suitable financial and time resources for the implementation of a proactive Health and Safety Management Culture.
- Ensures compliance with all legal and statutory health and safety obligations.
- Ensure the Board appoint suitably qualified and competent persons within the company for all matters regarding health and safety.

### **11.3(2) Operations Director and Director Responsible for Health and Safety**

- Provide suitable financial and time resources for the implementation of a proactive Health and Safety Management Culture.
- Appoints a suitably qualified and competent person for all matters regarding health and safety.
- Liaise directly with the appointed Company Health and Safety Advisors to ensure total compliance with current legislation and good practice.
- Understand and apply the Health and Safety Policy of The Company generally and in particular to ensure the co-ordination of and co-operation between The Company and all others concerned.
- Organise and provide the means for all necessary training.
- Ensure all accidents and incidents as determined by current legislation are reported to the enforcing authorities.
- Ensure good standards of discipline at all times.
- Set a personal example by the observing all safety procedures.
- Actively encourage employees and other persons to work safely and in compliance with current legislation and standards.

### **11.3(3) Company Secretary**

- Liaise directly with the appointed Company Director responsible for Health and Safety.
- Liaise with the Health and Safety Advisors to ensure total compliance with current legislation and good practice.
- Understand and apply the Health and Safety Policy of The Company generally and in particular to ensure the co-ordination of and co-operation between The Company and all others concerned.
- Ensure the reporting of and investigation of all accidents, incidents and near misses.
- Organise and provide the means for all necessary training.
- Ensure good standards of discipline at all times.

- Set a personal example by the observing all safety procedures.
- Actively encourage employees and other persons to work safely and in compliance with current legislation and standards.

#### **11.3(4) Duties of the Health & Safety Management Consultants**

- To assist in developing a proactive attitude to Health, Safety and Environmental matters by advising on and encouraging, a positive Health & Safety Management culture throughout the organisation.
- To inform the Managing Director, and the Company Secretary of any relevant new legislation and standards that directly affect the company's undertakings.
- Recommend working methods for compliance with current legislation and standards and assist with dissemination of this information throughout the organisation.
- To carry out, on request, site inspections, the monitoring of all active sites and report their findings, in the form of a written report to the Managing Director.
- To highlight any management, employee/subcontractor training requirements and, where appropriate, provide such training with regard to Health & Safety, in the form of on-site modular training ("Toolbox Talks") or off-site tuition relating to legal compliance or the avoidance of specific risk.
- To feedback information, suggestions, problems, concerns etc., from the workforce to the manager and assist him to measure performance and to set objectives to effect improvement.

#### **11.3(5) SITE MANAGERS**

- a) Understand the Company's Safety Policy for Health and Safety and ensure that it is brought to the notice of all employees, particularly new starters. Carry out all work in accordance with the Company's requirements and bring to the notice of the Contracts Manager any improvements or additions which you feel necessary.
- b) Where necessary, issue written instructions setting out the method of work. Check the sub-contractors engaged in high risk activities are working in accordance with their agreed Method Statement and those details of other relevant risk assessments are available.

- c) Organise the site so that work is carried out to the required standard with minimum risk to employees, other contractors, the public, equipment or materials.
- d) Ensure that an assessment has been carried out of any substance or process hazardous to health and that appropriate control measures, training, instruction, protective clothing etc. have been provided (where appropriate the on-site risk assessment details should form part of the Health and Safety Plan developments and may also need to be included in the safety file.
- e) Keep all registers, records and reports up to date and properly filled in and ensure that they are kept in a safe place. Ensure that copies of regulations are available and statutory notices are prominently displayed.
- f) Ensure that all “competent persons” appointed to make the necessary inspections to excavations, plant, etc. have sufficient knowledge and experience to evaluate all aspects of safety relating to the item being inspected.
- g) Ensure that all information available relating to underground services in the site is obtained and that services are located marked and plotted accurately before excavation work starts.
- h) Know the requirements of the Construction (Design and Management) Regulations 2007, the New Roads and Street Works Act 1991, and other relevant legislation and ensure that they are observed on site. If supervising roadworks on the public highway the supervisor overseeing the works must be accredited in accordance with NRSWA 1991 requirements.
- i) Ensure that Foremen, Gangers and operatives under your control are aware of their responsibilities for safe working and those they are not required or permitted to take unnecessary risks.
- j) Protect all overhead services in accordance with the Service Authority’s recommendations and Company Policy before work starts.
- k) Plan and maintain a tidy site.
- l) Do not allow the mechanical excavators within limits of the underground service laid down by the Service Authority and Company Policy.

- m) Check that all machinery and plant on site, including power and hand tools, are maintained in good condition, and that all temporary electrical equipment is not more than 110 volts.
- n) Ensure that protective clothing is issued when required and that records are kept of issue in the "Protective Clothing and Equipment Issue Register".
- o) Arrange delivery and stacking to avoid double handling and ensure that off-loading and stacking is carried out in a safe manner.
- p) Ensure that adequate supplies of protective clothing and equipment are maintained on site and that equipment is suitable. Display signs on site where safety equipment or specific personal protective clothing must be worn.
- q) Ensure that adequate first aid facilities are on site and that all persons on site are aware of their location and procedure for receiving treatment for injuries.
- r) Implement arrangements with sub-contractors and others on site to avoid confusion about areas of responsibility for health, safety and welfare.
- s) The site manager should ask the directors advice before commencing new methods of work or potentially hazardous operations.
- t) Ensure that the emergency procedure is organised in the event of an emergency for applying first aid and calling an ambulance. This should include minimising the likelihood of an emergency arising through risk assessment, ensure everyone on site is aware of the procedure and can be alerted, having emergency routes, means of contacting the emergency services and arrangements for treating and recovery.
- u) Ensure that the appointed site safety professional is informed of any arranged visit by HM Factory Inspector. Accompany the Inspector on site visits and act on his recommendations. In the case of the Inspector issuing a Notice (Prohibition or Improvement), contact the Contract Director immediately after complying with any requests to stop work.
- v) Set a personal example by wearing the appropriate protective clothing in site.

- w) Ensure that any accident or near miss on site and / or damage to plant or equipment is reported in accordance with Company Policy. This includes incidents involving any person on site not just employees.
- x) Ensure that all excavation work adheres to the procedures laid down in the Company Procedures for avoiding damage to underground services.
- y) Ensure that adequate fire precautions and welfare facilities are provided for site offices and that any flammable liquids or liquefied petroleum gases are stored and used safely.
- z) The Site Manager responsible for the work-site is the formally appointed safety supervisor for that site, with reference to the appointed visiting safety professional.
- aa) Maintain safe access to and egress from the work place at all times.
- bb) Reprimand any member of site supervisory staff for failing to discharge satisfactorily their responsibilities for health and safety.
- cc) Understand the Company Policy for Health and Safety and ensure that it is readily available on the site. Plan all work in accordance with its requirements and ensure that it is regularly examined to establish if improvements or additions should be made.
- dd) Examine drawing and soil investigation reports to determine excavation support requirements in advance and provide in accordance with Company Procedures. The risk assessment pro-forma provides a useful aide memoir in highlighting when specific assessments are required and forms part of the Company's procedures.
- ee) The project falls under the requirements of the Construction (Design and Management) Regulations 2007. Consequently, the necessary developments of Health and Safety Plan will be carried out prior to works commencing on site. These will include:
  - i) Details of the arrangements for ensuring the health and safety of all persons who may be affected in any way by the construction work.
  - ii) The arrangements for the monitoring of the health and safety performance of persons engaged in construction

work to ensure that they are complying with the relevant statutory provisions, and the health and safety plan.

- iii) Information concerning the welfare arrangements that have been made, (For further details refer to the company procedures for meeting the requirements of the Construction (Design and Management) Regulations 2007
- ff) Inform Sub-Contractors of the proposed areas on site where safety helmets must be worn.
- gg) Obtain details from Sub-Contractors of assessments of risk associated with substances or processes hazardous to health they intend to use and check that their planned control measures will provide protection to others in the site.
- hh) Ensure, as far as is reasonably practical that work, once started:
  - a) Carried out as planned and that account is taken of changing methods of work should unforeseen conditions arise as work proceeds.
  - ii) Carried out in accordance with the Construction (Design and Management) Regulations 2007, and other appropriate statutory requirements.
  - ii) Reprimand any member of site supervisory staff for failing to discharge satisfactorily their responsibilities for health and safety.
  - jj) Set a personal example by wearing appropriate protective clothing in site.
  - kk) Carry out necessary notifications to local Authorities, Police, etc. as required by Company policy and statutory requirements.
  - ll) Take appropriate action when notified of disregard on site of safety regulations and deviations from safe working practices.
- mm) Sources of information to help plan the work include.
  - Head Office;
  - The appointed Health & Safety Professional;
  - Specialist Contractors to be used;
  - HSE Guidance and British Standards;
  - Contract Documents;
  - Other Contractors on Site; □ Trade and Contractor Organisations;
  - Equipment and Material Suppliers.

### **11.3(6) SITE FOREMEN**

#### **Duties of all Supervisory Staff**

- Liaise directly with the Operations Director and Company Safety Advisors on all matters regarding Health and Safety.
- Ensure compliance with The Company's Health & Safety Policy and all relevant legal requirements.
- Report all accidents, near misses, dangerous occurrences, and all unsafe acts to the Operations Director.
- Ensure that all accidents, incidents and near misses are investigated to a conclusion.
- Ensure that all staff attend the company organised training.
- Ensure correct channels of communication when working on the company's premises and client's premises.
- Ensure the correct standards of supervision are afforded to all work tasks.
- Ensure good standards of discipline at all times.
- Ensure risk assessments and method statements have been compiled for all work tasks.
- Ensure all control measures to reduce the risk of harm have been implemented.
- Ensure safe systems of work are compiled with.
- Ensure all plant and equipment are maintained and operated in compliance with current legislation and company safe operating procedures.
- Ensure cooperation between company employees and those persons likely to be affected by The Company's activities.
- Ensure that all working areas are inspected in compliance with current legislation and company procedures.
- Ensure high standards of housekeeping at all times.
- Ensure the promotion of safe and healthy working practices.
- Ensure all defective equipment is removed out of service and documented.
- Set a personal example by the observing safety procedures, encourage employees and other persons to do the same.

### **11.3(7) OPERATIVES**

- 1) Read and understand the Company Health and Safety policy and carry out your work in accordance with its requirements.
- 2) Wear safety footwear at all times and use, where necessary, all protective clothing and safety equipment provided, e.g. safety helmets, goggles, respirators and so on.
- 3) Report immediately any defects of plant or equipment.
- 4) Use the correct tools and equipment for the job.
- 5) Keep tools in good condition.
- 6) Do not use plant or equipment for work which is not intended or if you are not trained or experienced to use it.
- 7) Work in a safe manner at all times. Do not take unnecessary risks, which could endanger yourself or others. If possible, remove site hazards, e.g. remove or flatten nails sticking out of timber, tie unsecured access ladders etc.
- 8) Warn other employees, particularly new employees and young people, of particular known hazards.
- 9) Do not play dangerous or practical jokes or “horseplay” on site.
- 10) Report any injury to yourself, which results from an accident at work, even if the injury does not stop you working.
- 11) Report to supervision any person seen abusing the welfare facilities provided.
- 12) Report any damage to plant or equipment.
- 13) Ensure your works are segregated from public access at all times.
- 14) Suggest safer methods of working.

### **11.3(8) TRANSPORT DRIVERS**

- 1) Read and understand the Company Health and Safety policy and carry out your work in accordance with its requirements.
- 2) Make regular checks of your vehicle for obvious defects.
- 3) Ensure that any defect in your vehicle is reported immediately to the Transport Manager.
- 4) Wear suitable safety footwear and protective clothing as you are exposed to the same hazards as others on site when not in the cab of your vehicle.
- 5) Get out of the cab of your vehicle when it is being loaded with loose materials (unless suitable means are provided to protect the cab).
- 6) Always report to the Site Manager before travelling around any site.
- 7) Drive in a safe manner at all times and be particularly careful when driving on sites to consider the conditions of temporary access roads or roads that are under construction and being used for access purposes. Keep to the designated site routes.
- 8) Ensure before reversing that there are no obstructions or people behind the vehicle. Preferably, ask someone to act as Banksman when you reverse.
- 9) Ensure that when reversing or driving towards an edge that a suitable stop has been provided to prevent the vehicle going over the edge.
- 10) Report all accidents or damage, however minor, to the Transport Manager.
- 11) Ensure that any load on your vehicle is well secured; also, that your vehicle is not overloaded or loaded in such a way as to affect the handling of the vehicle.
- 12) Tipper Drivers ensure that when you have tipped your load, you do not travel forward until the tipper body has returned to the travelling position. This is particularly important on sites with overhead services.

- 13) If operating on the highway ensures your vehicle becomes part of the segregated roadworks and that there is adequate warning to other drivers of your position.
- 14) Ensure that hazardous loads are carried in accordance with instructions, that any necessary signs are displayed and that the appropriate documents are available in the cab.
- 15) Only a driver with an ARD licence can carry more than 5 litres of fuel.

### **11.3(9) PLANT OPERATORS**

1. Read and understand the Company Safety Policy and carry out your work in accordance with its requirements.
2. Ensure that any defect in the machine is reported immediately to the Transport Manager. Do not continue to operate the machine if the defect affects its safe use.
3. Know the legal requirements affecting the use of your machine and ensure that the machine is used in accordance with those requirements.
4. Make regular inspections of your machine for defects at least once a week and if your machine is classed as a lifting appliance make a report of your inspection in the Records of Reports of Inspections Register.
5. Wear suitable safety footwear and protective clothing as you are exposed to the same hazards as others on the site when not in the cab of your machine.
6. Never try to use the machine for work for which it is not designed. If in doubt, ask the Transport Manager for advice.
7. Ask for, and use, ear protection to ensure that you do not suffer from gradual loss of hearing due to prolonged exposure to noise.
8. Suggest ways to eliminate hazards or improve working methods.

9. Ensure, if necessary, that you work with a Banksman, and, if so, you are both sure before starting work of the meaning of signals, which may be used (in the case of cranes, the signalling system used should be one recommended by the Federation of Civil Engineering Contractors).
10. Report all accidents or damage, however minor, to your supervisor.
11. Ensure when operating your machine that other persons are well clear, especially if reversing.
12. Check, prior to starting work, with the Site Manager or other supervision of the location of underground or overhead services. Do not approach or excavate within distances of services given in the Company Safety Policy.
13. Ensure you are familiar with the hazards associated with each individual project and that you are aware of any specific site rules.
14. Ensure that if your machine is used for lifting purposes it is sited on firm, level, and a well consolidated base, with suitable bearing timbers used under extended outriggers, if applicable.
15. Keep to designated site routes.

### **11.3(10)            FORKLIFT TRUCK OPERATOR**

Only an employee aged 18 plus and specifically trained and authorised by Management to do so, may drive a forklift truck. At the recruitment stage, the possession of a driving licence is a likely indication that the person has the co-ordination necessary to handle a forklift truck and this will be regarded as a pre-requisite by the Company. Each forklift must be specifically equipped with a notice listing those employees by name who are authorised by the Manager to operate that machine.

1. To read and understand the Company's Health and Safety Policy and carry out your work in accordance with its requirements.
2. To know the legal requirements affecting the use of your machine and ensure that the machine is used in accordance with these requirements.
3. To undertake regular inspections of your machine for defects, at least once a week, and make a written record of these.
4. To ensure that any defect in the machine is reported immediately to your Supervisor and the Plant Manager.
5. To ensure when operating your machine that other persons are well clear, especially if reversing.
6. To suggest ways to eliminate hazards or improve working methods.
7. To report all accidents or damage, however minor, to the Supervisor.
8. To work with an assistant where necessary and, when doing so to ensure before starting work, that you know the meaning of any signals which may be used.
9. To exercise the greatest possible caution when crossing wet or slippery surfaces.
10. To exercise extreme care when a forklift truck has to be used whilst members of the public, or other persons are present: restrict speed to walking pace or slower as circumstances dictate and the "hazard" light must be switched on to warn pedestrians of truck movements.
11. To avoid forklift truck movements in areas where cleaning work is in progress. (These should normally be segregated, by temporary signs or barriers.)

If truck movements have to be undertaken with the driver “unsighted” an assistant must be used to signal movements.

12. Do not, under any circumstances, driver over any unprotected electrical lead.
13. Do not try to use the machine for work for which it was not designed.

#### **11.3(11) STORES PERSON**

1. Understand the Company’s Health and Safety Policy.
2. Ensure that all equipment sent to site from stores has been checked and is in good condition.
3. Ensure that any other equipment, tools or materials sent to site from stores are suitable and safe when used for the purposes for which they were intended. If in doubt, ask for confirmation from technical staff or other competent persons.
4. Ensure that all electrical equipment and power tools sent to site from stores have been checked and are safe and in good condition and are not more than 110 volts.
5. Ensure that full instructions for the safe use of any article or substance is sent with the article or substance or check that full instructions are available on site.
6. Ensure that material or equipment delivered to the yard is stacked or stored in a position and manner, which does not create a hazard.
7. Maintain a stock of protective clothing and safety equipment for issue to sites as and when required.
8. Report any accident, which results in damage or injury to your supervisor in accordance with Company Policy.

### **11.3(12)            BUYING / PURCHASING**

1. Understand the Company's Health and Safety Policy.
2. Ensure that all equipment (including personal protective clothing) or materials purchased by the Company are to the standards required by Company Policy.
3. Set a personal example by wearing appropriate protective clothing, if required to visit sites.
4. Ensure that all suppliers are asked to provide full information on any hazards associated with the equipment or materials supplied and any precautions to be taken, and that this information is passed onto relevant supervision.
5. Ensure that suppliers are informed of safe working loads of plant used for handling materials on site so that materials are delivered in suitable size loads.
6. Local purchases will not include the acquisition of hazardous, corrosive, flammable, explosive or toxic material.

### **11.3(13)            ESTIMATING/QUANTITY SURVEYING**

1. Understand the Company's Health and Safety Policy.
2. Ensure that all tenders that fall under the Construction (Design and Management) Regulations 2007 include a pre-construction Health and Safety Plan.
3. Ensure tenders are adequate to cover sound methods of work and reasonable welfare facilities.
4. Report to Mike Killelt any unsafe practices observed when visiting sites.
5. Set a personal example by wearing appropriate protective clothing when visiting sites.
6. Have knowledge of the various statutory requirements governing the Company's work.
7. Ensure that sub-contractors have received lists or responsibilities and Company Policy Statement in accordance with this Policy. If the project is under the Construction (Design and Management) Regulations 2007 Sub-Contractors must be given all relevant information that relates to the contract, including the Health and Safety Plan, to enable them to allocate necessary resources.
8. Rates negotiated for work carried out by subcontractors must include all necessary safety precautions and, where appropriate, separate rates would be included for health and safety measures.

### **11.3(14) Duties of all Employees and Self-Employed Persons**

All persons at work carry individual responsibilities and these are outlined in the Health & Safety at Work Act 1974, Sections 7 and 8 as follows:

- To take reasonable care of themselves and other persons who may be affected by their acts or omissions.
- To co-operate with the employer so far as is necessary to enable the employer to comply with his statutory duties.
- Not to intentionally or recklessly interfere with or misuse anything provided in the interest of Health, Safety or Welfare.

Failure to comply with the above may render the employee liable to disciplinary action as determined by the Terms and Conditions of their Contract of Employment.

In particular, all persons working within The Company will at all time:

- Work to recognised industry safe working procedures.
- Cooperate with the company on all matters regarding health, safety and welfare.
- Cooperate with the principal contractor / client on all matters regarding health, safety, and welfare.
- Report all defective equipment to their supervisors.
- Comply with the Company's Waste Recycling and Environmental Policy.
- Maintain good housekeeping standards at all times.
- Ensure tools, plant and equipment are in good order and that they comply with the Provision and Use of Work Equipment Regulations 1998.
- Use appropriate personal protective equipment as determined by the specific risk assessment.
- Report all accidents, incidents and near misses to their immediate Supervisor and cooperate fully in any future investigation.
- Set a personal example by the observing safety procedures, encourage work colleagues and other persons to do likewise.
- Operate all company vehicles in compliance with current U.K. Legislation and the Company Driving Policy.

### **11.3(15) Sub-contractors Duties**

All subcontractors will be subject to a “pre-qualification appraisal” carried out by our appointed Health and Safety Consultants, following the successful approval, the individual sub-contractors will be subject to the terms and conditions below.

1. All sub-contractors will sign a declaration stating that they are conversant with the Health and Safety at Work Act 1974, all relevant statutory provisions, Approved Codes of Practice, and that they will conduct their activities in accordance with the requirements of this Safety Policy.
2. Compliance with The Special Regulations for persons under 18 years of age, if applicable.
3. Sub-contractors will at pre-contract meetings submit their proof of competence, risk assessments, method statements and safety documentation necessary for proving competence.
4. No article or substance will be brought onto site, stored or used, unless it is correctly labelled and in approved containers or packages.
5. Before work commences on hazardous operations a Permit to Work procedure may be adopted.
6. Operations specified at pre-contract meeting, as requiring method statements, will not commence until such time as the statements have been approved.
7. The Main Contractor and his Supervisors has the duty and the responsibility to ensure that all sub-contracting employees comply and co-operate with all Health and Safety Regulations.
8. Operators’ certificates of competence and test certificates for the various types of plant and work equipment to be used will be presented to site management before the work commences. The records of the same will be kept within the Contractors Health and Safety File at the Company’s premises.

I hereby declare that our employees are fully conversant with the requirements of the Health and Safety at Work Act 1974 and all other Statutory and legislative requirements, and that we will conduct our operations and activities in accordance with the provisions therein.

Name of Company: .....

Name and Signature:.....

Position in company:.....

Date:.....

## 11.4 ARRANGEMENTS

### 11.4.1 PROACTIVE MONITORING

- a) All employees will be expected to bring to the notice of their immediate Supervisors any areas where the Company Policy on Health, Safety and Welfare appears to be inadequate or if it is felt that it is not being complied with. Problems, where possible, should be dealt with. Suggestions or any other matters that cannot be resolved locally will be passed to the safety professional for consideration.
- b) The site manager is responsible for ensuring, on a day to day basis, that Company Policy and Procedures for Health, Safety and Welfare are complied with, that Statutory Regulations are not breached and that any hazards or defects, noted when visiting sites, are immediately dealt with.
- c) The Site Manager will carry out routine inspections of the site and workplaces to determine the level of compliance with Company Policy and Statutory Regulations.
- d) All Agents and Foremen will receive such training in Health and Safety as is required for them to be able to carry out the function of "Safety Supervisor" for the area of work for which they are responsible. This responsibility will be detailed in the job descriptions for those positions and the appointment will be formally made in writing.
- e) **Mike Killelt** will represent the Company on safety matters and will ensure that all accidents, incidents are investigated as required by Statutory Regulations and Company Policy and Procedures.
- f) The Health, Safety and Environmental Management Manual will be updated whenever necessary due to a change in legislation or in in the Company Reactive Monitoring Policy. In any event the whole document will be reviewed and amended as necessary at least annually.

#### **11.4.2 REACTIVE MONITORING**

- a) When failures occur in the Health and Safety Management System for example, an accident, a case of ill health or dangerous occurrence, the accident reporting, and investigation procedure will reflect the need to review Company Policy. The system will also analyse damage incidents and near misses. Problem areas will be identified, prioritise and improvements implemented to reduce the chance of reoccurrence.

#### **11.4.3 INCIDENT AND ILL HEALTH REPORTING**

- a) All injuries, damage or near miss incidents on site or in other workplaces, however minor, will be reported to the Site Management on an Accident/incident report form.
- b) In the event of a fatal or major injury to any person, or injury to persons not at work which results in them being taken to hospital from an accident arising out of or in connection with the works, or a dangerous occurrence as defined by the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995, the local office of the Health and Safety Executive must be notified by the quickest practicable means immediately by the Site Supervisor or Management. In the case of an employee of another Company being killed or injured, this duty is placed on his/her employer. However, in order to ensure that this Company has fully complied with legal requirements, the Site Management will notify the Health and Safety Executive following confirmation of the requirement to do so by the Directors.
- c) An accident Book will be available on the site to ensure any injured employee can record details of his accident. All injuries, no matter how small, must be entered in this book.
- d) Mike Killeth will check that the Health and Safety Executive have been informed of any fatal or major accidents, accidents to person not at work from or in connection with our works which result in hospital attendance, or noticeable dangerous occurrences by the quickest practicable means; carry out an investigation as soon as possible and confirm details of accidents in writing to the Health and Safety Executive within 10 days on form F2508 (01/96).

- e) Where any injury to any employee, self-employed operative or person undergoing training (other than those reported as in paragraph 2 above) results in the injured person being absent from work for more than 3 days, Mike Killett will send Form 2508 (01/96) to the Health and Safety Executive within 10 days of the incident if details have been received from site/workplaces in accordance with paragraph above.
- f) All fatalities, major injuries, reportable disease, dangerous occurrences and other notifiable injuries will be recorded in register F2509 or similar record as required. These records will be kept on site by the Site Manager who is responsible for ensuring that all details are entered and that records are kept for at least 3 years from the date of the last entry.
- g) If a medical certificate or other written diagnosis from a doctor has been received in respect of an employee who is absent from work and the disease diagnosed is one of those listed in the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995, then the Safety and Loss Site Manager will complete and send Form F2508A to the Health and Safety Executive.
- h) If an employee dies as a result of any injury detailed above, within a year of the accident the Health and Safety Executive must be informed in writing.

#### **11.4.4 PRELIMINARY PROCEDURES PROJECT PLANNING AND MANAGEMENT**

Management of Health and Safety is concerned with the controlling of risks leading to an improved injury and ill-health record. This can be achieved successfully by having a safety policy, which fulfils both the spirit and the letter of the law by assisting to preserve both physical and human resources and reduce financial losses and liabilities.

Effective systems use the safety policy as a foundation to influence activities and decision including those concerned with resources selection, design, and operation of working systems, design and delivery of products / services, and the control / disposal of waste. Structured organisations maintain high standards by putting their policy into effective practice thus creating positive attitudes, involvement, and participation at all levels. This is achieved by effective communications and the promotion of competence, enabling all employees to contribute to the effort by good go-operation.

A planned and systematic approach to the policy implementation is aimed at minimising risks created by work activities. Risk assessment methods are used to set priorities and objective for hazard elimination and thus risk reduction, by establishing performance standards and identifying specific actions required. Planning is the important feature of this system, by allowing hazards to be eliminated and risk reduced by designing the work method in advance rather than relying on individual protection.

Performance can thus be measured against the pre-determined standards and identify objectives for improvements. The control of risks is achieved by effective monitoring, which looks at the fixed elements of activities such as premises, plant, equipment substances etc, and the variable elements such as people, procedures and working systems. Reactive monitoring such as accident/incident investigation can identify failures of control, but proactive monitoring seeks to identify those failures before the accident/incident occurs. In both cases, the objectives are to identify not only the immediate causes of substandard performance, but also any underlying causes, but also any underlying causes which may have implications for the health and safety management systems.

A systematic review of performance based on data from both monitoring activities and independent audits of the whole management system allows a constant development and improvement in health and safety management. Information produced can then be used to revise the safety policy, implementation methods and techniques of risk control.

#### **11.4.5 ACTION**

The aims of the above will be achieved by: -

- a) Regular review of the Safety Policy.
- b) Effective communication of the Safety Policy.
- c) Assessment of risks by good forward planning.
- d) Effective and consistent monitoring of performance standards.
- e) Consultation between staff at all levels.
- f) Quick and effective response when deficiencies in work systems are noted.

#### **11.4.6 TENDERING**

At tendering negotiation and planning stages, the requirements of this Company Policy must be taken into account.

Any aspects of work not covered by this Policy must be planned by Management in conjunction with advice from the safety professional and written procedures defined.

Sub-contract meetings will be held with the safety professional if particular health and safety matters require discussion.

#### **11.4.7 TRAINING**

All supervisory staff will receive training in their responsibilities as defined in this Policy. Training will be repeated at 2 yearly intervals and whenever changing legislation or working methods require.

The operatives required to carry out key tasks (e.g. forklift truck operation, timbering, excavations, scaffolding, abrasive wheel mounting, etc) will be provided with necessary training.

#### **11.4.8 SUB-CONTRACTORS**

The selection of sub-contractor will take into account their Safety Policy, accident record and previous performance with respect to accident and ill health prevention on site. All sub-contractors will receive a copy of the Company Policy Statement and a list of responsibilities with every order placed. The following paragraph will be inserted on all orders to sub-contractors.

Please see attached copy of our Company Policy Statement for Health, Safety and Welfare and list of responsibilities for subcontractors on this Company's sites. Your acceptance of this order will be deemed to include acceptance of the requirements of our Company Policy".

Please contact the writer should you require further information on any matter in connection with health, safety and welfare.

If a contract falls under CDM then: Sub-contractors must be given relevant information relating to Health and Safety issues on that project to enable them to allocate the necessary resources.

#### **11.4.9 SUPPLIERS**

The following paragraph will be inserted on all orders to suppliers or hire companies providing any article or substance for use at work:

In accordance with Section 6 of the Health and Safety at Work Act 1974, we would be pleased to receive your confirmation that the article or substance to be supplied is, so far as is reasonably practicable, safe and without risk on health whilst being prepared for use, used, cleaned or maintained. Also, in accordance with the above, please supply details of any tests or examinations carried out and full instructions for the safe and proper use of the article or substance. Please note that we also must be informed of any updated information in respect of this article or substance in the future.

All information received from suppliers will be passed to site for implementation or reference.

#### **11.4.10 NOTIFICATIONS**

Mike Killett will make any necessary notifications to the regulated and enforcing authorities.

#### **11.4.11 PROTECTION OF THE PUBLIC**

All necessary measures required for the protection of the public will be allowed for and planned. In particular, taking into account the recommendations contained in Health and Safety Executive Guidance Note GS7, "Accidents to Children on Construction Sites", and the requirements of The New Roads and Street Works Act 1991.

#### **11.4.12 DOCUMENTATION**

Mike Killett will ensure that a complete copy of the Company Policy for Health, Safety and Welfare is available in the Company head office for reference; also, a copy of the current Employers; Liability Insurance Certificate is issued for display.

The Site Manager must ensure that all documentation supplied is displayed as necessary and that Regulations and Company Policy is available for reference as required.

Mike Killett must ensure that all registers, site inspection reports and other documentation relating to health and safety are returned to the office for safe keeping at the completion of the contract.

#### **11.4.13 JOINT CONSULTATION**

In accordance with the Safety Representatives and Safety Committee Regulations 1977 and the Health and Safety (communication with employees) Regulation 1996, and the Codes of Practice and Guidance Notes relating to these Regulations, every facility will be afforded officially appointed Safety Representatives and/or Committees.

Procedures on sites or at workplaces regarding the functions of Safety Representatives and Committees shall be in accordance with the National Working Rule 24 of the National Joint Council for the Building Industry Working Rule Agreements or Working Rule XVIIIA contained within the Civil Engineering Construction Conciliation Board Working Rules where applicable.

#### **11.4.14 PROHIBITION / IMPROVEMENT NOTICES**

If a prohibition or improvement notice is issued by an Inspector of an Enforcement Authority (Health and Safety Executive, Local Authority), the person to whom it is issued must comply immediately with an instruction on the notice.

When remedial measures have been taken, Mike Killett will contact the Inspector who issued the notice to inform him/her of action taken. This will be confirmed in writing.

#### **11.4.15 PROCEDURE FOR NEW EMPLOYEES OR TRANSFERRED TO SITE**

This procedure is to be carried out by the supervisor of the site/workplace where the new employee will be required to work.

- a) Explain to the new employee what he/she will be required to do and to whom he/she will be directly responsible. Complete the Induction checklist and issue. Site employee's duties and accident prevention advice and arrange safety induction.
- b) Show the new employee where the Company Safety Policy is kept, explain its purpose and ensure that the employee is aware of his/her responsibility.
- c) Ascertain if the new employee has any disability or illness which could prevent him/her carrying out certain operations safely or require additional protective measures.
- d) Show the new employee where copies of the Regulations are kept.
- e) Warn new employee of any potentially dangerous areas of operations on site or in the workplace.
- f) Warn the new employee of any prohibited actions on site or in the workplace, e.g. entering specific areas without a safety helmet, operating plant unless authorised, etc.
- g) If there is any training or instruction required, inform management, e.g. abrasive wheels, cartridge tools, scaffold inspection, etc.
- h) Issue to the new employee any protective clothing or equipment necessary, e.g. safety helmet, goggles, ear defenders, wet weather clothing, etc., and obtain their signature for the items issued.

- i) Show the new employee the location of the first aid box and explain the procedure in the event of an accident, in particular, the necessity to record all accidents, however trivial it may appear at the time.

#### **j) INITIAL INDUCTION CHECKLIST**

New starters must be made aware of the following information: -

- The Company's Health, Safety and Welfare Policy Statement.
- The responsibility of management and supervision in implementing safety standards. Who their Line Manager is?
- Accident and incident reporting procedures.
- First aid procedures.
- Health and Welfare facilities, (on site), working patterns and movements of materials.
- Personal protective equipment and clothing what is required for the work, and how to obtain it.
- Site hazards associated with their operations (special attention must be given to high-risk activities).
- What are the channels of communication to enable them to address safety issues?
- Protection and segregation of works from public and other unauthorised access.
- Operative duties and accident prevention advice. A copy issued and signed for by the operative.
- What to do in the event of an accident or emergency.

#### **11.4.16 OPERATIVES GENERAL DUTIES AND ACCIDENT PREVENTION ADVICE**

You have a LEGAL duty at work to: -

- Take responsible care of your own health and safety and that of others who may be affected by your acts or omissions.
- Not interfere with or misuse anything provided for your health, safety, and welfare.
- Co-operative with your employer on Health and Safety.

The following items give advice on accident prevention and general awareness to create a safe working environment for you, your fellow operatives and others affected by your work (the public, other contractors etc.) It is important that you consider the impact your actions have at work, and you are aware of your legal duty to work safely.

- a) Study our company's safety policy, which explains the arrangements made for your health and safety.
- b) When protective clothing and/or equipment are issued for use – wear and/or use it as instructed.
- c) Play your part in keeping the site TIDY AND SAFE.
- d) Watch out for warning notices and OBEY their instructions.
- e) Always keep alert if you are working in the vicinity of mobile plant.
- f) Never attempt to operate a machine or equipment unless you have been trained and authorised to do so.
- g) Never ride on machines which have no passenger seat – IT IS ILLEGAL.
- h) Never interfere with ladders or alter scaffolding or move boards unless you are properly authorised to do so.
- i) Never throw anything from ladders/platforms or any height.
- j) Do not take short cuts always use the access provided.
- k) Lifting heavy objects or materials can cause injury. Obtain assistance when necessary.
- l) Report any defects or damage to ladders, other access equipment, scaffolding, plant or tools, or any other unsafe circumstances to your foreman or supervisor.
- m) Report all accidents involving injury, however slight to your foreman/supervisor. An accident requiring first aid must be entered into the Accident Book.
- n) If in doubt about your job ask your foreman/supervisor.
- o) Construction sites are particularly inviting to young children. Your co-operation in discouraging them from entering sites will help reduce accidents to them.
- p) All materials, which would be liable to cause injury if they fall, should be stacked or stored so as to prevent easy displacement. Temporary but secure and stable racking should be used when appropriate.

- q) Be aware of the contents of the Safety Plan for the project (if applicable under the CDM Regulations) as this details the specific hazards associated with that work. It is important you are aware of and understand the standards to be achieved.
- r) All sites are hard hat sites unless deemed otherwise by the local supervisor who will record this in writing and can only be introduced if there are no overhead hazards present.
- s) Any incidents or near misses must be reported to your site foreman/supervisor.
- t) Any welfare facilities provided for your use must be kept in a good, clean condition. Abuse of such facilities will result in disciplinary action taken against you.
- u) Do not leave any item of plant, equipment or machinery unattended without securing it. Small items of plant (hand tools) should be kept with you at all times.
- v) Ensure the works are segregated from public access at ALL times; this includes entry/exit points.
- w) All chemicals have Safety Data information (normally an orange label). Do not use any chemical you are unfamiliar with. You should know how to handle, store and transport all substances safely. Substances must not be transferred into unmarked containers.
- x) Do not carry out any excavation unless you are aware that the plans have been interpreted, a cable survey has been done and you have been informed of its findings. A cable location device should be at the site of any excavation at all times. (Note emergency works will not have sufficient time to collect plans therefore an accurate cable survey is important.)
- y) Flameproof overalls must be worn when carrying out any excavation work however minor.

If you have any problems relating to a Health & Safety or Welfare issue you should discuss them with your foreman/supervisor and if necessary, get them to put it in writing. Safety issues are raised at each Project Progress Meeting where your points can be discussed. Failure to adhere to Safety Regulations and Site Rules will result in disciplinary action. A gross breach of safety standards will result in your removal from a project.

#### **11.4.17      ADDITIONAL PROCEDURES FOR NEW EMPLOYEES UNDER 18 YEARS OF AGE (Young Persons)**

- a) Inform employees that they must not operate any plant (including dumpers), give signals to any crane driver, and use any power tools or equipment unless being trained under the direct supervision of a competent person.
- b) Enter the employee's name in the General Register, F31/F36 complete and send form 2404 (located at the back of the General Register) to the local career's office.

### **11.5            WELFARE AND FIRST AID**

#### **11.5.1          STANDARDS REQUIRED**

The Construction (Design and Management) Regulations 2007 and the Workplace (Health Safety and Welfare) Regulations 1992 specify minimum requirements for welfare facilities on sites. The Health and Safety (First Aid) Regulations 1981 together with Approved Code of Practice and Guidance Note specify the first aid equipment, facilities and personnel required, depending on the type of work and numbers of personnel affected at each site or workplace. Both employees and the self-employed who have control over others doing construction work are responsible for providing or making available such welfare facilities as necessary.

#### **11.5.2          PLANNING PROCEDURES**

All work will be tendered, or negotiated, taking into account the requirements of the above regulations.

Mike Killeth will establish the welfare and first aid requirements before work starts, taking into account sub-contractor's requirements if applicable. Paragraph 3 (2) of Health and Safety (First Aid) Regulations 1981 requires the provision of an adequate number of suitable people for rendering first aid. A suitable person will have undergone: -

- such training and has an HSE or similar approved qualification.
- such additional training as may be appropriate in the circumstances.

It is also a requirement to provide cover (which could be an appointed person) when the first aider is temporarily absent.

### **11.5.3 SUPERVISION**

Mike Killett will ensure that all planned welfare and first aid facilities are provided and that they are maintained to the required standards.

### **11.5.4 CHECKLIST FOR WELFARE PROVISIONS**

- 1) Wherever possible toilets should be flushed by water, but if this is not possible, use chemical toilets.
- 2) Rooms containing sanitary conveniences should be adequately ventilated and lit.
- 3) Men and women may use the same toilet provided it is in a lockable room and is suitable positioned away from any urinals, which may also have been provided.
- 4) A wash hand basin with water, soap and towels or dryers should be close to the toilets if the toilets are not near the other washing facilities provided on the site.
- 5) Basins should be large enough to allow people to wash their faces, hands and forearms. They should have a supply of clean hot and cold, or warm water. If mains water is not available, water supplied from a tank may be used. Soap and towels (cloth or paper) or dryers should also be provided.
- 6) Where the work is particularly dirty or workers are exposed to toxic or corrosive substances (for example during work on contaminated ground) showers may be needed.

### 11.5.5 CONTENTS OF FIRST AID BOXES AND KITS

| ITEM                                                                                         | SITE            | VEHICLES            |
|----------------------------------------------------------------------------------------------|-----------------|---------------------|
|                                                                                              | First Aid Boxes | Travelling F/A Kits |
| Guidance card                                                                                | 1               | 1                   |
| Individually wrapped adhesive dressings (assorted sizes)                                     | 20              | 6                   |
| Sterile eye pads, with attachment                                                            | 2               |                     |
| Individually wrapped triangular bandages                                                     | 6               | 2                   |
| Safety pins                                                                                  | 6               | 2                   |
| Medium sized individually wrapped un-medicated wound dressings (approx. 28cm x 17.5cm)       | 6               |                     |
| Large sterile individually wrapped un-medicated wound dressings 13cm x 9cm                   | 2               | 1                   |
| Extra large sterile individually wrapped unmedicated wound dressings (approx. 28cm x 17.5cm) | 3               |                     |
| Individually wrapped mist cleaning wipes (Suggested minimum number)                          | 10              | 6                   |
| Box of Disposable Gloves                                                                     | 1               | 1                   |
| Resuscitator Mouth Guard                                                                     | 1               | 1                   |
| Eye Wash Bottles                                                                             | 2               | ★                   |

★ Where tap water is not readily available for eye irrigation, sterile water or sterile normal saline in sealed disposable containers should be provided. Each container should hold at least 300ml.

#### **11.5.6 SITE OFFICES**

- b) All Site Office accommodation will be compliant with all statutory requirements.
- c) The site manager will ensure that all offices are cleaned out daily and waste paper is not allowed to accumulate.
- d) All fire extinguishers shall comply with the relevant British Standard and will be serviced and maintained at regular intervals. Training will be provided to members of staff in their use.
- e) Any liquefied petroleum gas-heating appliance shall be used in accordance with the requirements of Company policy.
- f) Training will be provided in the use of office machinery and no person may operate or service any machinery unless authorised to do so.
- g) Any electrical installation shall be to the requirements of the IEE Regulations and shall be installed, tested, altered, and maintained by qualified electricians only.
- h) The Site Engineer will ensure that any office machinery is installed safely and that it is maintained and serviced in accordance with manufacturer's recommendations. A written assessment of the risk involved with any substance or process hazardous to health must be made and control measures, precautions, training, instructions etc. provided.
- i) The company will ensure the security of all working sites and premises in compliance with current statutory requirements and local specific conditions.

### **11.5.7 Fire and Emergency Arrangements**

Fire risk prevention will follow the requirements of the Regulatory Reform (Fire Safety) Order 2005.

The Operations Director is responsible for ensuring the undertaking of Fire Risk Assessments at the company office premises and sites; these will be recorded in accordance with the Management of Health and Safety at Work Regulations 1999 and displayed at the premises.

All employees working upon clients sites will comply with the clients principal contractors local site Fire and Emergency rules.

The company Risk assessment will be reviewed annually and/or when any significant changes have taken place.

Arrangements will be made for:

- Communication with Emergency Services
- Fire Prevention
- Evacuation of all staff
- Evacuation of staff with special needs
- Fire fighting capability
- Drills and exercises
- Inspection
- Maintenance
- Records

For further details reference must be made to The Company Health and Safety Procedures Manual.

### **11.5(8) Occupational Health Surveillance**

Under The Management of Health and Safety at Work Regulations 1999 Regulation 5, every employee will be consulted, and arrangements made regarding health surveillance, particularly when other statutory instruments require such health surveillance.

Annual surveillance will be required when working with or using lead and/or its compounds, work with asbestos containing materials (ACM"s). All operatives exposed to noise and vibration equipment will be tested periodically as determined by current legislation and best practice.

Employees working with or designated as users of display screen equipment will be ergonomically assessed and appropriate eye tests will be arranged, these tests and examinations will be carried out in accordance with the Display Screens Equipment Regulations 2002.

Any employee requiring or requesting an assessment, medical and or health surveillance will be assessed and if required appropriate arrangements made to that end.

Employees working under the requirements of specific statutory provision that requires health surveillance will automatically receive the appropriate surveillance and or medical examination.

The Health and Safety Director will be responsible for making such appropriate arrangements; the Health and Safety Advisors will assist by giving appropriate advice and guidance.

All health surveillance records will be kept in personal files for confidentiality and with the appointed medical advisor under the Data Protection Act.

#### **11.6 Construction Design and Management**

The Company will at all times comply with its duties as determined by the Construction (Design and Management) Regulations 1994 as amended 2001. The Managing Director will ensure that where the company undertakes specific duties within that legislation that the required time, funding and manpower are assigned to that end.

#### **11.7 Contractor Selection**

The Company has produced an individual Contractor Health and Safety Policy. Reference should be made to that individual document. All contracting companies will have to complete the Contractor Health and Safety Competence Questionnaire, which will then be scrutinised by The Company's Health and Safety Advisors.

The awarding of contracts will only be granted on complete compliance with The Health and Safety Competence Questionnaire.

#### **11.8 Asbestos**

At all times the company will ensure complete compliance with the requirements of The Control of Asbestos Regulations 2006 and all approved codes of practice and guidance.

If asbestos is found whilst working upon site; all work will cease immediately. Work will not commence until the Duty Holder has ensured a survey undertaken by a competent person as determined by HSG 264 has been completed.

### 11.9 Plant, Machinery, Work Equipment and Electrical Equipment,

All machinery, plant tools and equipment must comply with the Provision and Use of Work Equipment Regulations 1998, The Electricity at Work Regulations 1989 and other statutory provisions and Approved Codes of Practice.

The Operations Director is responsible for ensuring that all mobile plant, work equipment, tools and electrical equipment is adequately maintained, and a record of maintenance is logged within the company maintenance records. All inspections shall be carried out by suitably appointed competent persons.

Electrical equipment, office-based equipment and all operatives' tools are subject to planned maintenance and Portable Appliance Testing (PAT). Test periods are set out in the table below.

Records will be kept of all testing of work equipment and electrical equipment. The register is the responsibility of the designated line manager, who will ensure a competent person is assigned to carry out all testing of portable equipment within the periods/intervals as set out in the table below or sooner where the equipment used is subject to heavy usage and conditions likely to damage the equipment or will be subject to wear and tear. Reference should be made to the Procedures Manual.

| <b>Equipment/Environment</b>                                                                               | <b>User Checks</b> | <b>Formal Visual Inspection</b> | <b>Combined Inspection and Testing</b> |
|------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------|----------------------------------------|
| Battery operated tools:<br>(Less than 20 volts) Drills, circular saws                                      | No                 | No                              | No                                     |
| Extra low voltage:<br>(Less than 50 volts AC)e.g. telephone equipment, low voltage desk lights             | No                 | No                              | No                                     |
| Information technology:<br>e.g. desk top computers, laptop computers, Visual display screens               | No                 | Yes 2 – 4 Years                 | up to 5 years                          |
| Photocopiers, fax machines                                                                                 | No                 | Yes 2 – 4 Years                 | up to 5 years                          |
| Double insulated equipment<br>NOT hand held but moved occasionally e.g. Fans table lamps, slide projectors | No                 | Yes 6 months – 1 Year           | No                                     |

|                                                                         |     |                       |                 |
|-------------------------------------------------------------------------|-----|-----------------------|-----------------|
| Double insulated equipment                                              | Yes | 6 months – 1 Year     | No              |
| HAND held e.g. floor cleaners, vacuum                                   |     |                       |                 |
| Earthed equipment (Class 1)<br>e.g. Electric kettles, microwaves, ovens | Yes | Yes 6 months – 1 Year | Yes 1 – 2 Years |
| Cables, leads, extension leads and plugs connected to the above         | Yes | Yes 6 months -1 Year  | Yes 1 – 2 Year  |

NB: Inspection and testing of equipment should also be carried out:

- When there is reason to suspect the equipment is faulty or damaged but cannot be confirmed visually.
- Any equipment that can be confirmed visually that damage or a fault has occurred.
- After any repair, modification, or similar work to the equipment and its integrity needs to be established.

The competent person must keep a record of all equipment inspected.

The supplier of any such equipment will be responsible for the integrity and conformity with current UK and European legislation. All plant and equipment must be supplied with current test certification and records of inspection etc.

Failure to supply current test certificates or records of the equipment will render the supply agreement as void.

Only trained and competent persons will be allowed to use all machinery, fixed and mobile plant, equipment and tools.

Tools plant and equipment that is not suitably maintained and of serviceable use, will not be used and must be reported to the responsible line manager. The work equipment will then be removed from service and a record of this action will be kept within the health and safety file.

## 12.0 Hand and Power Tools

The hazards associated with hand and power tools are:

- Failure or disintegration of tools
- Proximity to moving or cutting parts
- Flying particles
- Heat and sparks
- Electric shock
- Crushing or pinching
- Whole Body and Hand Arm Vibration Injuries

Tools that are correct for the job, in a safe condition and used correctly will improve productivity as well as safe working conditions, e.g.:

- Wooden handles on tools must be free of splinters or cracks and solidly attached to their working heads.
- Suitable anti-vibration aids must be fitted to all power tools.
- Electric power tools will be fitted with residual circuit device for 240volt or be 110volt.
- Electric leads will be maintained free of cuts, abrasions, and kinks.
- Tools with exposed moving parts will be provided with guards to minimise exposure to operator.
- All power tools will be stopped and as applicable pneumatic, hydraulic, high-pressure water or electrical supply disconnected to make any adjustments to the tool.
- All fuel powered tools will be shut down for re-fuelling.
- Impact type (percussion) tools will have suitable retainers to hold tool bits in place during operation.
- Extension or leverage increases will not be used on tool handles.
- Tools with „mushroomed“ striking faces must be replaced. If these faces are to be redressed, the tool shall be inspected for cracks and proper temper restored before re-using.
- Grinding wheel and cutting blades speed and size will be compatible with the speed and power capability of the driving shaft.
- All tools will be regularly inspected, repaired and lubricated as required to maintain them in a safe condition. Records will be kept of such inspections.

- Power activated tools will include safety features that will minimise the possibility of accidental operation.
- Personnel and protective clothing requirements for each type of tool will be established and enforced.
- Pneumatic / Water / Hydraulic hoses and electrical leads, leading to tools at work areas will be located or covered to protect them from external mechanical damage.

### **13.0 Vibration**

The company operates specific machinery and plant that has the potential to expose employees to the levels of vibration that may cause harm.

The Company will comply with its duties to prevent its employees suffering from the effects of Hand Arm Vibration and Whole Body Vibration. When such work is required, all employees will be fully trained in the operation of such plant and machinery and all work will be carried out in conjunction with the Specific Risk Assessment and Safe System of Work for that specific task.

The Control of Vibration at Work Regulations 2005 impose a legal duty on all employers to assess the risk of harm to all employees exposed to the effects of vibration from machinery and equipment that the employee uses in the course of their work.

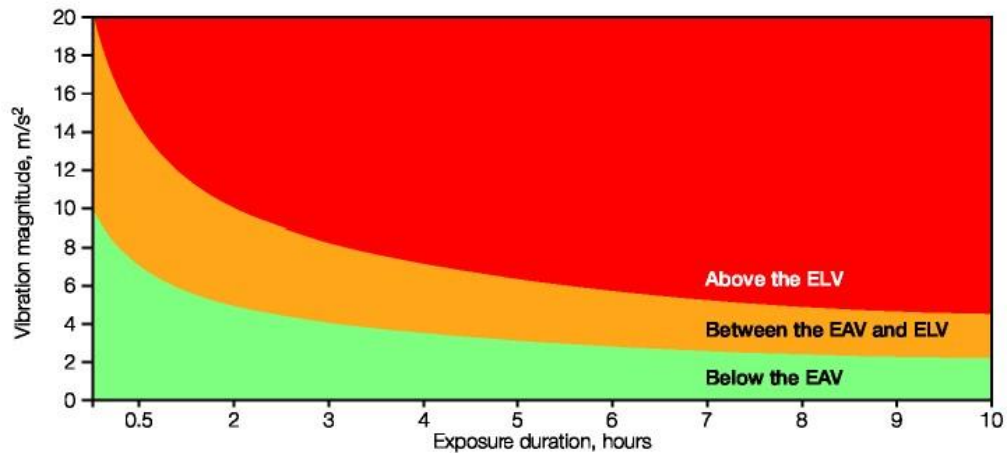
#### **Limit Values:**

#### **Exposure Action Values**

The exposure action value (EAV) is a daily amount of vibration exposure above which employers are required to take action to control exposure. The greater the exposure level, the greater the risk and the more action employers will need to take to reduce the risk. For hand-arm vibration the EAV is a daily exposure of  $2.5 \text{ m/s}^2 \text{ A(8)}$ .

## Exposure Limit Value

The exposure limit value (ELV) is the maximum amount of vibration an employee may be exposed to on any single day. For hand-arm vibration the ELV is a daily exposure of  $5 \text{ m/s}^2 \text{ A}(8)$ . It represents a high risk above which employees should not be exposed.



See HSE Leaflet INDG242 (rev1) the effects of whole-body vibration. Working Practices

Operatives over the age of 18 years must be supervised when undertaking training or operational awareness. All employees under the age of 18 years must be fully supervised at all times (see specific “Young Persons Risk Assessment”).

- Employees must not operate any item of machinery, plant, or equipment unless they have received suitable training and are authorised to do so.
- Employees must make full and proper use of all equipment guarding. Guards must not be removed.
- Employees must immediately report to their line manager any fault, damage, defect, or malfunction in any item of machinery, plant, equipment and tools.
- Maintenance and cleaning of any operational machinery and plant must be done so in compliance with manufacturer’s operational instructions and the company safe working procedures.
- Employees must not leave any item of machinery, plant, or equipment in motion whilst unattended unless authorised to do so.
- Employees under the age of 18 years must not operate any item of plant or equipment unless they have received sufficient training or under adequate supervision.

- Employees must not make any repairs or carry out maintenance work to any plant or equipment of any description unless authorised to do so.
- Employees must use all substances, chemicals, liquids etc. in accordance with all written instructions.
- Employees must return all substances, chemicals, liquids etc. to their designated safe storage area when not in use and at the end of the working period.
- Employees must observe all pedestrian and vehicle controls in force on or off the premises.

#### **14.0 Hazard/Warning Signs and Notices**

The company will ensure compliance with the Health and Safety (Safety Signs and Signals) Regulations 1996. Employees must comply with all hazard/warning signs and notices displayed on the company premises and upon client's premises and sites. All signs will be regularly maintained and cleaned, no person shall remove a safety sign or notice unless specific authority has been granted by their line manager.

#### **15.0 Working Conditions/Environment**

The company will ensure all working conditions comply with the provisions of the Workplace (health, safety, and welfare) Regulations 1992 and the Construction (Design and Management) Regulations 2007.

- Employees must make proper use of all equipment and facilities provided to control the working condition/environment.
- Employees must keep stairways, passageways, work areas and access and egress routes clear and in a clean and tidy condition.
- Employees must dispose of all waste materials within the working area, using the facilities provided. (See company policy on disposal of waste).
- Employees must use the correct methods when removing any articles or waste for disposal.
- Employees must clear up spillage or liquids within the work area in the prescribed manner.
- Employees must deposit all waste chemicals and other substances at the correct disposal points.
- Employees must not pollute watercourses, sewers or drains with chemicals, or substances.

## **16.0 Personal Protective Equipment**

The Company is committed to the Personal Protective Equipment Regulations 1992 as amended.

In order to demonstrate this commitment, the company will compile a personal protective equipment risk assessment, and based on the outcome of these risk assessments, suitable and sufficient personal protective equipment (PPE) will be issued where the control measure indicates the requirements. Suitable training will be provided for the use of the issued PPE.

All PPE will be supplied by The Company without charge as required by the Health and Safety at Work Act etc. 1974 and The Personal Protective Equipment Regulations 1992 as amended.

Personal protective equipment will not be issued as a means of priority control but may be initiated as an additional control or end result control.

- Employees must use all items of protective clothing/equipment provided as instructed.
- Employees must store and maintain protective clothing/equipment in the approved manner.
- Employees must report any damage, loss, fault or unsuitability of protective clothing/equipment to their supervisor.
- Any person found to be recklessly interfering with anything provided for health and safety including abusing PPE, will be subject to the Company disciplinary procedures.

### **Working in Excavations**

All work will be undertaken by suitably trained and competent employees or contractors; all persons will be trained to a minimum industry standard of competence.

All work will be in compliance with current industry standards and good practice.

Records of all training will be stored within the employees personal file.

Reference:

CSCS Contractors Safety

HSE Construction Information Sheet No 8 (Revision 1) Safety in Excavations.

Health and Safety Guidance (HSG47 HS G 47 HSG 47)

## **17.0 Working on or near to water**

Through its activities the company employees will be subject to working on or near water, where the probability of harm is significantly increased. Any work falling within this category must only be carried out in accordance with the Specific Safe System of Work, Working on or Near to Water.

All work must be carried out in accordance with Water Authorities, River Authorities, Local Port and Docks Legislation.

## **18.0 Working adjacent or on the Public Highway**

All work will be undertaken in full compliance of The Road Traffic Act 1984, Chapter 8 Road Signage and the Roads and Street Works Act 1991.

For all work of this type refer to the Safe System of Work and Specific Risk Assessment.

## **19.0 Confined Space Working**

The company undertakes confined space operations whilst working on its own and clients' sites.

The Confined Spaces Regulations 1997 define a confined space as:

“Any place, including any chamber, tank, vat, silo, pit, trench, pipe sewer, well or similar space in which, by virtue of its enclosed nature, there arises a reasonably foreseeable specified risk”

The company before undertaking any confined space work will arrange for suitable and sufficient arrangements for the rescue of persons and the establishment of a Safe System of Work. All work will be in compliance with the company's Confined Space Entry Permit System.

All persons employed on this type of work will be trained in entry and rescue procedures as determined in the Confined Spaces Regulations 1997.

## **20.0 Site Joinery**

All work will be undertaken by suitably trained and competent employees or contractors; all persons will be trained to a minimum industry standard of competence.

All plant tools and equipment will be compliant with the Provision and Use of Work Equipment Regulations 1998.

## **21.0 Bricklaying**

All work will be undertaken by suitably trained and competent employees or contractors; all persons will be trained to a minimum industry standard of competence.

All plant tools and equipment will be compliant with the Provision and Use of Work Equipment Regulations 1998.

All employees undertaking such work will have obtained as a minimum qualification, City and Guilds, NVQ or a CITB Accredited Qualification. All work will be in compliance with current Construction and House Building Industry Legislation.

Reference:

The Building Act 1984;

Building Regulations 2000 (Parts A-M)

Building Regulations 2000 Regulation 7 Materials and Workmanship

## **22.0 Ground-works provision of Drainage and Utility Services**

All work will be undertaken by suitably trained and competent employees or contractors; all persons will be trained to a minimum industry standard of competence.

All plant tools and equipment will be compliant with the Provision and Use of Work Equipment Regulations 1998.

Reference:

The Building Act 1984;

Building Regulations 2000 (Parts A-M)

Building Regulations 2000 Regulation 7 Materials and Workmanship

Building Regulations 2000 Site Preparation and Resistance to Moisture

British Standards 8500-1 2002 Concrete

## **23.0 Noise**

The Company will undertake suitable and sufficient Noise Assessments as determined by The Control of Noise at Work Regulations 2005.

The Company will ensure that as far as reasonably practicable all steps are taken to reduce the risk of exposure to its employees and others likely to be affected by such work activities.

Specific personal hearing protection shall be provided when the level of personal exposure cannot be reduced as far as reasonably practicable.

## **24.0 Working at Height**

The following should be read in conjunction with the Working at Height Regulations 2005.

The company will as far as reasonably practicably prevent or reduce the exposure of their employees to the task of “working at heights”. In the event of the necessity for employees to work at height, all reasonable steps shall be taken by the company to provide a safe working environment for those employees required to carry out their trade or professional skills.

The company shall provide the necessary preventive and protective measures to prevent falls of persons or materials from the workplace and will liaise with any other persons involved in the work activity. The employee and any other person involved in the work activity shall cooperate in the implementation of this policy.

The responsibility for the implementation of this section of the policy on behalf of the company lies with the site supervisor.

### **Arrangements for Securing the Health and Safety of Workers**

The Company will:

- carry out an assessment of the risks involved in any work at height and take steps to eliminate or control them.
- provide all the necessary equipment to allow safe access to and egress from the place of work.
- provide suitable plant to enable the materials used in the course of the work to be safely lifted to and stored at the workplace.
- when working at dusk, night or dawn, provide sufficient local lighting, so that work can be carried out safely and access and egress are easily visible.
- arrange for the regular inspection of all equipment required for working at height, particularly where there is a statutory requirement to do so.
- Appoint a competent person to be responsible for the supervision of the erection, altering and dismantling of scaffolding and for the inspection of equipment used in work at height.

## **25.0 Scaffolding**

All traditional tube and clip scaffolding shall only be erected by scaffolders holding a Construction Industry Scaffolders Record Scheme card (CISRS) or CITB Scaffolders Qualification.

Only trained and competent persons will be allowed to erect, alter and dismantle approved proprietary scaffold systems including easi-deck and ladder deck systems.

All scaffolding shall comply with the requirements of The Working at Height Regulations 2005, and shall be inspected by a competent person at least every seven days whilst in use, and following alterations or weather conditions likely to affect the scaffolding.

Records of all inspections shall be entered in the Site Scaffolding Register.

For further details on scaffolding refer to:  
The Working at Height Regulations 2005  
The Construction (Design and Management) Regulations) 2007

### **Use of Trestles and Staging**

All work from such equipment will only be carried out in compliance with current working at height legislation and after the compilation of a specific risk assessment. As far as reasonably practicable all working areas shall be fully boarded out to prevent the risk of fall. Where this cannot be achieved suitable edge protection shall be used in compliance with the above legislation. The provision of suitable access equipment to allow for safe access and egress to and from the working platform will be allowed for.

### **Safe Use of Access Equipment Safe Use of Ladders**

As far as reasonably practicable ladders shall only be used for the means of access and egress from a designated working platform. If any work has to take place from a ladder it will only be done so after the carrying out of a specific risk assessment; as a minimum all work will be of a short duration and the individual employee shall be able to maintain a secure handhold at all times whilst carrying out the work.

Reference: Working at Height Regulations 2005.  
HSE Guidance on the Safe Use of Ladders and Stepladders.  
BS1129:1990 Use of Portable Timber Ladders and Access Equipment.  
BS2037:1994 Use of Aluminium Ladders.  
BSEN131-1 Ladders Part 1  
Electricity at Work Regulations 1989

The following guidelines shall be followed at all times:

### **Slipping**

The best angle for a ladder for easy use and for security is about 75° to the horizontal, i.e. a slope of about four vertical to one horizontal.

But even at this slope there is a large outward push at the ladder foot that must be resisted and even a slight sideways push at the ladder top will start the ladder slipping sideways.

It must be remembered that the control that can be exercised by a man who is stationed at the foot of the ladder to hold or steady it varies with the length of the ladder, when the ladder is more than 6.00m long this control diminishes rapidly.

Tying the ladder foot to a stake driven into the ground or placing the foot on a sandbag or on a sole plate with a stop will prevent the base from slipping outwards.

However, these measures can do little to prevent the top from going side-ways; tying the ladder at the top can eliminate both of these dangers. In the very few cases where no anchorage is available near the top for tying, side guys of light rope can be secured to anchorage at or near ground level.

It is company policy that all ladders must be secured at the top by fixing an anchor to the fascia or other suitable point and tied or clipped when using ladders.

Ladders should not be placed on the working platform of tower scaffolds to gain height as the forces applied to the scaffold tower by the ladder only serve to destabilise it and cause overturning.

### **Handholds at the top of the ladder**

A common fault is to use ladders that are too short, and which offer no proper handhold at the top when the scaffold level is reached.

The ladder should rise at least 1.05m above the stepping off point unless there is some other adequate handhold convenient for the man to use while getting on or off the ladder.

## **Maintenance**

A ladder that has not been properly maintained may be unsafe, ladders which have badly worn, or broken rungs or split stiles should never be used.

They should either be properly repaired or should be scrapped, it is dangerous to fill in shakes, cracks and faults or cover up repairs with putty and paint.

The potential weak points are then hidden and may develop dangerously, the efficiency and safety of a ladder depends largely on the stiffness of the joints between the stiles and the rungs, and any repairs should ensure that this stiffness is maintained.

Replacement of a broken rung by a piece of timber nailed to the stiles or by a short length of steel tube or reinforcing rod also leads to accidents.

## **Working from Ladders**

As far as reasonably practicable The Company will reduce/eliminate the need for their employees to work from ladders.

Before deciding to use a ladder, a formal Risk Assessment should always be carried out.

It is necessary to carefully consider the securing of the employee on to it, and if there is still a potential of harm, an alternative means of working at height will need to be considered. A working stage should be provided as an alternative, i.e. a lightweight prefabricated scaffold, easi-deck or ladder deck system.

Work should never be carried out from a ladder where a three point contact cannot be maintained other than for access and where short duration inspection work is to be carried out.

## **Misuse of Ladders**

Ladders should not have scaffold planks laid on the rungs and should not be used as uprights of a scaffold unless they are heavily constructed and capable of carrying the loads imposed.

The rung of an ordinary ladder is designed to support the weight of a man and whatever load he may be carrying, but not the additional weight that may be imposed when used for the support of a ladder scaffold. Ladders should always be supported on their stiles and not on a rung.

Refer to the Working at Height Regulations 2005; Construction (Design and Management) Regulations 2007.

## **Stepladders**

ONLY INDUSTRIAL RATED STEPLADDERS WILL BE USED

- Always ensure they are placed on a good level footing.
- Spread to the fullest extent for stability and safety.
- Restraints should be adequate and equal in length and be in good condition. They should be replaced at the first sign of wear and deterioration.
- Whenever possible place at right angles to the work, that is with either the front or back of stepladders facing to the work.
- Do not stand on the last 2 steps or on the top plate unless it is constructed as a platform and there is a secure rail holds.
- Timber stepladders must not be painted but can be protected with a wood preservative and clear varnish.
- Inspection before taking into use:
  - Check treads and stiles
  - Check cords
  - Check hinges

Stepladders MUST ONLY be used for very short duration work.

## **26.0 Safe Use of Fixed/Mobile Plant and Machinery**

All machinery, plant, tools, and equipment will comply with the Provision and Use of Work Equipment Regulations 1998, The Electricity at Work Regulations 1989 and The Workplace Health Safety and Welfare Regulations 1992.

- All machinery, fixed/ mobile plant and equipment will comply with current UK and CE Standards
- All operators will be trained and competent in the operation, maintenance and cleaning.
- All operatives will have achieved a nationally recognised industry standard before operating such equipment. CSPS, CITB, National Plant, etc.
- All inspections will be carried out by a competent person and recorded within the specified maintenance manual.
- All moving parts will be guarded.
- All emergency systems will be operational.
- Suitable lighting shall be provided at all working areas.
- The floor areas around all fixed plant shall be so designed and maintained to ensure the safety of all operators.

## **27.0 Mechanical Lifting Operations**

All lift operations will be in compliance with the requirements of the Lifting Operations and Lifting Equipment Regulations 1998. All lifts will be planned and carried out by a competent contractor.

## **28.0 Manual Handling and Lifting**

Incidents associated with manual handling activities account for 34% of all UK workplace injuries which lead to absences from work of 3 days or more. The annual national cost to employers from manual handling accidents is estimated at £90 million. In addition to the financial cost to the country, there is also the pain and suffering, often long-term or permanent, caused to the employee and often the impairment of his/her long term earning capacity.

The Manual Handling Operations Regulations 1992, introduced to ensure that employers took steps to reduce the risks of manual handling injuries, require that hazardous manual handling is avoided whenever it is reasonably practicable to do so. Where this is not possible, the Regulations require a process of risk assessment and the introduction of measures to reduce the risk of injury to the lowest level which is reasonably practicable.

The Safety Advisors has provided instruction and guidance for manual handling assessors nominated by the Responsible Persons and is also offering training in manual handling. To ensure that Responsible Persons, nominated assessors and all staff are aware of the steps that the company requires them to take to comply with the Regulations, the enclosed draft policy has been produced.

The company recognizes that work related muscular-skeletal injuries from manual handling can affect all staff. It will take all reasonable steps to reduce, and will have the aim of eliminating, these injuries and will make diligent attempts to avoid putting staff at risk.

Work activities which involve hazardous manual handling will have been identified by the procedures involved in hazard identification and risk assessment under the Management of Health and Safety at Work Regulations 1992. These activities include such operations as the lifting, lowering, pushing, pulling, supporting, carrying and moving of loads by hand or by bodily force. The Manual Handling Operations Regulations 1992 apply to these activities.

## **DUTIES OF RESPONSIBLE PERSONS**

To secure the health and safety of workers with regard to manual handling operations, Responsible Persons in each department, unit or work area should ensure that, for work under their control:

- Manual handling operations which present a risk of injury are identified.
- Handling operations which present a risk of injury are avoided, so far as is reasonably practicable, by eliminating the need for the load to be moved or by the introduction of automation or mechanisation.
- Those operations which cannot be avoided are assessed using an ergonomic approach which considers the task, the load, the environment, and individual capability to determine the level of risk. The assessment should be recorded to show that it has taken place and to allow for easy review if circumstances change.
- Measures required to eliminate the risk, or reduce it to the lowest level which is reasonably practicable, are identified from the information in the risk assessment and are used to implement a safe system of work.
- All new work which might involve manual handling operations is assessed and safe systems of work are implemented before the work commences.
- Annual reviews of assessments are made to ensure that they are still valid but re-assessment is carried out immediately if any of the components of the work situation have changed.
- Incidents which result in musculoskeletal injury to staff are fully investigated and risk assessments and systems of work are reviewed in the light of such incidents.
- Staff recruited to posts involving manual handling are suitable for the work they are required to undertake, that job descriptions sent to applicants for employment include details of manual handling tasks where these are part of requirement of the post, that staff in post continue to be suitable for the work and that staff are not pressurised by supervisors or systems of work into undertaking operations (either by weight or rate of work) which are beyond their safe capability.
- Suitable information, training and supervision is provided for all employees engaged in manual handling tasks and that such training is recorded, monitored, evaluated and reviewed.
- Sufficient information about loads and environment is given to other employers who have control of workers on site and to self-employed contractors which will enable them to meet their responsibilities under the Regulations.
- Any specific arrangements for complying with the Regulations which are introduced are documented and incorporated into the local safety policy.

## **DUTIES OF EMPLOYEES**

The co-operation of employees is essential in reducing and eliminating the risks from manual handling. Staff should therefore ensure that they comply with the following requirements:

They should follow the safe system of work designed and introduced by the management and should not deviate from this without good reason:

They should use any mechanical aids which have been provided for their use and for which they have been trained. Any faults with mechanical aids should be immediately reported to the manager/supervisor:

They should assist and cooperate with the process of the assessment of risk:

They should assist the supervisor with the implementation of staff training, should attend training sessions as required and should apply the knowledge gained from training to their daily work:

They should report all accidents and occurrences which either caused, or could have caused, injury:

They should inform the supervisor if they are unable to undertake their normal manual handling duties because of injury, illness or any other condition:

They should not undertake any manual handling operation which they believe is beyond their capability:

They should report any unsafe systems of work to the supervisor

### **29.0 Mechanised Material Handling**

Mobile equipment is frequently used for handling materials, all operators will be fully trained to current industry standards e.g. CSPA, CITB, National Plant, etc.

- When moving, material will be secured to the vehicle.
- Any overhang of material on the vehicle transporting it, will be tagged or marked for easy visibility on its route.
- For heavy or bulky materials, routes of movement will be checked for clearance and adequacy of roads for the transported load.

Un-packing of material may pose hazards:

- Care must be taken when removing banding or straps by using the correct tools and equipment.
- When dismantling wooden pallets, nails must be removed or bent over and the lumber neatly stacked for ease of removal.

- Padding reinforcement, bracing or other suitable means will be used to prevent damage to material being handled by slings or subject to impact by the vehicle moving it.
- Combustible packing, e.g. wood, wool, etc. will be placed in a metal waste bin.

### **30.0 COSHH and Safe Working Practices**

All use of chemical products should be made the subject of good standards of Industrial Hygiene and Safe Working Practice.

The Control of Substances Hazardous to Health Regulations 2002 and EH40 2005 requires that as far as reasonably practicable the elimination of hazardous substances and/or the substitution with less hazardous substances.

Hierarchy of Control Measures:

- Elimination of exposure
- Substitution of substance to one less harmful
- Adequately control the exposure to any substance
- Monitoring the exposure of employees
- Health surveillance where assessed as a requirement
- Training and information to all persons exposed to hazardous substances
- PPE must only be used as the last resort

No person will be permitted to use any substance unless an assessment has been made of that material and all control measures have been implemented using the hierarchy of controls as listed above.

Employees will be issued with specific and generic assessments with regard to the substances used by The Company, detailed advice or assistance on what is desirable or obligatory in this respect may be obtained from The Health and Safety Executive (HSE).

Prolonged or repeated contact with the skin should be avoided.

Chemicals may present a very low hazard to health in terms of acute or chronic toxicity yet be able to cause inconvenience and discomfort by provoking local irritation if prolonged skin contact is permitted.

Protective clothing (as a minimum, gloves, eye protection and overalls) should always be worn.

Impervious protective clothing such as PVC coated gloves and aprons are desirable. Clothing which becomes contaminated should be removed and washed before re-use.

### **31.0 Chemicals in Construction & Refurbishment**

By law, Suppliers and Manufacturers of all materials, chemicals and substances, etc. should provide a Hazard Data Sheet. This must also be supplied by the manufacturer and is known as a Manufacturers Safety Data Sheet (MSDS).

Reference to these Data Sheets will identify any specific precautions to be taken for the safe storage and use of the material.

Every container must show whether the contents are:

- Explosive
- Flammable
- Toxic
- Corrosive
- Harmful
- Irritant
- Oxidising

Always use the least hazardous chemicals.

The following basic principles will help to ensure safe working:

- Inform employees of the hazards that exist and the precautions to be taken.
- Restrict the handling and usage of chemicals to those employees who have given the appropriate information and training.
- Ensure that all managers and supervisors recognise and understand the hazards, precautions and emergency procedures.

Substances including chemicals can enter the body in any of the following ways:

- Ingestion - eating, drinking, smoking
- Absorption - through the skin
- Inhalation – breathing
- Injection – splinters, lacerations etc.

Precautions must, therefore, be taken to prevent ingress to the body.

### **32.0 Dust and Vapour Hazards**

The company will ensure as far as reasonably practicable that all its operations will not cause harm to its employees or others likely to be affected. It will ensure that before such operations are undertaken that the compilation of a suitable and sufficient risk assessment and the correct control measures are in place before commencing with such an operation.

Local Exhaust Ventilation (LEV) is commonly used to control the release of hazardous airborne substances from a process into the workplace environment. The object of LEV is to control the emission at the point of release and prevent it from entering the air of the workplace.

A typical LEV system works by drawing contaminated air from the process through a partial enclosure or hood at, or close to, the source of emission. The contaminated air is then cleaned and discharged externally or recirculated into the room, preferably via a secondary filter.

An effective LEV system should be well designed and constructed, properly used and maintained in good condition, with regular inspections.

A system is deemed to be LEV if it is used to control, capture or contain airborne releases on, at, or close to the point of emission and then convey them to a point where they can be collected or released.

### **Legal Requirement**

The control of Substances Hazardous to Health Regulations 2002 (COSHH 2002) Regulation 7 requires that the exposure of employees to substances hazardous to health be prevented or, if this is not practicable, adequately controlled.

"Regulation 9" requires all control measures to be properly maintained and regularly examined and tested".

The employer should ensure all control measures are maintained in an efficient state, good working order and in good repair. To comply with Regulation 7 of COSHH, LEV plant should be thoroughly examined and tested at least once every 14 months and a suitable record of the examination and test results should be kept for at least 5 years from the date on which it was made.

The provision of suitable personal protective equipment and respiratory protective equipment will be provided if the specific risk assessment determines. All such equipment will only be provided when all other measures have failed to reduce the risk of exposure.

### **33.0 Permit to Work**

Permits to Work are an integral part of any Safe Systems of Work and therefore whilst carrying out High Risk operations such as maintenance of machinery and plant, the company will comply with its permit to work systems.

All operatives will be trained in the Permit Procedure and only authorised persons will be allowed to issue permits to work.

### **34.0 Biological Hazards**

The Company recognises its duty to ensure the Health Safety and Welfare of its employees and others in accordance with the Health and Safety at Work act 1974 and The Control of Substances Hazardous to Health Regulations 2002.

The Company will ensure the risks from identified biological hazards are assessed and effective control measures are put in place. These risks include those from Leptospirosis (Weils Disease), HIV/AIDS, Hepatitis (A, B & C), Leigonella, Toxicara, etc.

### **35.0 Working on clients' premises and sites.**

Working on site represent the main circumstances where strict controls are necessary to ensure the health and safety of all those affected, which includes clients, clients employees and members of the public. Additional controls will be required for work carried out in domestic premises, working on or adjacent to public highways and pedestrian routes. Particular attention must be paid to the old, infirm, disabled and children.

- Irrespective of how small the proposed works are, health and safety legislation must be complied with at all times.
- Where works are carried out in conjunction with the Clients continuing activity, business or otherwise, then careful consideration should be given to the phasing of the works.
  - The aim should be to separate, as completely as possible, the company scope of work to that of the Client's activities. ➤ The need for Clients and Client's staff to enter areas where work is being carried out and vice versa should be minimised and must be strictly controlled by site management.
  - If client's premises can be completely closed during any installation works, then this should be recommended.
- Assessments of hazard and risk in respect of any work activity that may affect any person will be carried out and appropriate action will be taken, and Management will monitor any control measures. Reassessment will take place as necessary.
- Effective protection controls in the work area, such as fans, barriers, warning notices etc, will be in place at all times and inspected regularly.
- Information, communication, and control measures are essential matters, which need to be discussed with Clients at regular meetings.

- Care in detailing design and inspection of work should be applied to minimise any health and safety risk.
- Such matters as tripping hazards, holes in floor, storage of materials, tools etc must be carefully inspected and hazards controlled.
- Potentially dangerous operations, such as cutting, hot works, operatives working overhead etc should be identified early and satisfactory precautions arranged prior to work being carried out.
- Any problems, hazards, risk or unsafe matters identified should immediately be brought to the attention of site supervisors for the necessary action to be taken.
- All accidents, injuries and incidents will be reported to site management, recorded as necessary and the appropriate action being taken.
- In the event of an incident, accident to Client personnel or member of the public, the Safety Adviser will be informed and carry out an investigation and report, if necessary.
- Any Fire Plan provided by the client, in respect of his premises, will be communicated to The Company to ensure it is understood and not compromised by any building operations. This matter must be taken into consideration for the Contingency Fire Plan.

## **36.0 Vehicles**

### **Policy for staff driving Company Vehicles**

This Code of Practice sets out the requirements for staff who wish to drive a company-owned vehicle. However, staff that use other vehicles, e.g. hired or their own car are advised to follow this policy.

The company takes seriously its „duty of care“ and as such considers the safety of the occupants of its vehicles and all people on site to be of paramount importance. Drivers need to be particularly aware of the safety of the many pedestrians whilst driving around the clients“ sites and respect the maximum speed limit of 10mph.

All staff that are required to drive a company vehicle must have passed their U.K. driving test or European equivalent. Copies of the driving licence are held on file by the company, who needs to check their validity before vehicle keys are issued.

Drivers must understand and agree to abide by the following:

- (a) Declare any convictions obtained after obtaining their driving license by informing promptly their line manager and supplying a copy of their endorsed driving licence.
- (b) To appreciate their „Duty of Care“ towards all other users of the company premises and drive with care, consideration and at a speed appropriate to the conditions around the premises.
- (c) It is the driver's responsibility to ensure that a pre-journey safety check is carried out on the vehicle; the following list is for guidance:
  - Tyres appear road worthy, free of unusual signs of wear or low/high pressure
  - Wheel nuts are secure
  - Vehicle body is in safe condition and no apparent fuel, oil or other fluid leaks
  - No load is overhanging the extremity of the vehicle
  - All warning /hazard lights are in working order
  - Driving mirrors are clean and suitably adjusted for the driver
  - Windscreens are in good condition (not obscured by snow/dirt and not chipped, cracked etc.)
  - Wash bottles have a sufficient supply of liquid
- (d) When a vehicle is out for more than a day, particularly for extended periods, it is the driver's responsibility to ensure that extra daily checks are made, namely checking the oil and cooling system fluid levels, the tyre pressures and the lights.
- (e) Alcohol must not be consumed, either whilst on driving duty or for 12 hours previous to taking charge of a company vehicle.
- (f) Drivers are not permitted to drive under the influence of drugs. If any driver is taking medication, which could affect his/her driving, they should obtain clearance from their line manager and where necessary written advice from their own or the company appointed doctor with regard to the medication they are taking.
- (g) Drivers are expected to comply with EU restrictions on hours of driving.
- (h) No smoking is to be allowed in any vehicle at any time.

## **Seatbelts**

Seat belts are fitted to all company vehicles. Drivers are expected to wear them at all times, and it is their responsibility to do so, otherwise the insurance against injury in the event of an accident is invalid.

## **Risk Assessment**

A risk assessment needs to be completed before using a company vehicle.

A signed copy of the document will be held on record by the company for one year after the journey start date. Risk Assessments should include any possible or expected hazards, which are likely to be encountered during the journey; e.g. *weather conditions, the suitability of non-main roads, any medical conditions of passengers, etc.* They should also state:-

- What precautions or contingencies have been made to deal with the above, e.g. condition of first aid kit, equipment carried, phone numbers, etc.
- The driving arrangements: e.g. relief drivers, route, change over points, rest halts, alternative routes and halts.
- Confirmation from the Company that the vehicle has been properly serviced for roadworthiness. In addition, the driver should also carry out the checks on the condition of the vehicle as in (c) and (d) above.
- Before any journey is undertaken it should be checked that the first aid kit is complete.

## **First Aid**

Company vehicles carry a basic first aid kit for use; it is the responsibility of each driver to ensure that the contents of the kit are kept up to date with supplies. Any accidents that occur should be dealt with in the normal way by a member of staff who is First Aid trained.

## **Mobile Phones**

The Company will not force an employee to use a mobile telephone when driving as part of their duties. The Company will however inform employees that, under the Road Vehicles (Construction and Use) (Amendment no 4) Regulations 2003, it is an offence whilst driving to use a handheld device to:

- Speak or Listen to a phone call.
- Use a device interactively to access any sort of data- including internet, text or other images.
- To hold a hands-free phone or other mobile device at any point whilst driving.
- The use of a handheld device even when stationary (e.g. Traffic Jam, Traffic Lights etc) will remain an offence.

Therefore, The Company will promote safe driving for employees by requesting that the use of mobile phones when driving is not undertaken.

### In the Event of an Accident

If a driver is involved in a road traffic accident, which causes injury to another person or animal not in the vehicle, or damage to another vehicle or roadside property; the driver needs to take the following actions:

If safe to do so;

- Stop and exchange details (driver and vehicle owner's name and vehicle registration number) with the third party involved. This is a legal requirement.
- Inform the police of the accident if somebody is injured or if the third party does not exchange details.
- Obtain the name and address of the owner/driver of other vehicle(s) involved along with registration number(s) and name(s) of their insurers.
- Obtain the names and addresses of independent witnesses, if any.
- Make a note with a sketch of the accident location, position of vehicles involved, road signs, measurements etc.

### Policy for the hours of driving company vehicles

There are EU rules on the number of hours that a person can work and drive. Where a driver also spends time undertaking other work activity besides driving the total hours worked **must** be considered as a factor when planning the **total driving time** within any 24 hour period. *No working day should exceed thirteen (13) hours.*

*Ref Rules on Drivers Hours and Tachographs goods vehicles in the UK and Europe*

### The Daily Driving Limit

No driver should drive for more than a total of 9 hours (which can be increased to 10 hours twice a week) in any 24 hours.

The EU rules require a rest period of 45 minutes or 2 or 3 rest stops, of not less than 15 minutes each that total 45 minutes, must be taken during any 4.5 hour period as per the chart below:-

|                          |                    |                            |                    |                             |
|--------------------------|--------------------|----------------------------|--------------------|-----------------------------|
| For a 4.5<br>hour period | 45 minute<br>break | Another 4.5<br>hour period | 45 minute<br>break | 1 hour<br>driving<br>period |
|--------------------------|--------------------|----------------------------|--------------------|-----------------------------|

The company policy requires in the addition that no driver must drive continuously for more than 2.5 hours without a break of at least 15 minutes.

|                               |                 |                               |                 |
|-------------------------------|-----------------|-------------------------------|-----------------|
| For a 2.5 hour driving period | 15 minute break | Another 2 hour driving period | 30 minute break |
|-------------------------------|-----------------|-------------------------------|-----------------|

Hence the driving regime for a single driver should be:-

|                   |                 |                 |                 |                   |                 |                 |                 |
|-------------------|-----------------|-----------------|-----------------|-------------------|-----------------|-----------------|-----------------|
| 2.5 hours driving | 15 minute break | 2 hours driving | 30 minute break | 2.5 hours driving | 15 minute break | 2 hours driving | 30 minute break |
|-------------------|-----------------|-----------------|-----------------|-------------------|-----------------|-----------------|-----------------|

**Total 9 hours driving, 1.5 hours cumulative break period.**

How should breaks from driving be taken?

During any break a driver must not drive or undertake any other work. If the vehicle has two drivers sharing the driving, then one is permitted to take a break whilst the other drives. Rest periods of less than 15 minutes do not count towards the statutory accumulated break requirement of 45 minutes.

**Daily Rest Period**

In each 24 hour period, a driver must have a minimum daily rest period of 11 consecutive hours. This may be reduced to 9 hours not more than 3 times a week, as long as the reduction is compensated by an equivalent total period of rest before the end of the following week.

The Company owns vehicles for the transportation of employees, work equipment and materials to the work place.

The company will ensure all vehicles provided are maintained to comply with the Road Traffic Act and current legislation.

All employees of such vehicles will at all times when on the public highway abide by the Road Traffic Act 1991 and subsequent Legislation.

When operating a vehicle on a clients site, the vehicle will be operated as to those specific sites.

### **37.0 Lone Working**

The Company understands that risks can be presented to employees that may have to work alone as part of their job requirements. This may occur at The Company premises or when working on site for a client.

The risks from lone working are identified in the company Lone Working Risk Assessment together with the relevant control measures employed by The Company.

Where high risk activities are required to be undertaken, it may be determined that lone working is unacceptable.

Reference:

Health and Safety Executive Guidance Working Alone

### **38.0 Violence at Work**

The Health and Safety Executive defines Work Related Violence experienced by an employee as:

“Any incident, in which an employee is abused, threatened or assaulted by another person in circumstances arising out the course of his or her employment”.

Any employee guilty of committing and act of physical or verbal violence against a colleague, contractor or member of the public whilst at work or on company business will be subject to Disciplinary action as pre-determined by their Terms and Conditions of their Contract of Employment.

All violent encounters should be reported to the Site Supervisor or member of management immediately.

Reference:

Health and Safety Executive Guidance, Violence at Work

### **39.0 Working Time**

The Company adheres to the requirements of the Working Time Regulations 1999 as amended, by ensuring that there is a limit placed on an individual's working time of forty eight hours (Unless otherwise agreed by the Individual) and also a limit placed on any night working to average out at eight hours.

## **40.0 Stress**

Definition of Stress:

The Health and Safety Executive define stress as the:

“Adverse reaction people have to excessive pressure or other types of demands placed upon them”.

In order to realize this commitment, the company has identified the following aims for the effective management of stress in the workplace:

- to increase general awareness of stress and the methods available to combat its damaging effects;
- to take action to identify and, so far as is reasonable, eliminate or reduce workplace stressors, whether associated with a person's work, or relationships with others (management, colleagues, subordinates, students or others), accepting that the effect will be different as to the people involved and over time;
- to assist staff in managing the effects of stress in others, particularly people whose work they supervise, and in themselves, whether the cause is internal or external to their working environment: this will include the publication of guidelines and provision of training;
- to manage effectively problems that do occur, including the return to work of staff who have had problems with the effect of stress;
- to maintain and develop appropriate services and facilities to support the health and welfare of staff.

The Company is committed to protecting the health, safety and welfare of their employees and recognises that workplace stress is a health and safety issue and acknowledges the importance of identifying and reducing workplace stressors.

## **41.0 Equal Opportunities**

The Company operates an equal opportunities policy, meaning that all employees are selected and treated on the basis of individual merit and will not be discriminated against in any way on the grounds of:

- Sex
- Age
- Marital or Parental status
- Physical Ability
- Colour
- Race
- Ethnic origin or nationality
- Any other reason than the ability to do their work

This Equal Opportunities Policy complies with all statutory requirements including the Disability and Equality Act 2010

## **42.0 Children and Vandalism**

When working on client's sites or within domestic premises, all steps should be taken to prevent children gaining access to the work areas at all times.

Appropriate measures are to be taken to prevent the use of the work areas as a play area and to ensure security of the work areas as to prevent vandalism.

The occupier of the premises, i.e. the Principal Contractor, is responsible for the safe conduct of his business on that site including the prevention of accidents and injuries to the public, even though they may be trespassing (Health and Safety at Work, etc Act 1974 s (3)).

Within domestic premises on completion of the day's work, the work areas such are left safe and secure as not to prevent a hazard.

On every site, whether enclosed, or open to the public (e.g. large housing sites, road works, etc.), it is becoming increasingly necessary to take precautions to prevent vandalism, damage and injury to the public.

Particular attention should be given to the guarding or covering of excavations and manhole, etc., immobilisation of company vehicles equipment, security of Domestic Gas and Electricity Supply, security of Liquefied Petroleum Gas Supplies, security of gas burning/welding equipment, other hazardous substances and prevention of access to working platforms, access equipment and the interior of buildings.

## **43.0 Office Safety Rules**

All office staff have a duty to assist in minimising the risk of accidents, ill health and fire.

The following rules shall be observed:

- Tripping hazards will be minimised by properly storing materials, limiting trailing electrical cables, closing filing cabinet drawers, keeping staircases and fire exits clear.
- Avoidance of manual handling: Where it has been assessed that there is a risk of injury from manual handling, the first consideration should be whether the load needs to be handled at all, or whether the requirement for handling can be minimised by using safe methods of manual handling, i.e. the use of mechanical aids. In all cases, a suitable and sufficient risk assessment will be carried out in accordance with the regulations.
- Chemical hazards will be minimised by the correct labelling and storage of cleaning and other harmful materials or substances.

- Fire hazards will be minimised by keeping fire doors closed, fire extinguishers in place, paper and other flammable materials tidy, use of ashtrays in smoking areas, and other control measures identified in the Fire Risk Assessment complied with.
- Electrical hazards will be minimised by ensuring that all cables and connections are sound, equipment earthen and correctly fused, sockets are not overloaded, and that water is kept away from all electrical installations. Electrical equipment shall be subject to regular checking, annually, and taken out of service if a fault is identified or suspected. The inspection and servicing to be carried out by competent electrician and no unauthorised person will install, repair or tamper with electrical equipment. All such inspections shall be recorded.
- Risk Assessments are to be completed as appropriate. A set of general risk assessments are available.

#### **44.0 Display Screen Equipment**

The Company will ensure compliance with the Display Screen Equipment Regulations 1992/2002 by the carrying out of regular DSE Workstation assessments.

Concerns of past and present users of DSEs" that prolonged exposure to display screen equipment can result in cancer, migraine and damage to the unborn foetus are unfounded. A lot of the problems associated to constant users of DSE equipment can be attributed to poorly designed work stations and poor working environments.

It is our policy to exceed, where possible, the minimum health and safety requirements of the law. We aim to provide a working environment that is both comfortable and maximises the effectiveness of employees. Although the Regulations only apply to DSE users or operators (an operator is a self-employed DSE user), we will try to apply the principles to all DSE workstations regardless of the category of user.

Responsibility for implementing this policy lies with the Office Administrator.

The following listed although not exhaustive are contributors to such concerns:

Postural hazards result from poor ergonomics and working environment. The following may produce fatigue-related conditions:

- sitting in an immobile position for long periods
- high rates of repetitive finger movements, with the wrists bent

- poor circulation to the legs
- pressure from the seat/chair upon the thighs

Visual fatigue can produce eye strain, headaches or other related symptoms from the following:

- poor screen display, such as low contrast or flickering
- high levels of ambient light compared to the screen display
- reflections or glare

Definitions:

Users or Operators - Employees and self employed who habitually use DSE for the purposes of an employer's undertaking as a significant part of their normal work.

- All DSE workstations will be assessed, using the assessment checklist provided. Those used by employees classified as DSE users will receive priority for corrective measures, if any are needed.
- Desks will be chosen with a worktop height between 580 and 790mm, unless the operator has special needs. When existing desks are replaced, the new desks will conform to these parameters.
- Employees will be considered to be operators when:
  - they use DSE regularly and continuously for more than an hour at a time,
  - they depend on display screen equipment to do the job, i.e. there is no alternative way of doing the job,
  - they need additional training and/or particular skills in the use of display screen equipment to do the job,
  - fast transfer of information between operator and screen is important,
  - The work being done requires a high level of attention and concentration and the consequences of error may be serious for the business.
- We will provide suitable and sufficient general and task lighting for DSE workstations, within the range 300-500 lux, as measured by a simple light meter.

If no suitable light meter is available, operators will be provided with additional task-lighting so that they can adjust levels to their own comfort, provided that no interference is caused to nearby workstations.

- Glare from bright lights, screen reflections and desktop finish will be modified where reasonably practicable by the use of:

- shielding or blinds
  - replacing or repositioning sources of light
  - rearranging document holders or all parts of workstations
  - covering work surfaces
  - Modifying the colour or reflectance of walls, ceilings and furnishings near to the workstation.
- Changes in workstations will be discussed with the operators before they are implemented.
  - Table-top printers for standing operations should be installed to a height which provides a normal working position.
  - For prolonged use of DSE such as data entry, the keyboard height will be such that when the user's fingers are resting comfortably on the home-row keys, the angle at the elbow is 90 degrees.
  - Keyboards will be chosen that can be tilted and separated from the screen to enable the operator to select a comfortable working position and avoid fatigue in the arms, wrists or hands.
  - Desks will be large enough to allow normal tasks to be performed that are associated with the user's work.
  - Desk tops will, where reasonably practicable, have a low reflection surface and allow flexible arrangement of the screen, keyboard, documents and related equipment.
  - Display screen tasks will be designed where possible in a way that periods of DSE use are spaced throughout the working day. Breaks will be arranged before fatigue where possible, rather than as a recovery period. Short, frequently occurring breaks will be taken, rather than longer less frequent ones.
  - Workstation users will be provided with suitable and sufficient training and information. The training will be recorded in the employee's records and refresher training given, as required by the job. Training will include awareness of the symptoms of work related upper limb disorders.
  - Document holders will be provided on request. They will be stable and adjustable by the operator, so as to minimise the need for uncomfortable head and eye movements (operators will be advised to position the holder at a similar viewing distance from the display screen and in the same plane).

- Operators will be advised that displays having vertical screens should be adjusted in height, so that the top row of displayed characters is level with, or just below, the user's eye height when the user is in a comfortable operating position.
- Operators will be advised that displays having tilted screens should be at a level where the centre of the screen is at an angle of approximately 15 degrees below the horizontal to the user's eye.
- Display screens are usually designed to be viewed at a distance of between 350 and 600mm. Desks or tables will, where reasonably practicable, be deep enough to allow the display screen to be positioned at that distance.
- When furniture is replaced, new furniture will offer no reduction in existing standards.
- Chairs for workstations will be stable and have five points of floor contact for maximum stability. They will be adjustable in height and the seat back is adjustable in both height and tilt.
- Footrests will be available on request, so that when the chair is properly adjusted for arm and wrist position, the operator's thighs can be positioned horizontally to reduce lower leg fatigue.
- Employees who are required to use laptop or hand-held computers with a display screen and who work in an office for more than short periods (i.e. longer than an hour a day), will be provided with docking stations and the other facilities of fixed workstations.
- Eyesight tests will be available to all users or potential users at the expense of the business, as required by law. Eyesight tests will be repeated at a frequency recommended by the optician/ optometrist.
- Employees who are required to use laptop or hand-held computers with a display screen will be entitled to the same eye tests and spectacle provision as fixed workstation operators.
- Spectacles that are required by an operator to use DSE will be provided at the employer's expense, but the contribution from the business will only be for that required by the task.
- The business will make a contribution equal to the cost of basic frames and the lenses recommended by the optician/optometrist. If the employee wishes to have more expensive spectacles, they must make up the difference in cost.
- Agencies, or other providers, will be asked to confirm that temporary staff has had suitable tests and have corrective spectacles, when retained for work with DSE.

- Self-assessment forms will be issued to each user as a prerequisite for the assessment of DSE. These will be used to assist the assessor in determining the user and existing conditions (SF 25).

### **Use of Laptop Computers.**

All users of laptop computers shall comply with current legislation and good practice when using such equipment. The following rules shall apply at all times.

1. Office Based, user shall use a docking station at all times
2. Non Office Based staff, users to use separate keyboard, mouse and screen riser to ensure a correct working posture at all times.

## **45.0 Drugs & Alcohol Policy**

### **Alcohol**

Alcohol misuse has become an ever-increasing problem in society affecting all types of businesses and occupations. Alcohol misuse can have disastrous consequences for the individual, their families and in certain circumstances members of the general public. In addition, The Company has specific statutory responsibilities towards their employees, the public and employees of other organisations working on The Company's premises, property or on clients' premises or property.

The policy will apply to all employees, external contractors and agency staff, whose misuse of alcohol or drugs, in the opinion of The Company, interferes with their work, their performance or ability to do their work and relationships with work colleagues.

The policy does not cover social drinking outside of working time, although the effects of heavy drinking are known to have an effect on the following day's ability to operate a motor vehicle and any other machinery or plant.

### **Drugs**

Any employee found to be taking or in possession of the following listed drugs will be in breach of this policy and will be subject to The Company's disciplinary procedures.

Classes of drugs defined in the Misuses of Drugs Act 1971 include the following.

- Class A drugs include cocaine, heroin, LSD, mescaline, methadone, morphine, opium and injectable forms of Class B drugs.

- Class B drugs include oral preparations of amphetamines, barbiturates, cannabis, cannabis resin, codeine and methaqualone (mandrex).
- Class C drugs include most benzodiazepines (sleeping pills, tranquillisers, e.g. Valium) and the harmful amphetamines.

This policy does not apply to the taking of drugs prescribed by a medical practitioner or purchased over the counter. However, if the taking of such drugs has an effect on the employee to carry out his normal duties safely, he must inform his site supervisor or the Managing Director immediately.

#### **Rules:**

- Alcohol must not be consumed during working hours (including breaks) either on or off The Company or clients/ principal contractors' premises.
- Illegal drugs from the above list must not be consumed / taken during working hours (including breaks), either on or off The Company or clients premises.
- Any breach of the above rules will be treated as Gross Misconduct under the Companies Disciplinary Procedures and may result in the dismissal of the employee.

### **46.0 Smoking Policy**

#### **Introduction**

The company will adhere to all the provisions of the Banning of Smoking in the Workplace and Enclosed Public Places Legislation 2007

Smoking is not allowed in any area where a special safety or health hazard might exist and in these areas the prohibition on smoking will if it is not already the case be clearly indicated by no smoking signs.

There should be no smoking in any working area.

#### **Disciplinary Action**

Disciplinary action may be taken against any employee who does not adhere to the agreed policy.

## **47.0 Insurance**

The Employers Liability (Compulsory Insurance) Act 1969 requires employers to take out and maintain with authorised insurers approved insurance policies against bodily injury or disease sustained by employees in the course of their employment.

Public Liability Insurance (including accidents and injuries to subcontractors).

Damage and injuries sustained by persons other than employees of The Company are covered by the Public Liability Insurance.

All steps are to be taken to protect those not employed on the site including visitors and the general public.

All visitors to site are to be made aware of safety procedures on site and protective clothing issued.

## 48.0 Advice

| Advice                                         |                                                                                       |
|------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Local H.S.E. Inspectors Office</b>          | HSE Unit 7&8 Eddison Court, Ellice Way, Wrexham, LL13 7YT                             |
| <b>Telephone number</b>                        | 01978 316000                                                                          |
| <b>Fax Number</b>                              | 01978 355669                                                                          |
| <b>HSE Information Line</b>                    | 0870 952 8222                                                                         |
| <b>HSE Website</b>                             | <a href="http://www.hse.gov.uk/hsehome.htm">http://www.hse.gov.uk/hsehome.htm</a>     |
| <b>RIDDOR Hotline</b>                          | 0845 300 9923                                                                         |
| <b>RIDDOR Reporting Website</b>                | <a href="http://www.riddor.go.uk">http://www.riddor.go.uk</a>                         |
| <b>RIDDOR Fax</b>                              | 0845 300 924                                                                          |
| <b>RIDDOR Email</b>                            | <a href="mailto:riddor@natbrit.com">riddor@natbrit.com</a>                            |
| <b>A &amp; H Health and Safety Consultants</b> | Unit A19 Bersham Enterprise Centre,<br>Plas Grono Road, Rhostyllen, Wrexham, LL14 4EG |
| <b>Telephone</b>                               | 01978 353506 07843200821                                                              |
| <b>Fax</b>                                     | 01978 353506                                                                          |
| <b>Email</b>                                   | <a href="mailto:ahhealthsafety@btopenworld.com">ahhealthsafety@btopenworld.com</a>    |
|                                                |                                                                                       |

## **APPENDIX 1**

### **PHASE 1A SITE INVESTIGATION**

## **APPENDIX 2**

### **EXISTING SERVICES**

1. SP Energy Networks (Electricity)
2. Dee Valley Water
3. Wales & West Utilities (Gas)
4. Open Reach (BT) Telephone (i)
5. Open Reach (BT) Telephone (ii)
6. Welsh Water – No services in local area
7. LA Storm Water Sewer
8. LA Foul Water Sewer



The position and depths of underground and overhead apparatus as indicated on this plan are approximate and are intended for guidance only. The depths may have changed if the land surface works have altered. You are also informed that the plan may not show, or may inaccurately show, individual property services and services to street lighting installations. The work of laying the apparatus previously before commencing any excavations or other works in the immediate vicinity therefore rests entirely upon the person undertaking or responsible for those works. Before any such works are undertaken the precise location of the apparatus and cables should therefore be ascertained by suitable means. In the event of an emergency or for further assistance please contact 0845 272 7379 (Electricity power area) or 0845 272 3424 (SP Networks area).

**SP ENERGY NETWORKS**  
On behalf of SP Networks plc

SP Networks plc  
Registered Office: 40a PowerSystems  
3 Preston Way, Preston, CH43 3ET  
Registered in England and Wales No 2206927

| OVERHEAD CABLES    |               |
|--------------------|---------------|
| In Use             | —             |
| Out of Use         | - - - - -     |
| Assumed route      | — · — · — · — |
| VOLTAGE COLOUR KEY |               |
| EHV                | 132kV BLUE    |
| EHV                | 33kV GREEN    |
| LV                 | RED           |
| LV                 | BROWN         |

Where cables have been laid SINCE 1 OCTOBER 1988, the following depths in mm apply to the tops of cables or ducts UNLESS OTHERWISE SHOWN, but see comments (TO TOP OF CABLE, ADD 75mm FOR BOTTOM OF TRENCH)

|              | EHV | HV  | LV  |
|--------------|-----|-----|-----|
| IN FOOTPATHS | 775 | 600 | 450 |
| ACROSS ROADS | 775 | 700 | 600 |
| ALONG ROADS  | 775 | 700 | 600 |
| AGRICULTURAL | 810 | 810 | 810 |

Your attention is drawn to the Health and Safety Executive Double H9547, available from HSE.

|                         |               |
|-------------------------|---------------|
| DATE                    | 19/01/2011    |
| SCALE                   | 1:2500        |
| MAP REFERENCE           | 331222 348086 |
| 0 10 20 40 60 80 Metres |               |





Title:

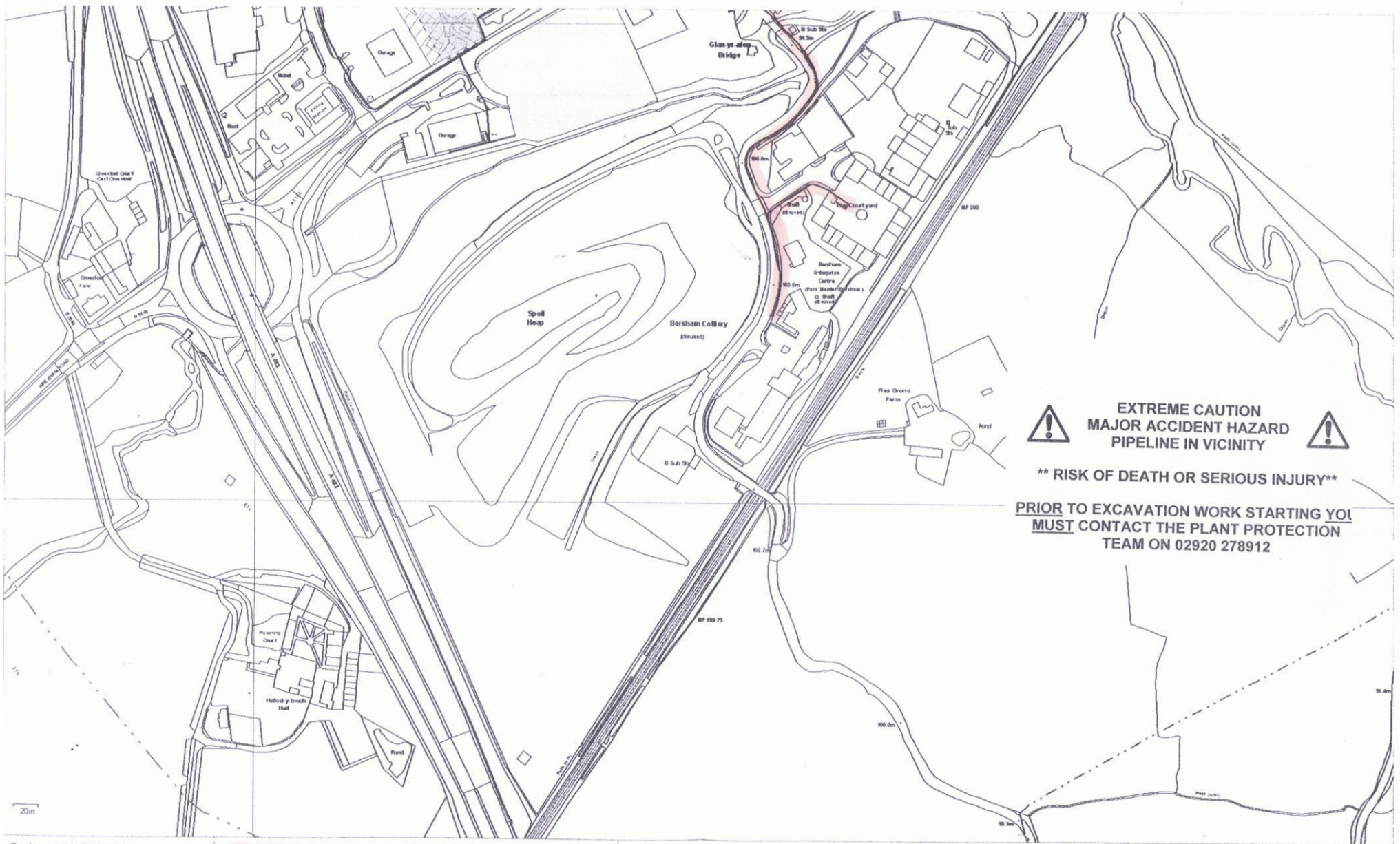
Date: 19/01/2011

Scale: 1:2000

Dee Valley Water plc

Packsaddle  
Wrexham Road  
Rhostyllen  
Wrexham LL14 4EH





**EXTREME CAUTION  
MAJOR ACCIDENT HAZARD  
PIPELINE IN VICINITY**

**\*\* RISK OF DEATH OR SERIOUS INJURY \*\***

**PRIOR TO EXCAVATION WORK STARTING YOU  
MUST CONTACT THE PLANT PROTECTION  
TEAM ON 02920 278912**

Scale 1 : 2850

User ID RH

Date 20/1/2011

Eastings: 331362

Low Pressure  
 Medium Pressure  
 Intermediate Pressure  
 High Pressure  
 Design Pipes  
 Abandoned

Some examples of plant items

TITLE: Ref 196170

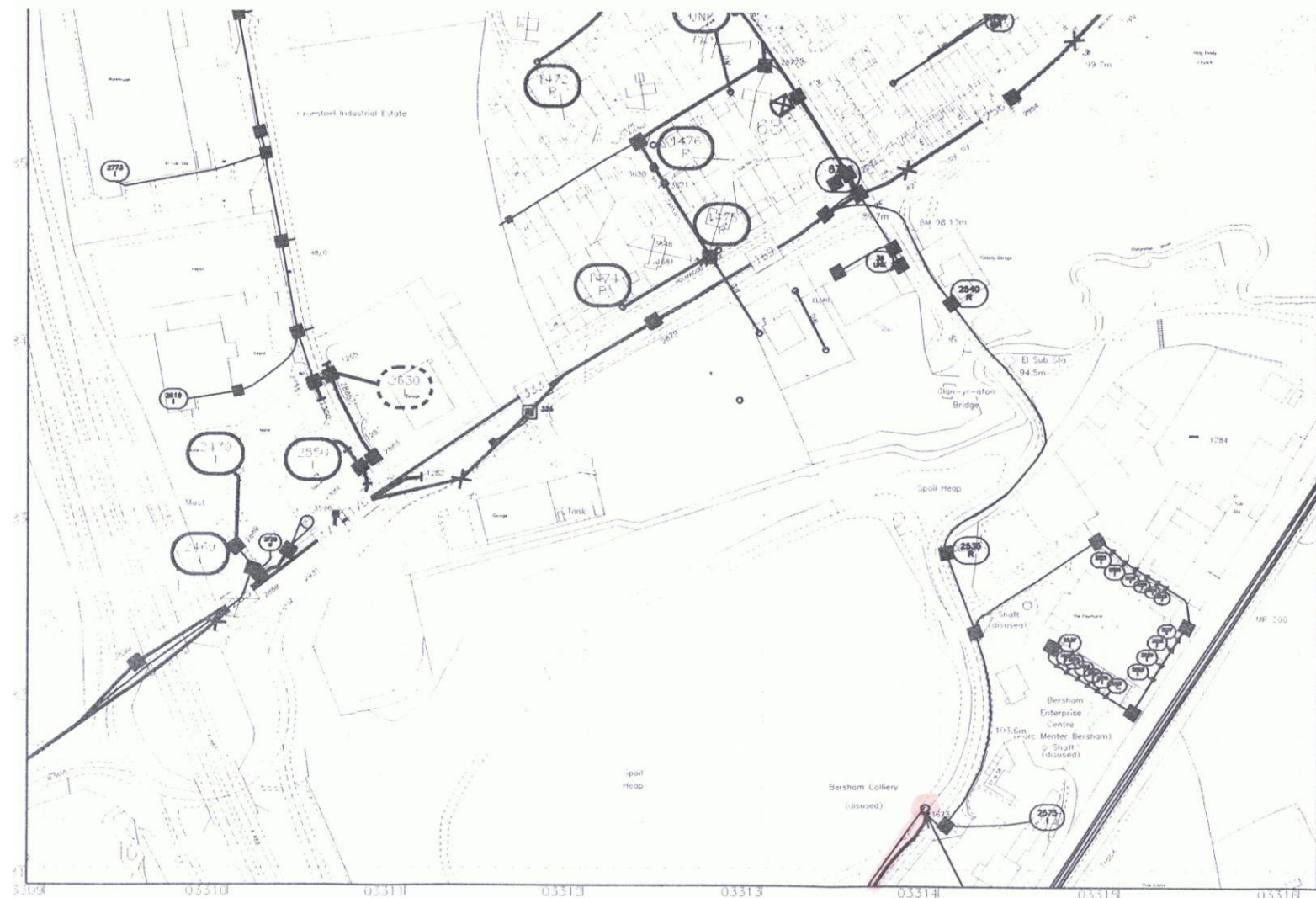
The plan shows those pipes owned by Wales & West Utilities (WWU) in its role as a Licensed Gas Transporter (GT). The information shown on this plan is derived from historic information and may have involved re-scaling plans, and the accuracy of it cannot be guaranteed. Service pipes, valves, syphons, stub connections, etc. may not be shown but their presence should be anticipated. No warranties are therefore given in respect of it. WWU its employees and contractors do not accept any liability for any inaccuracy or incompleteness in it.

You must use safe digging practices, in accordance with HSG47, to establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you or near gas apparatus. The information shown on this plan should not be used beyond 28 days from the date of issue of this plan as it is subject



Wales & West Utilities Ltd., Wales & West House, Spooner Close, Celtic Springs, Coedkernew, Newport, NP10 8FZ





# KEY TO BT SYMBOLS PLANT

- UNDERGROUND PLANT
- A/C, D/W or W OVERHEAD PLANT
- JOINT BOX
- DISTRIBUTION POINT
- MANHOLE
- POLE
- CABINET
- BURIED JOINT
- JOINTING POST
- MICROCONNECT
- DISTRIBUTED ANTENNA
- PROPOSED U/G
- PROPOSED O/H
- PROPOSED BOX

## NON PLANT

- DP BOUNDARY
- OTHER BT BOUNDARY

Other proposed plant is shown using dashed lines.

Existing BT plant may not be recorded.

Information valid at the time of preparation.

DIAL BEFORE YOU DIG

0800 917 3993

Fax - 01332 578650

Professional on-site assistance prior to commencement of excavation works

## IMPORTANT WARNING:

Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy. It should not be relied upon in the event of excavations or other works being made near to BT apparatus which may exist at various depths and may deviate from the marked route.

Reproduced from the Ordnance Survey map by BT by permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationary Office (C) Crown Copyright British Telecommunications plc 100028040

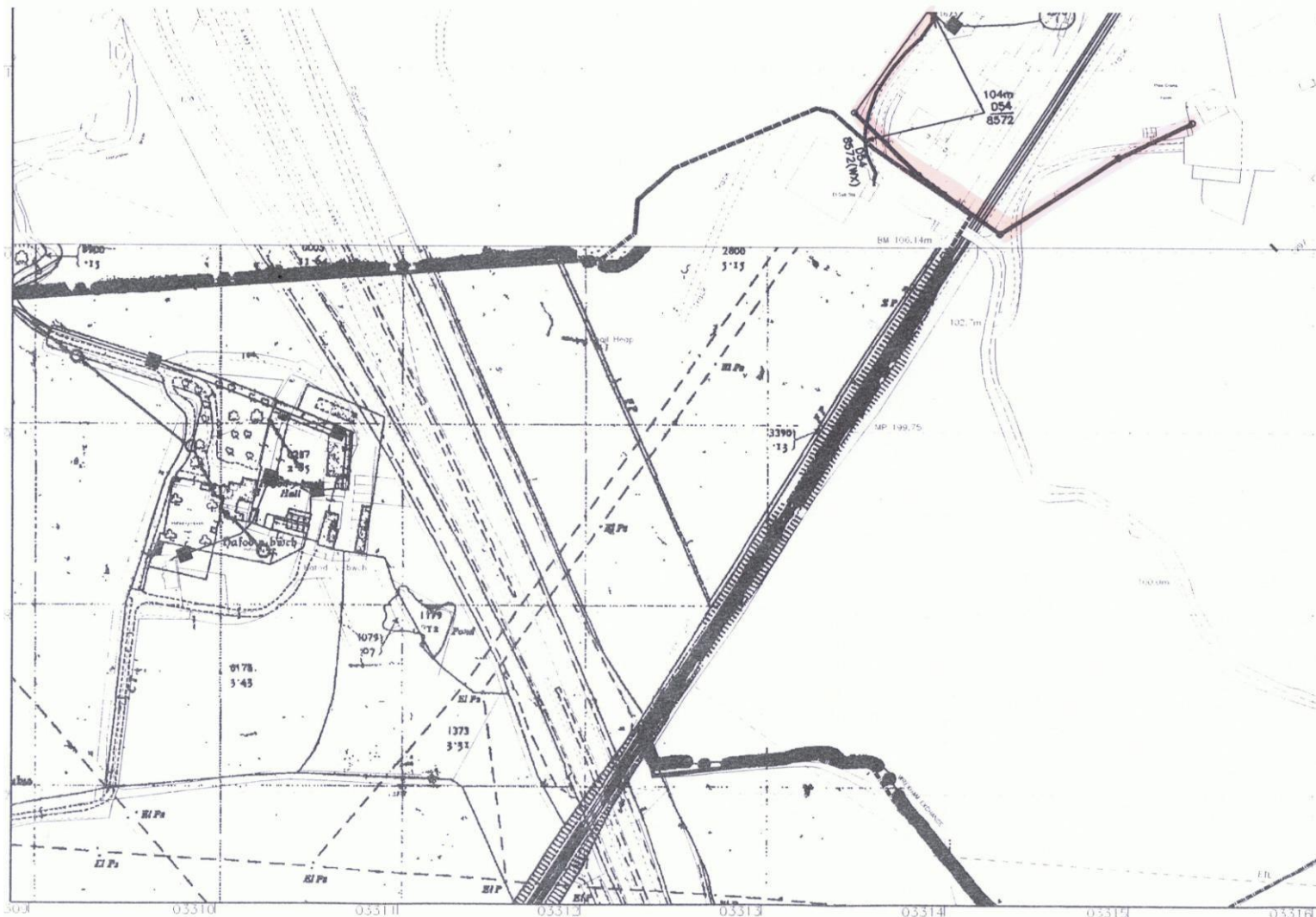
## PLANT INFORMATION REPLY

Notes:

BERSHAM COLLIERY WASTE TIP  
SJ3148 SHT 1

openreach  
BT

If more information is required please submit larger scale plans



## KEY TO BT SYMBOLS

### PLANT

- UNDERGROUND PLANT
- OVERHEAD PLANT
- JOINT BOX
- DISTRIBUTION POINT
- MANHOLE
- POLE
- CABINET
- BURIED JOINT
- JOINTING POST
- MICROCONNECT DISTRIBUTED ANTENNA
- PROPOSED U/G
- PROPOSED O/H
- PROPOSED BOX

### NON PLANT

- DP BOUNDARY
- OTHER BT BOUNDARY

Other proposed plant is shown using dashed lines.

Existing BT plant may not be recorded.

Information valid at the time of preparation.

### DIAL BEFORE YOU DIG

0800 917 3993

Fax - 01332 578650

Professional on-site assistance prior to commencement of excavation works

### IMPORTANT WARNING:

Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy. It should not be relied upon in the event of excavations or other works being made near to BT apparatus which may exist at various depths and may deviate from the marked route.

Reproduced from the Ordnance Survey map by BT by permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationary Office (C) Crown Copyright British Telecommunications plc 100028040

### PLANT INFORMATION REPLY

#### Notes:

BERSHAM COLLIERY WASTE TIP  
SHT 2 FINAL

**openreach**  
BT Group Business

If more information is required please submit larger scale plans



## **APPENDIX 3**

**HEALTH & SAFETY PROCEDURES, RISK ASSESSMENTS & COSHH**

## **Appendix 3.1**

### **HEALTH & SAFETY PROCEDURES**

| <b>PROCEDURE REF.</b> | <b>DESCRIPTION</b>                  |
|-----------------------|-------------------------------------|
| HSP1                  | Emergency procedure                 |
| HSP2                  | Risk assessments                    |
| HSP3                  | Site induction                      |
| HSP4                  | Site rules                          |
| HSP5                  | Complaints                          |
| HSP6                  | Handling waste                      |
| HSP7                  | Control of materials and waste      |
| HSP8                  | Plant & equipment on site           |
| HSP9                  | Personal protective equipment (PPE) |
| HSP10                 | Site tidiness and good housekeeping |
| HSP11                 | Manual handling                     |
| HSP12                 | Fuelling plant                      |
| HSP13                 | Overhead electricity cables         |
| HSP14                 | Permits to work                     |

The site management is responsible for ensuring that the emergency procedure is prominently displayed on site and that all site staff and visitors are inducted into the procedures.

---

**THE FIRST AID KIT & TELEPHONE IS LOCATED IN THE SITE OFFICE**

**THE QUALIFIED FIRST AIDER ON SITE IS:-**

.....

**CONTACT TELEPHONE NUMBER FOR FIRST AIDER:-**

.....

---

### **EMERGENCY PROCEDURE 1      AIM**

The aim of this procedure is to ensure a safe, efficient and easily understood system is in place for all the work force in the event of an accident / incident on site requiring the assistance of the emergency services.

### **2      IMPLEMENTATION**

Training on the procedure will take place prior to implementation. The procedure will also be covered at the induction.

### **3      PROCEDURE**

The procedure relies upon three main avenues of communication;

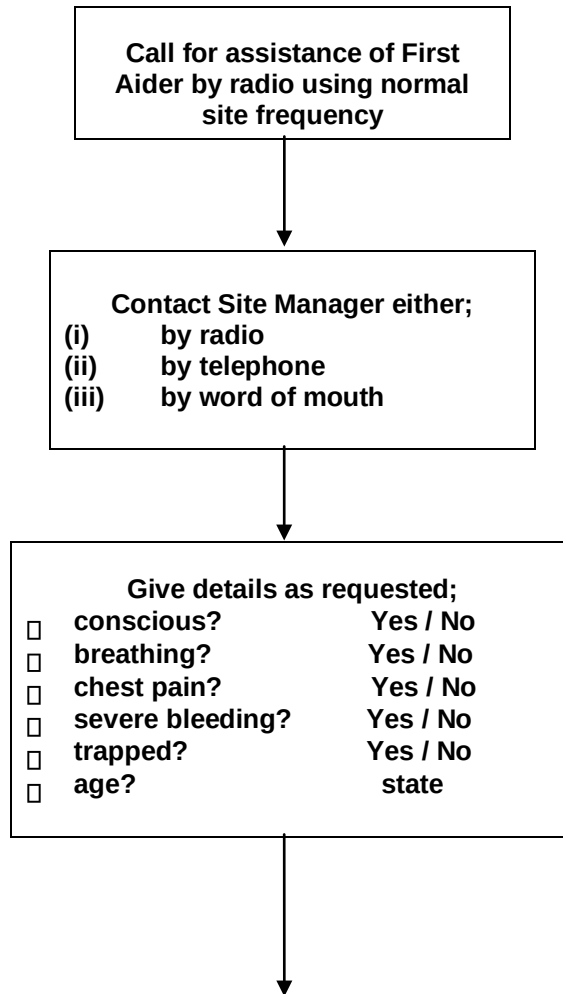
- (i) the radio network is appropriate;
- (ii) mobile telephones; (iii) the landline telephone.

In all cases initial contact for the emergency services will be through the site manager.

In the event of an accident or incident contact the site manager either by radio, mobile telephone or directly (verbally) and act upon his instructions. In the event of the site manager being off site you should contact head office on 0121 565 4500 where contact should be established with;

- (i) Mike Killett;
- (ii) Thomas Smyth;
- (i) Josephine Smyth OR;
- (ii) Tony Williams – Office: 01978 353506; m: 07843 200821

## **ACTION IN THE EVENT OF AN ACCIDENT ON SITE**



**Assist First Aider until ambulance service arrives.**

**The nearest hospital is:-**

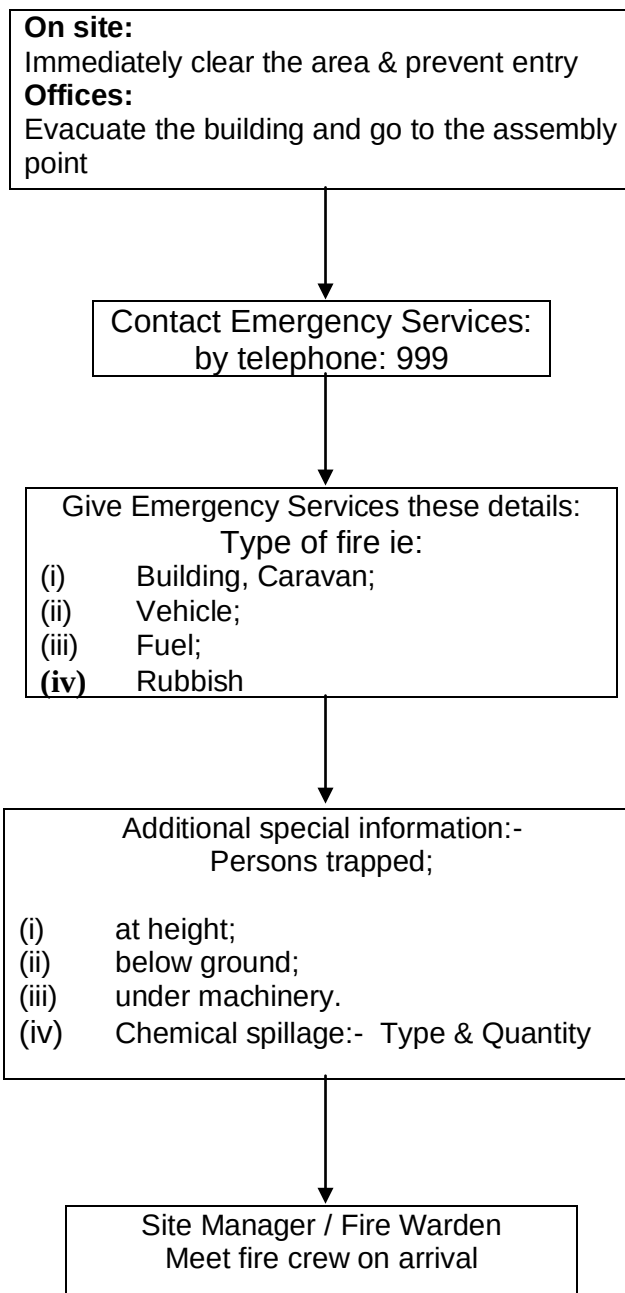
**Wrexham Maelor Hospital**

**Croesnewydd Road, Wrexham,**

**LL13 7TD**

**Telephone: 01978 725441**

## ACTION IN THE EVENT OF FIRE



### NOTE:

1. DO NOT ATTEMPT TO FIGHT THE FIRE UNLESS YOU HAVE BEEN TRAINED.
2. ALWAYS FOLLOW THE INSTRUCTIONS OF THE SITE MANAGER, FIRE WARDEN OR SENIOR PERSON PRESENT.

## **ACCIDENT QUESTIONNAIRE**

- (i) Is there more than one casualty? If so how many casualties are there?
- (ii) Approximate age of casualty? State approximate age.
- (iii) Is the casualty conscious? Yes or No.
- (iv) Is the casualty breathing? Yes or No.
- (v) Is the casualty bleeding severely (spurting) Yes or No.

## **FIRE QUESTIONNAIRE**

☐ What is the type of fire?

- (i) Caravan;
- (ii) Building;
- (iii) Vehicle;
- (iv) Rubbish;
- (v) Fuel;
- (vi) Chemicals (stores).

Special service calls in the event of fire:-

☐ Persons trapped:-

- (i) At height;
- (ii) Below ground;
- (iii) In/under Machinery / plant; (iv) Impaled.



**RISK ASSESSMENTS**

Site specific risk assessments have been completed for each task to be carried out on site.

Risk Assessments completed for the site are included within this document as follows;

| <b>Risk Assessment</b> | <b>Description Reference</b>                     |
|------------------------|--------------------------------------------------|
| RA17                   | Working adjacent to overhead electricity cables  |
| RA18                   | Site electrics                                   |
| RA20                   | Use of waste skips                               |
| RA27                   | Work in excavations                              |
| RA38                   | Public Safety                                    |
| RA41                   | Storage of Materials                             |
| RA46                   | Working adjacent to „live“ underground services  |
| RA48                   | Working on contaminated land                     |
| RA51                   | Lifting operations                               |
| RA52                   | Use of Excavators (Full slew track mounted)      |
| RA53                   | Use of wheeled excavators (full slew)            |
| RA54                   | Use of wheeled loading shovels                   |
| RA55                   | Dumpers (Open Cab)                               |
| RA57                   | Ride on rollers                                  |
| RA58                   | Transport on site                                |
| RA69                   | Pressurised plant & systems                      |
| RA70                   | High pressure water/steam cleaning equipment     |
| RA72                   | Loading/unloading/transporting plant & equipment |
| RA76                   | Materials processing by mobile screening         |
| RA77                   | Mobile crusher and screener                      |

The risk assessments completed as above are included within **Appendix 3.2** of this document.

## **SITE SAFETY INDUCTION**

### **Staff and site operatives**

All individuals employed to work on the site for and on behalf of the Company must complete a formal health & safety induction before commencing duties on site.

Each member of staff and all operatives on site are to complete the record of induction and sign the induction register that is to be held on site.

### **Visitors to site**

- (i) All visitors to the site must register as „on site“ within the visitors log book.

Details to be recorded are;

- Name
- Company
- Vehicle registration
- Time of arrival
- Time of leaving site
- Name of site employee they are visiting.

- (ii) All visitors to site are to be briefed on the site safety procedures, particularly the PPE requirements.
- (iii) If required to enter the working area of the site, visitors are to be accompanied by an approved member of the site staff.

**SITE RULES**

**The following site rules are an integral part of the Health & Safety Plan.**

- (i) All site operatives must wear full PPE as noted within the health & safety plan. Exempt areas are vehicle cabs, offices and welfare facilities only.
- (ii) Ear, eye, hand and any other protective equipment will be worn as instructed by the site manager. All PPE shall be properly used and maintained.
- (iii) All plant and machinery operatives, or other operatives required to operate or maintain plant and machinery, must never lean on moving machinery. The wearing of rings, chains, ties and loose clothing is to be avoided.
- (iv) All site personnel are responsible for ensuring that any job undertaken is completed by removing any debris to a safe location ensuring that the work area is left clean, clear and unencumbered.
- (v) Barrier creams and hand cleansers, where appropriate, should be used prior to consuming food & drink, and a high standard of personal hygiene maintained.
- (vi) Smoking on site is only permitted within designated areas.
- (vii) All site personnel must be vigilant and aware of any vehicle or plant movement in their vicinity. Where possible operatives should always move such that they may be aware of any oncoming site traffic.
- (viii) The carriage of persons on vehicles or plant is expressly prohibited.
- (ix) Citizen band radios or personal stereo equipment is not permitted for use on site.
- (x) Any working platform constructed for working at height (2 metres or more) must comply with the relevant codes of practice.
- (xi) A planned system of maintenance & inspection for plant & equipment is to be operated and controlled by the site manager.
- (xii) Any personnel finding defects in working areas liable to affect the safe passage of others is to immediately report the matter to site management.
- (xiii) The use of ladders is to be controlled such that any ladder is lashed and secured to prevent slipping. Ensure that a good hand-hold is available.
- (xiv) Heavy and / or awkward loads should only be lifted by the appropriate machinery.
- (xv) Any employee working at height must use the appropriate safety harness with adequate anchorage points where there is no platform or guard-rail.
- (xvi) Do not throw any materials from high places unless the area beneath is barricaded and appropriately sign posted.
- (xvii) Horseplay on site is prohibited.
- (xviii) Common rules of decency must be observed to keep welfare facilities, toilets, washing facilities and showers clean and sanitary.
- (xix) All walkways and floors must be kept clean and free from debris and obstruction, particularly access to fire extinguishers, hose reels, hydrants, emergency tools, emergency and fire exits from buildings.
- (xx) On completion of work all tools, scrap, parts etc must be removed to the designated places and the work area left clean and tidy.
- (xxi) Care must be taken when cleaning and/or washing around electrical equipment.
- (xxii) Any accident resulting in personal injury, or damage to plant & equipment, must be reported to the site management and entries made in the relevant accident book, forms completed (and head office notified accordingly).
- (xxiii) All personnel have a duty to report any unsafe occurrence or practices and to report any trespassers on site;
- (xxiv) All personnel should be aware of the location of fire extinguishers and other firefighting equipment;
- (xxv) Ensure that all extinguishers and fire fighting equipment is properly maintained, if not report to your foreman / line manager;
- (xxvi) Keep approaches and access to fire fighting equipment clear of obstructions at all times;
- (xxvii) Observe the NO SMOKING restrictions on site.

**COMPLAINTS**

In the event that a complaint is received at the facility then the following procedure is to be followed.

1. Inform the complainant that the Company has an established procedure for handling complaints and that a senior member of staff will respond to the complainant in due course.
2. Take the details of the complainant ie: Name, Company (if appropriate), Address and contact telephone number.
3. Record the location, time and date of the incident.
4. Take a description of the incident & complaint.
5. Take details of registration or markings on any vehicles involved.
6. Note the weather conditions at the time of the incident.
7. Note any other relevant information.
8. Pass a written report to head office.

**Action by Head Office**

1. Contact the complainant at the earliest opportunity to confirm the facts as initially provided by the complainant.
2. Inform the complainant that a full incident investigation will be carried out.
3. Provide the complainant with an anticipated duration for the investigation and the likely date of determination.
4. Inform the complainant that the Company has a policy of continually reviewing operations with the aim of reducing incidents and complaints arising.
5. Record all details in Office Complaints Log.
6. Contact the appropriate enforcing and/or regulating authorities as required.

## **HSP6 HANDLING WASTE**

It is essential that the appropriate personal protective equipment (PPE) is worn when handling waste.

Strict high standards of hygiene must be observed.

All waste materials received at the site must be subjected to the waste acceptance procedures and criteria included in Appendix 7 of this document.

All waste materials designated for use on site must be tested in accordance with the waste acceptance criteria and must be appropriate for the intended use.

The procedures controlling the movement of waste are included at HSP7 herein.

## **HSP7**

## **CONTROL OF THE MOVEMENT OF WASTE**

For the control of the movement of waste to comply with environmental legislation, and to ensure the safety of all personnel and the public, it is essential to follow the appropriate duty of care procedures as set out.

### **1. THE 'WIF' FORM**

The WIF form is the Waste Information Form. The WIF contains all details of the source and nature of the waste and is completed as part of the waste acceptance criteria before any movement of waste into the facility is permitted. For details of the WIF and waste acceptance criteria see Appendix 7 within this document.

### **2. DUTY OF CARE WASTE TRANSFER**

This note is used to provide details of bulk transfers of waste from the source or point of origin to the site. Known as the „waste passport“ the note includes the following details;

- The nature of the material and the European waste classification code;
- The waste producer and the source of the waste; □  
Details of the licensed waste carrier;
- The destination of the waste transfer.

### **3. CONVEYANCE NOTE**

This note is used to provide details of the individual transfer of loads of waste from the source to the destination.

This note includes the following details;

- Source of material and European waste code;
- Date of collection;
- Volume or mass of the waste;
- Nature of the waste;
- The destination of the waste transfer.

## **PLANT & EQUIPMENT ON SITE**

### **STANDARDS REQUIRED**

The following contains requirements for compliance in the provision, maintenance, operation and use of plant on site:

### **PLANNING PROCEDURES**

The Site Manager will take all aspects of the work into account to ensure that sufficient information is provided to hire company or Plant Manager to enable correct type of plant to be provided.

The Site Manager will ensure that competent operators and banks men (where required) are provided or that where necessary full training and instruction is arranged. Only operators holding a current Operator's Certificate under the FCEC/CITB Plant Operator's Registration Scheme or equivalent, or who have completed an in-house certification procedure, will be permitted to operate plant on site. The Health & Safety Adviser will advise on training requirements.

The Site Manager will determine whether any preparatory work is required for the installation or use of plant on site and ensure that any requirements are planned e.g. fork lift truck storage areas, loading towers, solid base for mobile cranes, mixer set-up, fuel storage, road crossing etc.

The Site Manager will ensure that a planned servicing schedule is prepared for all Company plant on site.

### **SUPERVISION**

The Site Manager will ensure that plant delivered to site is in good order and fitted with any necessary safety devices and guards.

Any defects noted will be reported to Head Office or Hire Company immediately.

The Site Manager will ensure that only authorised and where appropriate certified operators are permitted to operate any item of plant. Where any doubt of the competency of an operator exists the Site Supervisor will report to the Plant Manager or hire company immediately.

No young person (under 18 years old) is permitted to operate any item of plant or act as banks man unless being trained and under direct supervision.

All plant will be properly secured and Immobilised at the end of each day or while not in use.

All necessary testing and thorough examination certificates will be requested and checked by the Site Manager and all items of plant requiring weekly inspections by operator or other competent person will have the inspection recorded in the site register regardless of any register kept by the operator or plant hire company. The Supervisor will ensure that any necessary preparatory work required to enable plant to be installed or used correctly is carried out in accordance with specific requirements.

The Site Manager will ensure that any defect notified by the plant operator during operations on the site is reported immediately for repair and that where defects could affect safety on site the item of plant is not used until the repairs are carried out.

The site manager will not ask or permit the plant operator to carry out work with the machine for which it is not intended unless specific advice has been obtained from the manufacturers of the machine on the proposed use.

## **SAFE SYSTEM OF WORK**

Hazards with the use of plant arise out of: □  
Unskilled operation.

- Incorrect use.
- Poor maintenance.
- Reversing unsupervised.
- Defects in machine unchecked.

All Banksman, supervisory staff and operatives required to enter earth moving areas will be provided with high visibility clothing and the appropriate PPE.

Plant operators must not drink alcohol or take drugs during the working day or shift.

## **PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT (PPE) STANDARDS REQUIRED**

Under the Management of Health and Safety at Work Regulations, it is a requirement to identify the hazards in any undertaking and then evaluate the extent of the risks involved. After eliminated or reducing these risks as far as possible, it may still be necessary to protect the worker from further harm. In this case Personal Protective Equipment may be considered necessary.

The Personal Protective Equipment at Work Regulations (PPE) states:

Every employer shall ensure that suitable personal protective equipment is provided to his employees who may be exposed to a risk to their health or safety while at work except where and to the extent that such risk has been adequately controlled by other means which are equally or more effective.

All safety equipment purchased for use on Company sites/workplaces will be in accordance with the appropriate British Standard, Health and Safety Executive Approval etc. Copies of the above Regulations will be kept on site/workplace as applicable and any other appropriate special Regulations will be kept on site/workplace as required.

### **PLANNING PROCEDURES**

Before work starts, the Site Manager will establish what protective clothing and equipment will be necessary and will ensure that any special protective clothing or equipment required and any signs relating to the wearing of helmets, eye protection, ear defenders etc. are ordered and available for use on site and that sub-contractors are made aware of the site requirements for the wearing of safety helmets.

### **SUPERVISION**

The Site Manager will ensure that adequate supplies of all necessary protective clothing and equipment are available on site for issue as required and that when issued to employees, a record is kept in the Safety Equipment and Protective Clothing Issue Register.

The Site/Workplace Manager will ensure that before employees are set to work, that any necessary protective clothing is provided and that Safety Signs are erected for safety helmet areas, machinery requiring eye protection, ear defenders and emergency procedures etc.

Any person on site/workplace observed carrying out any process which requires the use of protective clothing or equipment will be informed of statutory and Company Policy requirements and instructed not to continue working until protective clothing or equipment is obtained. This applies to any sub-contractors as well as direct employees.

The Supervisor will ensure that the protective clothing or equipment is suitable for the specific process for which it is provided, information and advice on the correct equipment to be issued will be provided by management, as required.

All supervisory and management staff will set a good example in the wearing of safety helmets, protective footwear, etc. and will use all necessary protective clothing and equipment where required.

### **SAFE SYSTEMS OF WORK**

All operatives are required to wear suitable footwear whilst at work on Company sites on in Company workplaces.

All management, supervisory staff, visitors, subcontractors and employees shall wear safety helmets whilst on site, other than in areas specifically designated in writing by the Company as being areas where the risk of head injuries is negligible. Information on any areas or working conditions where helmets need not be worn must be displayed in the site mess room or issued to each person and contractor. Normal disciplinary Proceedings will be used against employees not complying with this requirement.

All plant operators employed by the Company will be issued with appropriate hearing protection and instructed in its maintenance and use.

All persons issued with protective clothing or equipment must immediately report to the site manager any loss or defect in the equipment.

Copies of the Safety Equipment and Protective Clothing Issue Register will be maintained by site management.

**SITE TIDINESS AND GOOD HOUSEKEEPING STANDARDS REQUIRED**

A number of Regulations deal with the need for workplaces and accesses to be kept clear of debris and other materials. Some examples are:

The Construction (Health Safety and Welfare) Regulations & associated legislation requirements to provide safe access and working places so far as is reasonably practicable.

All welfare facilities must be kept in a clean and orderly condition and not used for storage of materials or plant.

A clear working space must be provided around each machine and floors must be in good condition and kept clear from off-cuts chips and other materials.

For premises floors, passages and stairs shall be properly maintained and be kept free from obstructions or slippery substances & requirements for the provision and maintenance of safe means of access so far as is reasonably practicable.

In addition to the statutory requirements some of which are outlined above a tidy site and workplace results in increased efficiency and better public relations. Therefore, tidiness is to receive priority on the Company sites and in Company workplaces.

Copies of the relevant Regulations will be kept on site. Information on the requirements of the Regulations and advice on current good working practices is available from management as required.

**PLANNING PROCEDURES**

The Site Manager will ensure that before the site commences access routes and planned deliveries are programmed to ensure that excess materials are not stored on site, storage areas are defined, compounds are planned and subcontractors are made aware of the Company requirements with regard to storage, clearing up tidiness etc.

The Site Manager will ensure that safe recesses and places of work are available for employees to carry out their work safely.

**SUPERVISION**

The Site Manager will ensure that all sub-contractors and operatives are made aware of the need to maintain the site in a tidy condition throughout the contract. The Site Manager will ensure that stacking areas are prepared and that materials are called off in quantities which will not create difficulties on site.

The Site Manager will ensure that all waste materials are cleared and disposed of safely as work proceeds. All materials delivered to site for use by this Company will be stored safely ensuring that accesses are not obstructed. All openings must be securely covered or be clearly marked to show that there is an opening below. The Site manager will arrange for sufficient labour and plant to enable clearing up and maintenance of safe accesses cleaning of welfare facilities etc. to be carried out in accordance with these standards.

**SAFE SYSTEMS OF WORK**

Particular emphasis is to be placed on instructions to all employees and subcontractors on the safe disposal of steel and nylon banding used to contain bundles of materials delivered to site.

## **PROCEDURE**

### **MANUAL HANDLING AND LIFTING**

#### **STANDARDS REQUIRED**

The Regulations state "A person shall not be employed to lift, carry or move any load so heavy as to be likely to cause injury to him". \*

Copies of the relevant Regulations will be kept on site and information on the requirements of the Regulations and management will provide recommendations contained in advisory literature.

#### **PLANNING PROCEDURES**

The Site Manager will ensure that materials are handled as far as possible by machine. Where the use of a machine is impracticable, sufficient labour must be available to handle any heavy or awkward loads and instructions must be issued to site on the handling of these loads.

All supervisory staff will be given training in the correct methods of handling and lifting loads as part of their normal site safety training.

#### **SUPERVISION**

Supervisory staff will instruct any operative in the correct handling and lifting of loads as required.

Supervisory staff will ensure that supplies of suitable gloves are available from issue as required for the handling of materials that could cause injuries to the hands.

The Company will enforce the wearing of safety footwear and supervisory staff will caution any employee or sub-contractor wearing unsuitable footwear.

The supervision will not require any operative, particularly a young person, to lift without assistance a load that is likely to cause injury.

#### **SAFE SYSTEMS OF WORK**

The main injuries associated with manual handling and lifting are: □ Back strain, slipped disc.

- Hernias.
- Lacerations, crushing of hands or fingers.
- Tenosynovitis and other conditions.
- Bruised or broken toes or feet.
- Various sprains, strains, etc.

The selection of persons to carry out manual handling or lifting tasks will be based on the training given, age, physical build, etc. Where loads have to be manually handled, the need to ensure that accesses are safe is especially important.

The training provided should be based on the physical structure of the body and the effect of attempting to handle loads in various positions, Management will provide suitable training as required.

## **PROCEDURE**

### **FUELLING PLANT**

Any individual required to fuel plant and/or equipment must conform to this procedure and the following rules.

1. Smoking in the vicinity of the operation and elsewhere on site other than within designated areas is strictly forbidden.
2. Over-filling fuel tank must be avoided to prevent spillages.
3. The item of plant and /or equipment must not be left unattended while fuelling.
4. Any and all fuel spillages must be cleared up.
5. Sand or oil absorbent granules must be used to soak up the spillage.
6. All spillages must be reported to the facility manager who will convey notice to head office.
7. On completion of re-fuelling ensure that fuelling equipment is correctly stored and secured.

## **PROCEDURE**

### **OVERHEAD ELECTRICITY CABLES**

#### **PLANNING PROCEDURES**

Before commencing work on site the existence of any overhead cables will be noted and accounted for in accordance with approved standards.

All sub-contractors likely to be affected will be informed of any overhead cables on site.

#### **SUPERVISION**

The Site Supervisor will ensure that the necessary protection is erected in accordance with the approved standards.

#### **SAFE SYSTEM OF WORK**

The main hazards are contact with the cables by plant or vehicles or by operatives handling long objects, e.g. scaffold tube, cladding sheet, ladder etc. The fact that electricity can arc across gaps must always be taken into account.

Where work directly beneath or other unusual activity near cables has to be carried out, the cables may need to be made dead and a Permit to Work system operated. In these cases, the Safety Adviser must be consulted for advice at an early stage. In certain situations, capacitated or induced AC voltages can be created in fences and pipelines which run parallel to overhead cables.

The Electricity Authority must be consulted for advice before work commences.

Risk assessments should be carried out and suitably recorded, the information being made available to operatives involved on site.

## **PROCEDURE**

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### **PERMITS TO WORK**

#### **INTRODUCTION**

Permits to Work procedures are adopted in workplaces or where activities are carried out with significant risk, i.e.

- a. Work on or adjacent to or testing “live” Electrical Systems.
- b. Work in Confined Spaces.
- c. Work on Roofs.
- d. Hot Work.
- e. General Permit for:
- f. Exposure to High Noise Levels etc.
- g. High Risk Maintenance Work.

#### **BASIC OBJECTIVES**

- 1. to prevent the employees or contractors being exposed to danger;
- 2. to identify the individuals with responsibilities and functions they undertake;
- 3. to provide „safe systems of work“
- 4. to ensure effective „control“ by the Company in high-risk activities;
- 5. to ensure that all „statutory“ and Company rules are fully implemented.

It is the responsibility of site management to ensure that all work undertaken using a „Permit System“ is fully monitored at all times.

#### **CONTRACTORS**

Where work is undertaken on the Company’s premises / sites all contractors must comply with the Company’s procedures and Permits to Work must be included in the „Method Statement“ the contractor must produce for agreement prior to any work being carried out.

## Appendix 3.2

### RISK ASSESSMENTS

| <b>Risk Assessment</b> | <b>Description Reference</b>                 |
|------------------------|----------------------------------------------|
| RA17                   | Work adjacent to overhead electricity cables |
| RA18                   | Site electrics                               |
| RA20                   | Use of waste skips                           |
| RA27                   | Work in excavations                          |
| RA38                   | Public Safety                                |
| RA41                   | Storage of Materials                         |
| RA46                   | Work adjacent to „live“ underground services |
| RA48                   | Working on contaminated land                 |
| RA51                   | Lifting operations                           |
| RA52                   | Use of Excavators (Full slew track mounted)  |
| RA53                   | Use of wheeled excavators (full slew)        |
| RA54                   | Use of wheeled loading shovels               |
| RA55                   | Dumpers (Open Cab)                           |
| RA57                   | Ride on rollers                              |
| RA58                   | Transport on site                            |
| RA69                   | Pressurised plant & systems                  |
| RA70                   | High pressure water/steam cleaning equipment |
| RA72                   | Load/unload/transport plant & equipment      |
| RA76                   | Materials processing by mobile screening     |
| RA77                   | Mobile crusher and screener                  |

|                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------------------------------------------------------------------|
| Site address:                                                                                                                                                                                                                                                                                                                                                                                    |                      | BERSHAM COLLIERY TIP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          | RA17                                                                                  |
| Operation covered by this assessment: <b>OVERHEAD ELECTRICITY CABLES</b>                                                                                                                                                                                                                                                                                                                         |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                                                                                       |
| Personnel exposed to risk:                                                                                                                                                                                                                                                                                                                                                                       |                      | Employees                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Contractors              | Clients Personnel                                                                     |
| General Public<br>                                                                                                                                                                                                                                                                                              |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <input type="checkbox"/> | <input type="checkbox"/>                                                              |
| Hazards:                                                                                                                                                                                                                                                                                                                                                                                         |                      | Control measures:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                          |                                                                                       |
| Contact with 'live' cables.                                                                                                                                                                                                                                                                                                                                                                      |                      | <p>The Site Manager will consult with the relevant Statutory Authority and the Safety Advisor regarding safe working distances and provision of protection and signage <b>prior to</b> commencing work in the vicinity of 'live' overhead services.</p> <p>Where reasonably practicable overhead services will be isolated prior to works commencing. All operatives and personnel working in the vicinity will be formally advised of the hazards and further advised of protection methods and devices available.</p> <p>A 'Permit to Work' system will be instigated and adequately supervised and monitored for effectiveness.</p> <p>Suitable and sufficient signage will be erected advising of the hazard.</p> <p>Suitable and sufficient high visibility barriers (goalposts) will be erected where required.</p> <p>Materials storage will not be permitted adjacent to overhead services.</p> |                          |                                                                                       |
| Probability and Severity given the implementation of the Control Measures                                                                                                                                                                                                                                                                                                                        |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                                                                                       |
| PROBABILITY                                                                                                                                                                                                                                                                                                                                                                                      | DESCRIPTION          | SEVERITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DESCRIPTION              |                                                                                       |
| High                                                                                                                                                                                                                                                                                                                                                                                             | Likely to occur      | High                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Death or Major Injury    |                                                                                       |
| Medium                                                                                                                                                                                                                                                                                                                                                                                           | Could possibly occur | Medium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Minor fractures, sprains |                                                                                       |
| Low                                                                                                                                                                                                                                                                                                                                                                                              | Unlikely to occur    | Low                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Minor cuts, bruises      |                                                                                       |
| Risk factor:                                                                                                                                                                                                                                                                                                                                                                                     |                      | HIGH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | MEDIUM                   | LOW                                                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                  |                      | <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <input type="checkbox"/> |  |
| Monitoring:                                                                                                                                                                                                                                                                                                                                                                                      |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                                                                                       |
| <p>The Site Manager will not permit work to commence in the vicinity of overhead electricity and/or telecommunications cables without first consulting the relevant Statutory Authority <b>and</b> the site Safety Advisor.</p> <p>All recommendations and requirements stipulated by the relevant Statutory Authority and the site Safety Advisor will be instigated on site and monitored.</p> |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                                                                                       |
| ASSESSED BY:                                                                                                                                                                                                                                                                                                                                                                                     |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                                                                                       |
| Print name: M J KILLETT                                                                                                                                                                                                                                                                                                                                                                          |                      | Signature: MJK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |                                                                                       |
| Date: 19.11.2010                                                                                                                                                                                                                                                                                                                                                                                 |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                                                                                       |

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| <b>Site address:</b>                                                                                                                                                                          | <b>BERSHAM COLLIERY TIP</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>RA18</b>                         |
| <b>Operation covered by this assessment:</b>                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |
| <b>SITE ELECTRICS</b>                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |
| <b>Personnel exposed to risk:</b>                                                                                                                                                             | Employees                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Contractors                         |
| General Public                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |
| <input checked="" type="checkbox"/>                                                                                                                                                           | <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <input type="checkbox"/>            |
| <b>Clients Personnel</b>                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |
| <input type="checkbox"/>                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |
| <b>Hazards:</b>                                                                                                                                                                               | <b>Control measures:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                     |
| Electric shock.                                                                                                                                                                               | Qualified and competent electricians only will install, test and commission site electrics.<br><br>The Site Manager will obtain a test/commissioning certificate.<br>110 volt tools and equipment only will be used on site.<br>Site offices and welfare facilities will have all electrical appliances PAT tested at the required intervals with records kept on site.<br>All defects to electrical equipment will be notified immediately to the Company Safety Manager and taken out of use until repaired and/or replaced.<br>The Site Manager will ensure electrical sockets within site offices and welfare units are not overloaded (1 plug per socket).<br>Electricity supply cables to site offices and welfare units will be routed/protected to prevent accidental damage from plant/equipment and to prevent a trip hazard. |                                     |
| Fire.                                                                                                                                                                                         | Fire extinguishers of the correct type will be provided in site offices and welfare units.<br>All electrical equipment to be isolated at source at the end of each working day and prior to holiday shutdowns.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                     |
| Probability and Severity given the implementation of the Control Measures                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |
| <b>PROBABILITY</b>                                                                                                                                                                            | <b>DESCRIPTION</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>SEVERITY</b>                     |
| High                                                                                                                                                                                          | Likely to occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | High                                |
| Medium                                                                                                                                                                                        | Could possibly occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Medium                              |
| Low                                                                                                                                                                                           | Unlikely to occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Low                                 |
| <b>Risk factor:</b>                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |
| <b>HIGH</b>                                                                                                                                                                                   | <b>MEDIUM</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>LOW</b>                          |
| <input type="checkbox"/>                                                                                                                                                                      | <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <input checked="" type="checkbox"/> |
| Monitoring:                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |
| Site Manager to obtain test/commissioning certificate from supply installer.<br>Site Manager to report damaged/malfunctioning electrical equipment immediately to the Company Safety Manager. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |
| <b>ASSESSED BY:</b>                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |
| Print name: M J KILLETT                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Signature: MJK                      |
| Date: 19.11.2010                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |



|                                                                                                                                                                                                                                                                                                                                                                                                                                          |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |                          |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------|--|
| Site address:                                                                                                                                                                                                                                                                                                                                                                                                                            |                      | BERSHAM COLLIERY TIP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             | RA20                     |  |
| Operation covered by this assessment: USE OF WASTE SKIPS                                                                                                                                                                                                                                                                                                                                                                                 |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |                          |  |
| Personnel exposed to risk:                                                                                                                                                                                                                                                                                                                                                                                                               |                      | Employees                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Contractors | Clients Personnel        |  |
| General Public                                                                                                                                                                                                                                                                                                                                                                                                                           |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |                          |  |
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| <b>Hazards:</b><br>Skip located causing restricted Visibility/access/egress.<br><br>Poor access/egress for skip truck.<br><br>Overloaded skip.<br><br>Skip collapse.                                                                                                                                                                                                                                                                     |                      | <b>Control measures:</b><br>Location of skips on site will be planned to prevent creating blindspots for traffic/pedestrians.<br><br>Route for skip trucks will be established to provide firm, consolidated truck access, avoidance of overhead services and shallow underground services. Overhead services on route to skips will have adequate signage and ‘goalposts’ erected.<br><br>Skips will not be overloaded to cause difficulty in skip trucks lifting them. Supervisor to ensure skips containing sheet and/or lightweight loose materials are netted or sheeted over prior to leaving site to prevent spillage of contents onto highways.<br><br>When moving/lifting skips this will only be done using the correct lifting points and equipment. Fires within or adjacent to skips will potentially weaken the welded seams and joints therefore the skip must not be used. |             |                          |  |
| Probability and Severity given the implementation of the Control Measures                                                                                                                                                                                                                                                                                                                                                                |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |                          |  |
| PROBABILITY                                                                                                                                                                                                                                                                                                                                                                                                                              | DESCRIPTION          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | SEVERITY    | DESCRIPTION              |  |
| High                                                                                                                                                                                                                                                                                                                                                                                                                                     | Likely to occur      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | High        | Death or Major Injury    |  |
| Medium                                                                                                                                                                                                                                                                                                                                                                                                                                   | Could possibly occur |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Medium      | Minor fractures, sprains |  |
| Low                                                                                                                                                                                                                                                                                                                                                                                                                                      | Unlikely to occur    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Low         | Minor cuts, bruises      |  |
| <b>Risk factor:</b>                                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |                          |  |
| <b>HIGH</b>                                                                                                                                                                                                                                                                                                                                                                                                                              |                      | <b>MEDIUM</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | <b>LOW</b>               |  |
| <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                              |                      | <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             | <div></div>              |  |
| Monitoring:<br>Skip company to be advised of traffic routes and set down areas.<br>Damaged/twisted/fire damaged skips to be emptied before attempts are made to recover them.<br>All skip damage to be reported to the Supervisor immediately who will report damage to the skip hire company requesting removal and replacement.<br><br><b>ASSESSED BY:</b><br><br>Print name: MJ KILLETT<br><br>Signature: MJK<br><br>Date: 19.11.2010 |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |                          |  |

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| <b>Site address:</b>                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>BERSHAM COLLIERY TIP</b> |                          | <b>RA27</b> |
| <b>Operation covered by this assessment: WORK IN EXCAVATIONS</b>                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                             |                          |             |
| <b>Personnel exposed to risk:</b><br>General Public                                                                                                                                                                                                                                                                                                                                                | Employees                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Contractors                 | Clients Personnel        |             |
| <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                | <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <input type="checkbox"/>    | <input type="checkbox"/> |             |
| <b>Hazards:</b><br>Contact with 'live' services.<br><br>Contaminated ground.<br><br>Collapse of excavation.<br><br>Plant falling into excavation.<br><br>Persons falling into excavation.<br><br>Materials/arising falling into excavation.<br><br>Noxious fumes entering excavation.                                                                                                              | <b>Control measures:</b><br>Site Manager will establish location, type and status of all existing underground services in the vicinity of proposed excavations. Existing services will be exposed via hand dug test holes prior to mechanical excavation.<br>Site Manager will establish nature of, and known contaminants in the ground. Operatives will be provided with adequate welfare facilities and PPE and where required, health monitoring will be instigated.<br>Adequate support will be provided to excavation sides and trench headings. Support will be checked daily, prior to first entry of persons, and subsequently at 7 day intervals with inspection records completed. Adequate means of access/egress will be provided for personnel working within excavations. High visibility warnings will be positioned along excavations. 'Wheel stops' comprised of timber sleepers will be positioned adjacent to edge of excavations to prevent mobile plant overrunning into excavations. Physical barriers will be provided to prevent persons entering excavations and adequate signage will be erected warning of hazards.<br>Arisings will be removed or deposited well away from excavation edges. Materials will be stored away from edges until required.<br>Powered plant (compressors, generators etc) will be positioned as far away from edges as possible and plant will not be left running when not in use. |                             |                          |             |
| <b>Probability and Severity given the implementation of the Control Measures</b>                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                             |                          |             |
| <b>PROBABILITY</b>                                                                                                                                                                                                                                                                                                                                                                                 | <b>DESCRIPTION</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>SEVERITY</b>             | <b>DESCRIPTION</b>       |             |
| High                                                                                                                                                                                                                                                                                                                                                                                               | Likely to occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | High                        | Death or Major Injury    |             |
| Medium                                                                                                                                                                                                                                                                                                                                                                                             | Could possibly occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Medium                      | Minor fractures, sprains |             |
| Low                                                                                                                                                                                                                                                                                                                                                                                                | Unlikely to occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Low                         | Minor cuts, bruises      |             |
| <b>Risk factor:</b> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> <div style="text-align: center;"> <b>HIGH</b><br/> <input type="checkbox"/> </div> <div style="text-align: center;"> <b>MEDIUM</b><br/> <input type="checkbox"/> </div> <div style="text-align: center;"> <b>LOW</b><br/> <input checked="" type="checkbox"/> </div> </div> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                             |                          |             |
| <b>Monitoring:</b><br>Excavations to be checked by 'competent person'. Prior to first entry each day and during excavation activities.<br>'Permit to Dig' procedures will be instigated where required by site conditions or Client requirements.                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                             |                          |             |
| <b>ASSESSED BY:</b><br><div style="display: flex; justify-content: space-between; margin-top: 10px;"> <span>Print name: M J KILLET</span> <span>Signature: MJK</span> </div> <div style="margin-top: 10px;">       Date: 19.11.2010     </div>                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                             |                          |             |

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| Site address:                                                                                                                                                                                |                      | BERSHAM COLLIERY TIP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          | RA38                                 |
| Operation covered by this assessment: PUBLIC SAFETY                                                                                                                                          |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |                                      |
| Personnel exposed to risk:                                                                                                                                                                   |                      | Employees                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Contractors              | Clients Personnel                    |
| General Public<br><div><div></div></div>                                                                                                                                                     |                      | <div><div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <div><div></div></div>   | <div><div></div></div>               |
| <b>Hazards:</b><br>Trespass onto site.<br><br>Public struck by falling objects.<br><br>Public struck by plant/machinery.<br><br>Noise/dust<br><br>Site traffic conflict with public traffic. |                      | <b>Control measures:</b><br>Physical barriers including lockable gates will be erected around site perimeter with adequate signage erected warning of hazards. All excavations within site perimeter will be covered/fenced at the end of each working day. Access to scaffolds will be removed/rendered inaccessible, and all chemicals and flammable materials and substances will be placed in locked stores. Mobile plant will be parked in one area where reasonably practicable and ignition keys will be removed and handed in to Site Manager at the end of each working day. All lifting operations will be planned to prevent objects being lifted over the site boundary and particularly to prevent lifting over existing live roads, footpaths and occupied buildings.<br>All plant movements will be restricted, where reasonably practicable to within the site boundary. Plant movement outwith the site will be controlled by a trained banksman, a flashing/rotating amber beacon will be fitted to each item of plant and the plant will have operational wipers, lights, brake lights and horn.<br>The Site Manager will formally plan tasks likely to generate high noise/dust levels to eliminate/reduce the levels to an absolute minimum – see Method Statement. All plant and delivery drivers will be advised to give priority at all times to non-site traffic when entering leaving site. All materials/equipment will be unloaded within the site boundary where reasonably practicable. Deliveries will be planned to prevent congestion at the site entrance. All site personnel will be advised to park their cars with consideration for other road users and clear of all adjacent existing entrances and exits. |                          |                                      |
| Probability and Severity given the implementation of the Control Measures                                                                                                                    |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |                                      |
| PROBABILITY                                                                                                                                                                                  | DESCRIPTION          | SEVERITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DESCRIPTION              |                                      |
| High                                                                                                                                                                                         | Likely to occur      | High                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Death or Major Injury    |                                      |
| Medium                                                                                                                                                                                       | Could possibly occur | Medium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Minor fractures, sprains |                                      |
| Low                                                                                                                                                                                          | Unlikely to occur    | Low                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Minor cuts, bruises      |                                      |
| <b>Risk factor:</b>                                                                                                                                                                          |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |                                      |
| <b>HIGH</b><br><div><div></div></div>                                                                                                                                                        |                      | <b>MEDIUM</b><br><div><div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          | <b>LOW</b><br><div><div></div></div> |

Monitoring:  
All deliveries of plant/equipment/materials will be planned to prevent congestion to adjacent public roads.  
Lifting Operations will be planned to ensure no lifting takes place over non-site areas. Temporary controls (traffic control, footpath closure) will be put in place where required and/or necessary and where permission is granted by controlling authority.

ASSESSED BY:

Print name: M J KILLETT

Signature: MJK

Date: 19.11.2010

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| Site address:                                                             |                      | BERSHAM COLLIERY TIP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          | RA41              |  |
| Operation covered by this assessment: STORAGE OF MATERIALS                |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                   |  |
| Personnel exposed to risk:                                                |                      | Employees                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Contractors              | Clients Personnel |  |
| General Public                                                            |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                   |  |
| <div></div>                                                               |                      | <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <div></div>              | <div></div>       |  |
| Hazards:                                                                  |                      | Control measures:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |                   |  |
| Falling/unstable materials.                                               |                      | Materials stored on pallets will not be stored in excess of 2 pallets high. All materials will be stored on a level, well consolidated surface. Tubes, pipes etc will be ‘chocked’ to prevent uncontrolled movement. Adequate access around stored items will be provided. Responsible person will check stability of stored materials following periods of high wind or other extreme weather conditions. When establishing storage compound the Site Manager will check the selected area for cable/pipe runs, manholes, inspection chambers, fire hydrants etc and will ensure they remain adequately accessible. |                          |                   |  |
| Personnel contact with chemicals.                                         |                      | All chemicals, flammable/explosive substances and harmful agents will be stored in accordance with manufacturers instructions in their purpose made and correctly labeled containers away from sources of ignition and/or reactive agents.                                                                                                                                                                                                                                                                                                                                                                           |                          |                   |  |
| Personnel struck by handling equipment.                                   |                      | Personnel will not be permitted into storage compounds alone and will wear high visibility clothing. All materials retrieval mechanical plant/equipment will have amber beacons fitted and operating and will be fitted with audible reversing warning devices.                                                                                                                                                                                                                                                                                                                                                      |                          |                   |  |
| Probability and Severity given the implementation of the Control Measures |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                   |  |
| PROBABILITY                                                               | DESCRIPTION          | SEVERITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | DESCRIPTION              |                   |  |
| High                                                                      | Likely to occur      | High                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Death or Major Injury    |                   |  |
| Medium                                                                    | Could possibly occur | Medium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Minor fractures, sprains |                   |  |
| Low                                                                       | Unlikely to occur    | Low                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Minor cuts, bruises      |                   |  |
| Risk factor:                                                              |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                   |  |
| HIGH                                                                      |                      | MEDIUM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          | LOW               |  |
| <div></div>                                                               |                      | <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          | <div></div>       |  |

Monitoring:  
COSHH Assessments will be provided for all harmful substances stored and handled.  
Manual Handling Assessments may be required and will be produced for handling activities where the use of mechanised handling is not reasonably practicable.  
Storage compounds to be secured to prevent access to the public, especially children.

**ASSESSED BY:**

Print name: M J KILLETT

Signature: MJK

Date: 19.11.2010

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| <b>Site address:</b>                                                                                          |                      | <b>BERSHAM COLLIERY TIP</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                   | <b>RA46</b>                                   |
| <b>Operation covered by this assessment:</b><br><b>WORKING ADJACENT TO ‘LIVE’ (UNDERGROUND) SERVICES</b>      |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                   |                                               |
| <b>Personnel exposed to risk:</b><br>General Public<br><input checked="" type="checkbox"/>                    |                      | Employees<br><input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Contractors<br><input type="checkbox"/>           | Clients Personnel<br><input type="checkbox"/> |
| <b>Hazards:</b><br><br>Contact resulting in electrocution, fire, explosion, flood, damage to plant/equipment. |                      | <b>Control measures:</b><br><br>Through liaison with Client and Statutory Authorities the Site Manager will establish the exact nature, location and status of all existing services on site prior to commencement. Where possible existing services will be isolated when potentially disruptive works are taking place in their vicinity. In any case the method of protecting existing services will be outlined within the Method Statement relative to the specific works. The Site Manager will establish formal emergency procedures which will be communicated to all concerned parties prior to commencement. Service ducts, cables, pipes etc will, when encountered in excavations, be adequately supported and not used as means of access/egress or for attaching any item. When backfilling excavations containing existing services, extreme care will be taken to ensure voids beneath the services are not created, and the service is not shifted off line during backfilling. Damage caused to existing services will be reported <b>immediately</b> to the Site Manager who will inform the relevant Statutory Authority and suspend works in the immediate vicinity of the damage until authorised safe to continue. Adequate, secure means of egress from excavations will be provided at all times for personnel. Where there is a risk of flooding from water services and/or existing land drains pumps will be available on standby. |                                                   |                                               |
| Probability and Severity given the implementation of the Control Measures                                     |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                   |                                               |
| <b>PROBABILITY</b>                                                                                            | <b>DESCRIPTION</b>   | <b>SEVERITY</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>DESCRIPTION</b>                                |                                               |
| High                                                                                                          | Likely to occur      | High                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Death or Major Injury                             |                                               |
| Medium                                                                                                        | Could possibly occur | Medium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Minor fractures, sprains                          |                                               |
| Low                                                                                                           | Unlikely to occur    | Low                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Minor cuts, bruises                               |                                               |
| <b>Risk factor:</b>                                                                                           |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                   |                                               |
| <b>HIGH</b><br><input type="checkbox"/>                                                                       |                      | <b>MEDIUM</b><br><input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>LOW</b><br><input checked="" type="checkbox"/> |                                               |

|                                                                                                                                                                                                                                                         |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                          |                                      |
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| <b>Monitoring</b><br><br>All monitoring will be carried out by the site management team with permits issued prior to commencing excavation in any area.<br><br>ASSESSED BY:<br><br>Print Name: M J KILLETT<br><br>Date: 19.11.2010<br><br>Signature MJK |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                          |                                      |
| Site address:                                                                                                                                                                                                                                           |                                                              | BERSHAM COLLIERY TIP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                          | RA48                                 |
| Operation covered by this assessment: <b>WORKING ON CONTAMINATED LAND</b>                                                                                                                                                                               |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                          |                                      |
| Personnel exposed to risk:                                                                                                                                                                                                                              |                                                              | Employees                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Contractors                                                              | Clients Personnel                    |
| General Public<br><div><div></div></div>                                                                                                                                                                                                                |                                                              | <div><div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <div><div></div></div>                                                   | <div><div></div></div>               |
| <b>Hazards:</b><br><br>Ingestion/inhalation/absorption of harmful substances.<br><br><br><br><br><br><br><br><br><br>Fire/explosion.                                                                                                                    |                                                              | <b>Control measures:</b><br>When suspected contamination is encountered and identified by visual and/or olfactory means, the Site Manager will obtain soil analysis results from which comprehensive COSHH Assessments will be produced. Operatives will be advised of all identified hazards and provided with adequate PPE/RPE, first aid and welfare facilities as identified by the COSHH Assessments.<br>During operations involving contaminated land operatives will be constantly monitored for ill effects including, nausea, dizziness, breathing difficulties, skin irritation, headaches, disorientation etc. Emergency evacuation and medical procedures will be installed where necessary.<br>Any exposure limits identified by COSHH Assessments will not be exceeded by personnel for any reason.<br>Depending on the nature of the contamination a no smoking rule may be enforced and all combustible and/or reactive agents will not be permitted to enter site. Adequate fire fighting facilities and emergency evacuation procedures will be established where required. |                                                                          |                                      |
| Probability and Severity given the implementation of the Control Measures                                                                                                                                                                               |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                          |                                      |
| PROBABILITY                                                                                                                                                                                                                                             | DESCRIPTION                                                  | SEVERITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | DESCRIPTION                                                              |                                      |
| High<br>Medium<br>Low                                                                                                                                                                                                                                   | Likely to occur<br>Could possibly occur<br>Unlikely to occur | High<br>Medium<br>Low                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Death or Major Injury<br>Minor fractures, sprains<br>Minor cuts, bruises |                                      |
| Risk factor:                                                                                                                                                                                                                                            |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                          |                                      |
| <b>HIGH</b><br><div><div></div></div>                                                                                                                                                                                                                   |                                                              | <b>MEDIUM</b><br><div><div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                          | <b>LOW</b><br><div><div></div></div> |

Monitoring:

Comprehensive Method Statements will be produced for **all** work activities where contamination has been established. The effectiveness of control measures will be assessed regularly by the Site Manager and improved where necessary. In areas of high contamination advice will be sought from Employers Medical Advisory Service (EMAS) prior to commencement.

**ASSESSED BY:**

Print name: M J KILLETT

Signature: MJK

Date: 19.11.2010

|                                                                           |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          |                          |
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| Site address:                                                             |             | BERSHAM COLLIERY TIP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          | RA51                     |
| Operation covered by this assessment: <b>LIFTING OPERATIONS</b>           |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          |                          |
| Personnel exposed to risk:                                                |             | Employees                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Contractors              | Clients Personnel        |
| General Public                                                            |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          |                          |
| <input checked="" type="checkbox"/>                                       |             | <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <input type="checkbox"/> | <input type="checkbox"/> |
| Hazards:                                                                  |             | Control measures:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                          |
| Persons struck by falling objects.                                        |             | <p>Lifting areas will be cleared of non-essential personnel. Only demonstrably competent and experienced slingers will be used to attach loads. Slung loads will be attached via purpose designed lifting points where these are provided. Banksman will test lift each load by raising slightly off the ground to ensure load is adequately and evenly slung. Lifting operations will be planned, where reasonably practicable, to avoid lifting over existing buildings and/or outwith the site boundaries.</p> <p>All operatives will be provided with and will wear high visibility clothing. All crane movements will be controlled by a demonstrably competent banksman. Where possible crane positions will be planned to provide maximum vision of operations to the crane operator.</p> <p>All lifting equipment to be used will be accompanied by a current, valid test certificate. Each item of lifting equipment will be examined by a competent person prior to each use, if defects/damage are found the item will be removed from service immediately and replaced/repared and re-tested. Lifting chains, straps, steel wire ropes, shackles, bolts, etc will not be used for towing/pulling etc.</p> <p>Site Manager will not permit lifting operations to commence until provided with copies of crane operators competence and test certification for the crane. A well consolidated crane standing will be created prior to its arrival and adequate access for material deliveries will be established.</p> |                          |                          |
| Persons struck by moving objects.                                         |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          |                          |
| Lifting equipment failure.                                                |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          |                          |
| Crane overturn.                                                           |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          |                          |
| Probability and Severity given the implementation of the Control Measures |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          |                          |
| PROBABILITY                                                               | DESCRIPTION | SEVERITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | DESCRIPTION              |                          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                              |                       |                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|-----------------------|--------------------------------------------------------------------------|
| High<br>Medium<br>Low                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Likely to occur<br>Could possibly occur<br>Unlikely to occur | High<br>Medium<br>Low | Death or Major Injury<br>Minor fractures, sprains<br>Minor cuts, bruises |
| <b>Risk factor:</b> <div><div>HIGH<div></div></div><div>MEDIUM<div></div></div><div>LOW<div></div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                              |                       |                                                                          |
| <p>Monitoring:<br/>Site Manager will establish the following prior to and during lifting operations; Operator competence, suitability of crane, condition of crane, suitability of lifting equipment, condition of lifting equipment, lifting operations formal Method Statement, communications between crane operator and banksmen, access and standing for crane, access/egress, standing and storage of deliveries.</p> <p><b>ASSESSED BY:</b></p> <div><div>Print name: M J KILLETT</div><div>Signature: MJK</div></div> <p>Date: 19.11.2010</p> |                                                              |                       |                                                                          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| <b>Site address:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>BERSHAM COLLIERY TIP</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>RA52</b>              |
| <b>Operation covered by this assessment: USE OF EXCAVATORS (full slew – track mounted)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |
| <b>Personnel exposed to risk:</b><br>General Public                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Employees                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Contractors              |
| <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/> |
| <b>Clients Personnel</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |
| <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |
| <b>Hazards:</b><br><br>Contact with o/head services.<br>Contact with u/ground services.<br>Operatives struck by machine.<br><br>Machine overturning.                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Control measures:</b><br><br>See - RA17<br>See – RA46.<br>Site Manager will establish competence of operator prior to commencement on site. Persons working in the vicinity of working machine will be provided with high visibility clothing. Dumper drivers will dismount their dumper while it is being loaded with materials etc. Operatives will not be permitted to remain adjacent to excavations whilst excavation is taking place. Site Operatives are not permitted to ride/stand/travel on machine. Operatives will be made aware of areas where excavators are operating and where reasonably practicable ‘exclusion zones’ will be created around the areas to prevent access to non-essential personnel.<br>Excavators will operate at all times on safe ground and will not travel or operate on inclines in excess of the manufacturers recommendations. Excavators will not be permitted to travel/operate in very close proximity to the edges of excavations or to operate whilst astride excavations, unless deemed safe to do so by a competent person. |                          |
| Probability and Severity given the implementation of the Control Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |
| <b>PROBABILITY</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>DESCRIPTION</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>SEVERITY</b>          |
| High                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Likely to occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | High                     |
| Medium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Could possibly occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Medium                   |
| Low                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Unlikely to occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Low                      |
| <b>Risk factor:</b><br><br><div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <b>HIGH</b><br/> <input type="checkbox"/> </div> <div style="text-align: center;"> <b>MEDIUM</b><br/> <input type="checkbox"/> </div> <div style="text-align: center;"> <b>LOW</b><br/> <input checked="" type="checkbox"/> </div> </div>                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |
| <b>Monitoring:</b><br>Site Manager will confirm competence of operator and condition of machine <b>prior to use</b> .<br>Excavators to be used will operate in accordance with a formal Safe System of Work.<br>All defects to excavators will result in the machine being removed from service until defect is rectified.<br><br><b>ASSESSED BY:</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Print name: M J KILLETT<br/><br/>           Date: 19.11.2010         </div> <div>           Signature: MJK         </div> </div> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                        |                               |  |
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| Site address:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      | BERSHAM COLLIERY TIP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                        | RA53                          |  |
| Operation covered by this assessment: <b>USE OF WHEELED EXCAVATORS</b><br><b>(full slew)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                        |                               |  |
| Personnel exposed to risk:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      | Employees                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Contractors            | Clients Personnel             |  |
| General Public<br><div><div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      | <div><div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <div><div></div></div> | <div><div></div></div>        |  |
| Hazards:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      | Control measures:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        |                               |  |
| Contact with live o/head services.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      | See – RA17.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        |                               |  |
| Contact with live u/ground services.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                      | See – RA46.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        |                               |  |
| Contact with personnel.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                      | Site Manager will ensure all plant operators are demonstrably competent /experienced prior to commencement on site. All site operatives working in the proximity of working/travelling excavators will wear high visibility clothing. All plant movements will be controlled by a competent banksman where deemed necessary. Where reasonably practicable an ‘exclusion zone’ will be created around excavators to prevent access by non-essential site personnel.                                                     |                        |                               |  |
| Overturning.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                      | Operator will not be permitted to travel on site/highway at excessive speeds. Excavator will not operate/travel on gradients in excess of those recommended by the manufacturer. Safe access/egress to work areas will be provided, particularly when working adjacent to waterlogged ground, made ground, dykes, ditches, ponds, lakes, railways etc. Excavator will not be permitted to travel/operate astride existing excavations. Excavator will not travel/operate immediately adjacent to existing excavations. |                        |                               |  |
| Probability and Severity given the implementation of the Control Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                        |                               |  |
| PROBABILITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DESCRIPTION          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | SEVERITY               | DESCRIPTION                   |  |
| High                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Likely to occur      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | High                   | Death or Major Injury         |  |
| Medium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Could possibly occur |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Medium                 | Minor fractures, sprains      |  |
| Low                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Unlikely to occur    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Low                    | Minor cuts, bruises           |  |
| Risk factor:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                        |                               |  |
| HIGH<br><div><div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                      | MEDIUM<br><div><div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                        | LOW<br><div><div></div></div> |  |
| Monitoring:<br>The Site Manager will obtain operators certificates of competency upon his arrival to site.<br>The Site Manager will obtain copies of plant test/inspection records prior to its use on site and will ensure subsequent tests/inspections are undertaken as required whilst the machine operates on site.<br>All reported damage/defects will result in the machine in question being removed from service until damage/defects are rectified or the machine is replaced.<br>The Site Manager will ensure regular tyre inspections are undertaken by a ‘competent person’. |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                        |                               |  |
| ASSESSED BY:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                        |                               |  |
| Print name: M J KILLETT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Signature: MJK         |                               |  |
| Date: 19.11.2010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                        |                               |  |

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| Site address:                                                                                                                                                                                                                                                                                                                                                                                                             |                      | BERSHAM COLLIERY TIP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          | RA54              |
| Operation covered by this assessment: <b>USE OF WHEELED LOADING SHOVELS</b>                                                                                                                                                                                                                                                                                                                                               |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                   |
| Personnel exposed to risk:                                                                                                                                                                                                                                                                                                                                                                                                |                      | Employees                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Contractors              | Clients Personnel |
| General Public                                                                                                                                                                                                                                                                                                                                                                                                            |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                   |
| <div></div>                                                                                                                                                                                                                                                                                                                                                                                                               |                      | <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <div></div>              | <div></div>       |
| Hazards:                                                                                                                                                                                                                                                                                                                                                                                                                  |                      | Control measures:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                          |                   |
| Contact with live u/ground services.<br>Contact with site personnel.                                                                                                                                                                                                                                                                                                                                                      |                      | See – RA46.<br>See – RA52 and RA53 also operator and/or plant fitter will not be permitted to work on unsupported machine or unsupported parts of machine. Site Personnel will not be permitted to travel in or on the cab/shovel or any other part of the machine which is not specifically designed for the carriage of passengers. Where reasonably practicable the carrying of articles/loads in the front bucket of the machine will not be permitted on site over long distances and, in any case, will be prohibited on highways. When travelling on highways the operator will first ensure good visibility through the cab windows, all lights/indicators are functioning and amber flashing/rotating lamp is fitted and operating.<br>See – RA52 and RA53 also operator will not be permitted to travel over fixed obstacles. |                          |                   |
| Overturning.                                                                                                                                                                                                                                                                                                                                                                                                              |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                   |
| Probability and Severity given the implementation of the Control Measures                                                                                                                                                                                                                                                                                                                                                 |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                   |
| PROBABILITY                                                                                                                                                                                                                                                                                                                                                                                                               | DESCRIPTION          | SEVERITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DESCRIPTION              |                   |
| High                                                                                                                                                                                                                                                                                                                                                                                                                      | Likely to occur      | High                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Death or Major Injury    |                   |
| Medium                                                                                                                                                                                                                                                                                                                                                                                                                    | Could possibly occur | Medium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Minor fractures, sprains |                   |
| Low                                                                                                                                                                                                                                                                                                                                                                                                                       | Unlikely to occur    | Low                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Minor cuts, bruises      |                   |
| Risk factor:                                                                                                                                                                                                                                                                                                                                                                                                              |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                   |
| HIGH                                                                                                                                                                                                                                                                                                                                                                                                                      |                      | MEDIUM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | LOW                      |                   |
| <div></div>                                                                                                                                                                                                                                                                                                                                                                                                               |                      | <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <div></div>              |                   |
| Monitoring:                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                   |
| The Site Manager will obtain current copies of operator’s competency certificates and machines test/examination certificates upon first arrival to site. In addition the Site Manager will ensure subsequent tests/examinations required are undertaken whilst the relevant item of plant is on site.<br>All damage/defects to plant will result in the relevant item being removed from service until repaired/replaced. |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                   |
| ASSESSED BY:                                                                                                                                                                                                                                                                                                                                                                                                              |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                   |
| Print name: M J KILLETT                                                                                                                                                                                                                                                                                                                                                                                                   |                      | Signature: MJK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |                   |
| Date: 19.11.2010                                                                                                                                                                                                                                                                                                                                                                                                          |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                   |

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| Site address:                                                                                                                                                                                                                                                                       |                      | BERSHAM COLLIERY TIP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          | RA55                                |  |
| Operation covered by this assessment: <b>DUMPERS (open cab)</b>                                                                                                                                                                                                                     |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                                     |  |
| Personnel exposed to risk:                                                                                                                                                                                                                                                          |                      | Employees                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Contractors              | Clients Personnel                   |  |
| General Public                                                                                                                                                                                                                                                                      |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                                     |  |
| <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                 |                      | <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <input type="checkbox"/> | <input type="checkbox"/>            |  |
| Hazards:                                                                                                                                                                                                                                                                            |                      | Control measures:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                          |                                     |  |
| Overturning.                                                                                                                                                                                                                                                                        |                      | Site Manager to ensure al dumpers are fitted with Roll Over Protection Structures (ROPS) and operator restraints where there is a <b>foreseeable risk of the dumper overturning</b> . Wheel stops will be positioned adjacent to excavations to prevent dumper entering them when backfilling. Dumpers will not be permitted to travel adjacent to excavations. Operatives will not be permitted to travel dumpers near to waters edge. Site Manager will impose strict speed restrictions on sites with particularly rough terrain. When using dumpers for creating stockpiles of materials visual aids denoting ramp edges will be positioned to prevent dumper over running. Dumpers will not be permitted to traverse gradients in excess of those recommended by the manufacturer. |                          |                                     |  |
| Contact with pedestrian traffic.                                                                                                                                                                                                                                                    |                      | Only demonstrably competent operatives will be permitted to operate dumpers. Site Manager will establish if equipment is ‘fit for use’ upon its arrival to site and will instigate frequent periodic checks of brakes, tyres, lights and operating parts. Site operatives working adjacent to dumper access/egress routes will be provided with high visibility clothing. Personnel will not ride on dumpers unless purpose made seating is provided. Dumpers will be fitted with working lights and amber flashing/rotating beacons when used on public roads or areas with unrestricted vehicular access. Operators will be advised to give priority to all non-site traffic when entering/leaving site.                                                                              |                          |                                     |  |
| Contact with vehicular traffic.                                                                                                                                                                                                                                                     |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                                     |  |
| Probability and Severity given the implementation of the Control Measures                                                                                                                                                                                                           |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                                     |  |
| PROBABILITY                                                                                                                                                                                                                                                                         | DESCRIPTION          | SEVERITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DESCRIPTION              |                                     |  |
| High                                                                                                                                                                                                                                                                                | Likely to occur      | High                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Death or Major Injury    |                                     |  |
| Medium                                                                                                                                                                                                                                                                              | Could possibly occur | Medium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Minor fractures, sprains |                                     |  |
| Low                                                                                                                                                                                                                                                                                 | Unlikely to occur    | Low                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Minor cuts, bruises      |                                     |  |
| Risk factor:                                                                                                                                                                                                                                                                        |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                                     |  |
| HIGH                                                                                                                                                                                                                                                                                |                      | MEDIUM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          | LOW                                 |  |
| <input type="checkbox"/>                                                                                                                                                                                                                                                            |                      | <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          | <input checked="" type="checkbox"/> |  |
| Monitoring:<br>Site Manager will check condition of dumper upon its arrival to site.<br>Frequent periodic checks of tyres, brakes, lights etc will be undertaken with all defects rectified before further use. Only competent, experienced personnel will be permitted to operate. |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                                     |  |
| ASSESSED BY:                                                                                                                                                                                                                                                                        |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                                     |  |
| Print name: M J KILLETT                                                                                                                                                                                                                                                             |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Signature: MJK           |                                     |  |
| Date:                                                                                                                                                                                                                                                                               |                      | 19.11.2010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                                     |  |

|                                                                                                                                                                                                                         |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                     |             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------|
| Site address:                                                                                                                                                                                                           |                                     | <b>BERSHAM COLLIERY TIP</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                     | <b>RA57</b> |
| Operation covered by this assessment: <b>RIDE ON ROAD ROLLERS</b>                                                                                                                                                       |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                     |             |
| Personnel exposed to risk:                                                                                                                                                                                              |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                     |             |
| Employees                                                                                                                                                                                                               | Contractors                         | Clients Personnel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | General Public                      |             |
| <input checked="" type="checkbox"/>                                                                                                                                                                                     | <input checked="" type="checkbox"/> | <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <input type="checkbox"/>            |             |
| <b>Hazards:</b>                                                                                                                                                                                                         |                                     | <b>Control measures:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |             |
| Overturning.                                                                                                                                                                                                            |                                     | Site Manager will assess competency of operators prior to commencement. Machine will be fitted with a Roll Over Protection Structure (ROPS) and operator restraint where there is a foreseeable risk of the machine overturning. Rollers will not be permitted to operate on inclines greater than those recommended by the manufacturer. Operation immediately adjacent to excavations, ditches, dykes, ponds, rivers, lakes, railways etc will not be permitted without physical barriers present to prevent machine entering them. When being used to compact road formations at the top of batters the roller will be operated at a safe distance from the edge. Rollers will not be permitted to travel over fixed and/or raised obstacles. |                                     |             |
| Contact with pedestrian traffic.                                                                                                                                                                                        |                                     | Operator will not travel at excessive speeds on site and/or public roads. Site operatives working adjacent to road rollers will be provided with high visibility clothing. Nonessential personnel will not be permitted to enter work areas. Where concentrations of personnel are high the machine will be fitted with amber beacon and audible reversing warning device.                                                                                                                                                                                                                                                                                                                                                                       |                                     |             |
| Contact with vehicular traffic.                                                                                                                                                                                         |                                     | Operators entering/leaving site will be instructed to give priority rights of way to non-site traffic. Site Manager will check condition of machine upon arrival to site to ensure all working parts and safety devices are fitted and functioning correctly. All damage/defects found will result in the machine being removed from service until repaired/replaced.                                                                                                                                                                                                                                                                                                                                                                            |                                     |             |
| Probability and Severity given the implementation of the Control Measures                                                                                                                                               |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                     |             |
| <b>PROBABILITY</b>                                                                                                                                                                                                      | <b>DESCRIPTION</b>                  | <b>SEVERITY</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>DESCRIPTION</b>                  |             |
| High                                                                                                                                                                                                                    | Likely to occur                     | High                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Death or Major Injury               |             |
| Medium                                                                                                                                                                                                                  | Could possibly occur                | Medium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Minor fractures, sprains            |             |
| Low                                                                                                                                                                                                                     | Unlikely to occur                   | Low                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Minor cuts, bruises                 |             |
| <b>Risk factor:</b>                                                                                                                                                                                                     |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                     |             |
| <b>HIGH</b>                                                                                                                                                                                                             |                                     | <b>MEDIUM</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>LOW</b>                          |             |
| <input type="checkbox"/>                                                                                                                                                                                                |                                     | <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <input checked="" type="checkbox"/> |             |
| Monitoring:                                                                                                                                                                                                             |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                     |             |
| Site Manager will instigate periodic machine inspections and defect/damage reporting procedure.<br>Site Manager will ensure the correct type machine is selected for the task and operators are demonstrably competent. |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                     |             |
| <b>ASSESSED BY:</b>                                                                                                                                                                                                     |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                     |             |
| Print name: M J KILLETT                                                                                                                                                                                                 |                                     | Signature: MJK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                     |             |
| Date: 19.11.2010                                                                                                                                                                                                        |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                     |             |

|                                                                                                                                                                                                                                                                 |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Site address: <b>BERSHAM COLLIERY TIP</b> <b>RA58</b>                                                                                                                                                                                                           |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                          |
| Operation covered by this assessment: <b>TRANSPORT ON SITE</b>                                                                                                                                                                                                  |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                          |
| Personnel exposed to risk:<br><div>Employees <input checked="" type="checkbox"/> Contractors <input checked="" type="checkbox"/> Clients Personnel <input type="checkbox"/> General Public <input checked="" type="checkbox"/></div>                            |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                          |
| <b>Hazards:</b><br>Contact with pedestrian traffic.<br><br>Contact with vehicular traffic.<br><br>Overturning.<br><br>Persons struck by falling materials.                                                                                                      |                                                              | <b>Control measures:</b><br>Where site conditions allow, transport delivering to/collecting from site will enter site whilst travelling in a forward direction. Where reversing onto site is required all reversing movements will be controlled by a competent banks-man. Where reasonably practicable traffic routes will be segregated from pedestrian routes. Operatives required to work in close proximity to traffic routes will be provided with high visibility clothing The Manager/Supervisor will plan deliveries/collections to prevent congestion of traffic at the approach and entrance to site. Transport drivers will be advised to give right of way to non-site traffic at all times when entering/leaving site. Transport drivers will be advised upon their arrival to site of the routes they are to take whilst on site and where necessary they will be accompanied by a competent person to their onsite destination. The Site Manager/Supervisor will ensure all known hazards along traffic routes are clearly signed and drivers are made aware of the meaning of the signage. Traffic routes will be created away from hazards (overhead services, excavations etc) where reasonably practicable and will be of level, well consolidated construction. Off/on loading will, where possible be undertaken in designated areas. On no occasion will on/off loading be permitted where such activity will cause obstruction to existing site access/egress and emergency routes. Prior to transport leaving site the Site Manager/Supervisor will ensure all loads (including plant on low loaders) is adequately secured and sheeted. Off/on loading areas will not be accessed by non-essential personnel. |                                                                          |
| Probability and Severity given the implementation of the Control Measures                                                                                                                                                                                       |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                          |
| PROBABILITY                                                                                                                                                                                                                                                     | DESCRIPTION                                                  | SEVERITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DESCRIPTION                                                              |
| High<br>Medium<br>Low                                                                                                                                                                                                                                           | Likely to occur<br>Could possibly occur<br>Unlikely to occur | High<br>Medium<br>Low                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Death or Major Injury<br>Minor fractures, sprains<br>Minor cuts, bruises |
| Risk factor:<br><div>HIGH <input type="checkbox"/> MEDIUM <input type="checkbox"/> LOW <input checked="" type="checkbox"/></div>                                                                                                                                |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                          |
| <b>Monitoring</b><br>Daily monitoring by the site management will be carried out to verify the effectiveness of the control of transport on site.<br><b>ASSESSED BY:</b><br><br>Print Name: <b>M J KILLETT</b> Signature: <b>MJK</b><br>Date: <b>19.11.2010</b> |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                          |

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| <div style="border: 1px solid black; width: 250px; height: 25px; margin: 0 auto;"></div>                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |
| <b>Site address:</b>                                                                                                                                                                                                                                                                                                                                                                               | <b>BERSHAM COLLIERY TIP</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>RA69</b>              |
| <b>Operation covered by this assessment: PRESSURISED PLANT AND SYSTEMS</b>                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |
| <b>Personnel exposed to risk:</b>                                                                                                                                                                                                                                                                                                                                                                  | Employees                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Contractors              |
| General Public                                                                                                                                                                                                                                                                                                                                                                                     | Clients Personnel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |
| <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                | <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <input type="checkbox"/> |
| <b>Hazards:</b><br>Uncontrolled release of pressurized fluid/gas/air.<br><br><br><br><br><br><br><br><br><br>Skin penetration.<br><br><br><br><br><br><br><br><br><br>Eye damage.<br><br><br><br><br><br><br><br><br><br>Hearing damage                                                                                                                                                            | <b>Control measures:</b><br>All systems and controls installed to regulate and indicate pressure will be installed and maintained with formal records taken of all inspections taken and retained for future reference. Work on pressurized systems will always be undertaken by competent persons in accordance with a written scheme of examination drawn up by a 'competent person'.<br><br>Adequate Personal Protective Equipment will be provided and worn, ordinary work clothes including coveralls are not normally sufficient to resist the penetration of compressed air, fluid or gas into the body through the skin. Because the degree of injury following skin penetration may not always be immediately apparent, operatives must report all incidents of this nature immediately to their Supervisor who will seek medical advice.<br><br>Adequate eye protection will be provided and worn when examining, repairing, testing or maintaining pressurized systems.<br><br>Adequate hearing protection will be provided and worn when leak testing, repairing, maintaining, examining, discharging or recharging pressurized systems. |                          |
| Probability and Severity: <b>use these descriptions to help you make your assessment.</b>                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |
| <b>PROBABILITY</b>                                                                                                                                                                                                                                                                                                                                                                                 | <b>DESCRIPTION</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>SEVERITY</b>          |
| High                                                                                                                                                                                                                                                                                                                                                                                               | Likely to occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | High                     |
| Medium                                                                                                                                                                                                                                                                                                                                                                                             | Could possibly occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Medium                   |
| Low                                                                                                                                                                                                                                                                                                                                                                                                | Unlikely to occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Low                      |
| <b>Risk factor:</b> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> <div style="text-align: center;"> <b>HIGH</b><br/> <input type="checkbox"/> </div> <div style="text-align: center;"> <b>MEDIUM</b><br/> <input type="checkbox"/> </div> <div style="text-align: center;"> <b>LOW</b><br/> <input checked="" type="checkbox"/> </div> </div> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |

**Monitoring:**

All pressurised systems will be correctly maintained by 'competent persons'.

Any modifications or repairs will be tested by competent persons prior to the equipment being operated.

Written schemes of examination will be drawn up by competent persons prior to examination of pressurised equipment.

Records of all examinations, repairs, modifications etc will be recorded and retained.

**ASSESSED BY:**

Print name: MIKE KILLETT

Signature: MJK

Date: 19.11.2010

|                                                                                                                                                                                     |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                   |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------|--|
| Site address:                                                                                                                                                                       |                      | BERSHAM COLLIERY TIP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                          | RA70              |  |
| Operation covered by this assessment: HIGH PRESSURE WATER/STEAM CLEANING AND JETTING EQUIPMENT                                                                                      |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                   |  |
| Personnel exposed to risk:                                                                                                                                                          |                      | Employees                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Contractors              | Clients Personnel |  |
| General Public                                                                                                                                                                      |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                   |  |
| <div></div>                                                                                                                                                                         |                      | <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <div></div>              | <div></div>       |  |
| <b>Hazards:</b><br>Skin penetration.<br><br>Eye damage.<br>Hearing damage.<br>Loss of control of lance/hoses.<br><br><br><br><br><br><br><br><br>Inhalation/ingestion of chemicals. |                      | <b>Control measures:</b><br>See – RA69. In addition no attempt will be made to tighten, loosen or adjust any screw, nut, hose coupling, fitting etc whilst the equipment is under pressure. See – RA69. See – RA69<br>Where the reaction force of the jet is 25 kgf (kilograms force), additional support will be provided to prevent operator fatigue. Secure surface/working platforms with clear, unobstructed access/egress will be provided and maintained to prevent slips/trips/falls. Operators will be allowed to experience the reaction force of the jet progressively until the required working pressure is achieved. Hose lengths will be kept to a minimum to prevent ‘jolting’ of the operator caused by operating the lance trigger, dump valve or dry shut – off valve. Where long hose lengths cannot be avoided damping devices will be introduced into the system. Only adequately trained and competent persons will be permitted to operate this equipment. Hoses will be routed away from pedestrian and vehicular traffic routes.<br>Where chemical cleaning additives are used the operator and other persons likely to be affected will be provided with the relevant COSHH Assessments and will abide by the control measures and recommendations described. In addition COSHH Assessments will be undertaken, where required relating to the substance being removed from the item being cleaned. |                          |                   |  |
| Probability and Severity: use these descriptions to help you make your assessment.                                                                                                  |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                   |  |
| PROBABILITY                                                                                                                                                                         | DESCRIPTION          | SEVERITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | DESCRIPTION              |                   |  |
| High                                                                                                                                                                                | Likely to occur      | High                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Death or Major Injury    |                   |  |
| Medium                                                                                                                                                                              | Could possibly occur | Medium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Minor fractures, sprains |                   |  |
| Low                                                                                                                                                                                 | Unlikely to occur    | Low                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Minor cuts, bruises      |                   |  |
| Risk factor:                                                                                                                                                                        |                      | HIGH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                          | MEDIUM            |  |
| LOW                                                                                                                                                                                 |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          | <div></div>       |  |

**Monitoring:**

All pressure wash/steam cleaning equipment will be regularly inspected and maintained by a competent person with records of all inspections, modifications and inspections taken and retained.

**ASSESSED BY:**

Print name: MIKE KILLETT

Signature: MJK

Date: 19.11.2010

|                                                                                    |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                                     |  |
|------------------------------------------------------------------------------------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------|--|
| Site address:                                                                      |                      | BERSHAM COLLIERY TIP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          | RA71                                |  |
| Operation covered by this assessment:                                              |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                                     |  |
| FORK LIFT TRUCKS                                                                   |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                                     |  |
|                                                                                    |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                                     |  |
| Personnel exposed to risk:                                                         |                      | Employees                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Contractors              | Clients Personnel                   |  |
| General Public                                                                     |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                                     |  |
| <input checked="" type="checkbox"/>                                                |                      | <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <input type="checkbox"/> | <input type="checkbox"/>            |  |
| <b>Hazards:</b>                                                                    |                      | <b>Control measures:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |                                     |  |
| Contact with pedestrian/vehicular traffic.                                         |                      | Where possible forklift operating areas will be segregated from other traffic areas. Forklifts will be fitted with amber beacons and audible warning reversing devices. Operatives will not be permitted to carry passengers unless a purpose designed passenger seat is fitted. Operatives will have strict speed limits imposed in operating areas. Routes near vulnerable plant/equipment will be avoided. All forklift truck operators will receive competence training by approved instructors. |                          |                                     |  |
| Overturning.                                                                       |                      | Forktrucks will not be permitted to operate on surfaces which are incapable of supporting both the forktruck and its maximum load. Traversing gradients in excess of the manufacturers recommendations will be strictly forbidden. Uneven surfaces/routes which will create a foreseeable risk of overturning and/or uncontrolled discharge of the load will not be used for forktruck operation.                                                                                                    |                          |                                     |  |
| Exhaust emissions (diesel/petrol).                                                 |                      | Diesel or petrol powered trucks will only be used in well ventilated areas and for the absolute minimum periods possible.                                                                                                                                                                                                                                                                                                                                                                            |                          |                                     |  |
| Explosive gas emissions (battery).                                                 |                      | Battery powered forktrucks will be parked and re-charged away from sources of combustion and in well ventilated areas.                                                                                                                                                                                                                                                                                                                                                                               |                          |                                     |  |
| <b>N.B – for LPG powered forktrucks see also – RA43.</b>                           |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                                     |  |
| Probability and Severity: use these descriptions to help you make your assessment. |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                                     |  |
| PROBABILITY                                                                        | DESCRIPTION          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | SEVERITY                 | DESCRIPTION                         |  |
| High                                                                               | Likely to occur      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | High                     | Death or Major Injury               |  |
| Medium                                                                             | Could possibly occur |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Medium                   | Minor fractures, sprains            |  |
| Low                                                                                | Unlikely to occur    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Low                      | Minor cuts, bruises                 |  |
| Risk factor:                                                                       |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                                     |  |
| HIGH                                                                               |                      | MEDIUM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          | LOW                                 |  |
| <input type="checkbox"/>                                                           |                      | <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          | <input checked="" type="checkbox"/> |  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                |                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Monitoring:<br><br>All mobile work equipment to be examined by a competent person with records taken and maintained.<br>Where there exists a 'foreseeable risk' of overturning forklift trucks will be fitted with Roll Over Protection Structures (ROPS) and operator restraints (seatbelts).<br><br><b>ASSESSED BY:</b><br><br><div style="display: flex; justify-content: space-between;"> <span>Print name: M J KILLETT</span> <span>Signature: MJK</span> </div><br>Date: 19.11.2010 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                |                                                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                |                                                                                      |
| <b>Site address:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>BERSHAM COLLIERY TIP</b>                                                    |                                                                                      |
| <b>RA72</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                |                                                                                      |
| <b>Operation covered by this assessment:</b><br><div style="text-align: center; font-weight: bold; font-size: 1.2em;">LOADING, UNLOADING &amp; TRANSPORTING PLANT/MACHINERY.</div>                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                |                                                                                      |
| <b>Personnel exposed to risk:</b><br>General Public<br><div style="text-align: center;"><input checked="" type="checkbox"/></div>                                                                                                                                                                                                                                                                                                                                                         | Employees<br><div style="text-align: center;"><input checked="" type="checkbox"/></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Contractors<br><div style="text-align: center;"><input type="checkbox"/></div> | Clients Personnel<br><div style="text-align: center;"><input type="checkbox"/></div> |
| <b>Hazards:</b><br>Overturn whilst loading/unloading.<br><br>Overturn whilst entering/leaving site.<br><br>Load inadequately secured.<br><br>Transport driver fatigue/illness/injury<br><br>Defect to vehicle and/or trailer                                                                                                                                                                                                                                                              | <b>Control measures:</b><br>Operative to ensure area remains clear of non-essential personnel. Area of approach and loading/unloading must be level and well consolidated. Operative to seek assistance from competent banksman where available. Only trained and competent operatives to load/unload.<br>Transport driver to ensure the route on site is well consolidated and level. Driver to report to Supervisor/gate house upon arrival at site. Where possible, when collecting, plant/machinery must be traveled to the transporter.<br>Transport driver to ensure load is evenly distributed and adequately secured with <u>tested</u> chains. All damage defects to chains and securing devices to be <u>immediately</u> reported with the damaged item removed from service until rectified. Prior to leaving site the transporter driver will ensure all loose and/or detachable items are secured and/or removed including mud and debris which could present a hazard to other road users. LPG and other gas containers will only be transported in an upright position and in minimum possible quantities.<br>Transport drivers will <u>at all times</u> not exceed the recommended driving hours. Drivers who experience fatigue/illness/injury/distress or are involved in an accident, however minor, will discontinue their journey and report immediately to their depot via telephone. Drivers receiving medication following medical diagnosis will advise their Supervisor at the earliest opportunity.<br>Transport drivers must report all defects to vehicles and trailers to their supervisor immediately they are discovered. Prior to each journey drivers must check their vehicle and/or trailer for any defect. |                                                                                |                                                                                      |
| Probability and Severity: <b>use these descriptions to help you make your assessment.</b>                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                |                                                                                      |
| <b>PROBABILITY</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>DESCRIPTION</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>SEVERITY</b>                                                                | <b>DESCRIPTION</b>                                                                   |
| High                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Likely to occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | High                                                                           | Death or Major Injury                                                                |
| Medium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Could possibly occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Medium                                                                         | Minor fractures, sprains                                                             |
| Low                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Unlikely to occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Low                                                                            | Minor cuts, bruises                                                                  |

|                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Risk factor:</b><br><br><div> <div>HIGH</div> <div><input type="checkbox"/></div> </div> <div> <div>MEDIUM</div> <div><input type="checkbox"/></div> </div> <div> <div>LOW</div> <div><input checked="" type="checkbox"/></div> </div>                                                                                                                                                    |
| <p>Monitoring:</p> <p>Drivers to check roadworthiness of their vehicle and trailer prior to each journey.</p> <p>Drivers must never exceed their permitted hours.</p> <p>Defects and/damage to vehicles, trailers, chains and other securing devices to be reported immediately.</p> <p><b>ASSESSED BY:</b></p> <p>Print name: M J KILLETT</p> <p>Signature: MJK</p> <p>Date: 19.11.2010</p> |

|                                                                                                                                                             |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                          |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--|
| <b>Site address:</b>                                                                                                                                        |  | <b>BERSHAM COLLIERY TIP</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          | <b>RA76</b>              |  |
| <b>Operation covered by this assessment: MATERIALS PROCESSING BY MOBILE SCREENING</b>                                                                       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                          |  |
| <b>Personnel exposed to risk:</b><br>General Public                                                                                                         |  | Employees                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Contractors              | Clients Personnel        |  |
| <input checked="" type="checkbox"/>                                                                                                                         |  | <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <input type="checkbox"/> | <input type="checkbox"/> |  |
| <b>Hazards:</b><br>Untrained operators<br><br>Overturning<br><br>Malfunctioning<br><br>Passenger / Operator becoming trapped<br><br>Toxic Fumes<br><br>Dust |  | <b>Control measures:</b><br>All operators are to be trained in use of the plant & equipment<br><br>Route of travel and operation to be checked for load bearing capacity. All obstructions are to be cleared leaving a clear, level route.<br><br>Physical and mechanical condition is to be checked before signing delivery note. ALL defects are to be immediately reported to site manager<br><br><b>OPERATOR WILL SWITCH OFF ALL POWER TO PLANT &amp; EQUIPMENT PRIOR TO REMOVING ANY BLOCKAGES THAT MAY OCCUR AND DURING PERIODS OF INACTIVITY.</b><br><br>Diesel, Petrol or LPG powered plant & equipment will only be used in well ventilated or external areas. Only electrically (battery) powered equipment will be used within enclosed and / or unventilated areas.<br><br>Dust emissions will be controlled by the application of water to the processing plant |                          |                          |  |
| Probability and Severity: <b>use these descriptions to help you make your assessment.</b>                                                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                          |  |
| PROBABILITY                                                                                                                                                 |  | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          | SEVERITY                 |  |
|                                                                                                                                                             |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                          |  |

|                                   |                                                                                                  |                                                                                                    |                                                                                     |
|-----------------------------------|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| High<br>Medium<br>Low             | Likely to occur<br>Could possibly occur<br>Unlikely to occur                                     | High<br>Medium<br>Low                                                                              | Death or Major Injury<br>Minor fractures, sprains<br>Minor cuts, bruises            |
| <b>Risk factor:</b><br><b>LOW</b> | <b>HIGH</b><br> | <b>MEDIUM</b><br> |  |
| Monitoring:                       |                                                                                                  |                                                                                                    |                                                                                     |
| <b>ASSESSED BY:</b>               |                                                                                                  |                                                                                                    |                                                                                     |
| Print name: MIKE KILLETT          |                                                                                                  | Signature: MJK                                                                                     |                                                                                     |
| Date: 19.11.2010                  |                                                                                                  |                                                                                                    |                                                                                     |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                 |                                                                                                          |             |                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-------------|-------------------------------------------------------------------------------------------------|
| <b>Site address:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>BERSHAM COLLIERY TIP</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>RA77</b>                                                                                     |                                                                                                          |             |                                                                                                 |
| <b>Operation covered by this assessment:</b><br><br><div style="text-align: center; font-weight: bold; font-size: 1.2em;">MOBILE CRUSHER &amp; SCREENER</div>                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                 |                                                                                                          |             |                                                                                                 |
| <b>Personnel exposed to risk:</b><br>General Public<br><div style="text-align: center;"><input checked="" type="checkbox"/></div>                                                                                                                                                                                                                                                                                                                                                                         | Employees<br><div style="text-align: center;"><input checked="" type="checkbox"/></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Contractors<br><div style="text-align: center;"><input type="checkbox"/></div>                  |                                                                                                          |             |                                                                                                 |
| Clients Personnel<br><div style="text-align: center;"><input type="checkbox"/></div>                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                 |                                                                                                          |             |                                                                                                 |
| <b>Hazards:</b><br><br>Untrained operators<br>Overturning<br><br>Malfunctioning<br><br>Passenger/operator becoming trapped<br><br>Toxic fumes<br><br>Dust                                                                                                                                                                                                                                                                                                                                                 | <b>Control measures:</b><br><br>All operators to be trained in use.<br>Route of travel and operation will be checked for load bearing capability and all obstructions will be removed leaving a level, clear route.<br>Check physical condition and function <b>before</b> signing delivery note and report all defects immediately to Site Manager.<br>OPERATOR WILL SWITCH OFF ALL POWER TO PLANT PRIOR TO REMOVING ANY BLOCKAGES THAT MAY OCCUR AND DURING PERIODS OF INACTIVITY.<br>Diesel/Petrol or LPG powered equipment will only be used in well ventilated or external areas. Only electrically (battery) powered equipment will be used within enclosed and/or unventilated areas.<br>Dust emissions will be controlled by the application of water to the processing plant |                                                                                                 |                                                                                                          |             |                                                                                                 |
| Probability and Severity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                 |                                                                                                          |             |                                                                                                 |
| PROBABILITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SEVERITY                                                                                        |                                                                                                          |             |                                                                                                 |
| High                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Likely to occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | High                                                                                            |                                                                                                          |             |                                                                                                 |
| Medium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Could possibly occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Medium                                                                                          |                                                                                                          |             |                                                                                                 |
| Low                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Unlikely to occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Low                                                                                             |                                                                                                          |             |                                                                                                 |
| <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <b>Risk factor:</b><br/> <b>LOW</b><br/><br/> <div style="text-align: center;"><input type="checkbox"/></div> </td> <td style="width: 33%; text-align: center; vertical-align: top;"> <b>HIGH</b> </td> <td style="width: 33%; text-align: center; vertical-align: top;"> <b>MEDIUM</b><br/><br/> <div style="text-align: center;"><input checked="" type="checkbox"/></div> </td> </tr> </table>           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                 | <b>Risk factor:</b><br><b>LOW</b><br><br><div style="text-align: center;"><input type="checkbox"/></div> | <b>HIGH</b> | <b>MEDIUM</b><br><br><div style="text-align: center;"><input checked="" type="checkbox"/></div> |
| <b>Risk factor:</b><br><b>LOW</b><br><br><div style="text-align: center;"><input type="checkbox"/></div>                                                                                                                                                                                                                                                                                                                                                                                                  | <b>HIGH</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>MEDIUM</b><br><br><div style="text-align: center;"><input checked="" type="checkbox"/></div> |                                                                                                          |             |                                                                                                 |
| <b>Monitoring:</b><br>Will not be used on loose or sloping ground. Do not travel in extended position, always lower the equipment prior to travelling. Report all defects immediately to the Site Manager and do not use until defects are rectified. Never travel over electricity cables, compressed air hoses, water pipes etc. Check equipment for fuel, oil and fluids prior to each use. Check condition of tyres, tracks, outriggers, audible warning devices and amber beacons prior to each use. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                 |                                                                                                          |             |                                                                                                 |
| <b>ASSESSED BY:</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Print name M J KILLETT<br/><br/>           Date: 19.11.2010         </div> <div>           Signature: MJK         </div> </div>                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                 |                                                                                                          |             |                                                                                                 |

## **APPENDIX 3.3**

### **COSHH ASSESSMENTS**

| <b>REFERENCE</b> | <b>DESCRIPTION</b>             |
|------------------|--------------------------------|
| CA/001/A         | Petroleum spirit               |
| CA/002/A         | Diesel fuel / gas oil          |
| CA/019/A         | De-icer                        |
| CA/020/A         | Vehicle screen wash            |
| CA/021/A         | Granules – spillage absorbents |
| CA/024/A         | Anti freeze                    |
| CA/026/A         | Disinfectant                   |

# C.O.S.H.H. Assessment

Contract No:

Product: Petroleum Spirit  
Ref. No: CA/001/A

## Hazardous contents:

Vapour contains narcotic agents, can cause unconsciousness and eventual death.  
Contains de-fatting agents which will cause dermatitis.  
Extremely flammable.

## Appearance:

Clear amber liquid

## HAZARD:

| Toxic | Corrosive | Oxidiser | Irritant | Explosive | Flammable |
|-------|-----------|----------|----------|-----------|-----------|
| YES   | NO        | YES      | YES      | YES       | YES       |

## ROUTE OF EXPOSURE:

| Ingestion | Inhalation | Skin (including cuts) | Eyes |
|-----------|------------|-----------------------|------|
| YES       | YES        | YES                   | YES  |

## PERSONNEL EXPOSED: (TO BE COMPLETED)

| Employees | Contractors | Clients Personnel | General Public |
|-----------|-------------|-------------------|----------------|
| YES/NO    | YES/NO      | YES/NO            | YES/NO         |

## PROTECTIVE EQUIPMENT:

| Items Required  | Details                                                                      |
|-----------------|------------------------------------------------------------------------------|
| Goggles         |                                                                              |
| Gloves          | Impervious.                                                                  |
| Coveralls       | Remove if contaminated/soiled, avoid nylon type as sparks can occur.         |
| Respirator/Mask | Only required if handling/dispensing large quantities in unventilated areas. |
| Other           |                                                                              |

## CONTROL MEASURES:

| Action Required           | Applicable | Specify                                                               |
|---------------------------|------------|-----------------------------------------------------------------------|
| Method Statement          | NO         |                                                                       |
| Exposure Monitoring       | NO         |                                                                       |
| Health Surveillance       | NO         |                                                                       |
| Product Specific Training | NO         |                                                                       |
| First Aid                 | YES        | If contact with skin/eyes, wash with copious amounts of water.        |
| Fire/Explosion            | YES        | Use only in well ventilated areas away from sources of heat/ignition. |
| Handling                  | YES        | Avoid direct contact with skin                                        |
| Storage                   | YES        | Away from sources of heat/ignition in well ventilated areas.          |
| Transport                 | YES        | In small quantities and in purpose designed containers.               |
| Spillage                  | YES        | Dilute with copious water and ventilate the area well.                |
| Disposal                  | YES        | Hazardous waste – dispose of contaminated petrol at licensed depot.   |
| Other                     | NO         |                                                                       |

## Emergency Action

Do not attempt to extinguish petrol fires with water

## DEGREE OF RISK: (IF ALL ABOVE CONTROLS ARE INSTIGATED)

| HIGH | MEDIUM | LOW |
|------|--------|-----|
|------|--------|-----|

Assessed by (print):

M. J. KILLET

Signature:

*M. J. KILLET*

Date:

19/11/2010

Comments:

# C.O.S.H.H. Assessment

Contract No:

Product: Vehicle Screen Wash  
Ref. No. CA/020/A

## Hazardous contents:

Isopropyl alcohol, Glycol, Surfactants, Chelating agents, Dyes.

## Appearance:

Blue liquid

## HAZARD:

| Toxic | Corrosive | Oxidiser | Irritant | Explosive | Flammable |
|-------|-----------|----------|----------|-----------|-----------|
| YES   | NO        | YES      | YES      | YES       | YES       |

## ROUTE OF EXPOSURE:

| Ingestion | Inhalation | Skin (including cuts) | Eyes |
|-----------|------------|-----------------------|------|
| YES       | YES        | YES                   | YES  |

## PERSONNEL EXPOSED: (TO BE COMPLETED)

| Employees | Contractors | Clients Personnel | General Public |
|-----------|-------------|-------------------|----------------|
| YES/NO    | YES/NO      | YES/NO            | YES/NO         |

## PROTECTIVE EQUIPMENT:

| Items Required  | Details        |
|-----------------|----------------|
| Goggles         | If splash risk |
| Gloves          | Impervious     |
| Coveralls       |                |
| Respirator/Mask |                |
| Other           |                |

## CONTROL MEASURES:

| Action Required           | Applicable | Specify                                                             |
|---------------------------|------------|---------------------------------------------------------------------|
| Method Statement          | NO         |                                                                     |
| Exposure Monitoring       | NO         |                                                                     |
| Health Surveillance       | NO         |                                                                     |
| Product Specific Training | NO         |                                                                     |
| First Aid                 | YES        | If contact with eyes, flush with copious water. Avoid skin contact. |
| Fire/Explosion            | YES        | Flammable, use away from heat/ignition sources.                     |
| Handling                  | YES        | As above.                                                           |
| Storage                   | YES        | As above.                                                           |
| Transport                 | YES        | As above.                                                           |
| Spillage                  | YES        | Soak up with sand/granules and wash area with detergent/water.      |
| Disposal                  | YES        | As above.                                                           |
| Other                     | NO         |                                                                     |

## Emergency Action

If ingested drink milk/water. Seek immediate medical advice.

## DEGREE OF RISK: (IF ALL ABOVE CONTROLS ARE INSTIGATED)

|      |        |     |
|------|--------|-----|
| HIGH | MEDIUM | LOW |
|------|--------|-----|

Assessed by (print):

M. J. KILLET

Signature:

MJK 11/07/10

Date:

19/11/2010

Comments:

# C.O.S.H.H. Assessment

Product: Granules - Spillage Absorbents  
Ref. No: CA/021/A

Contract No:

## Hazardous contents:

Hydrated Magnesium Silicate.

## Appearance:

White granules.

## HAZARD:

| Toxic | Corrosive | Oxidiser | Irritant | Explosive | Flammable |
|-------|-----------|----------|----------|-----------|-----------|
| YES   | NO        | NO       | YES      | NO        | NO        |

## ROUTE OF EXPOSURE:

| Ingestion | Inhalation | Skin (including cuts) | Eyes |
|-----------|------------|-----------------------|------|
| NO        | YES        | YES                   | YES  |

## PERSONNEL EXPOSED: (TO BE COMPLETED)

| Employees | Contractors | Clients Personnel | General Public |
|-----------|-------------|-------------------|----------------|
| YES/NO    | YES/NO      | YES/NO            | YES/NO         |

## PROTECTIVE EQUIPMENT:

| Items Required  | Details                                                 |
|-----------------|---------------------------------------------------------|
| Goggles         |                                                         |
| Gloves          |                                                         |
| Coveralls       |                                                         |
| Respirator/Mask | If using in large quantities. Avoid inhalation of dust. |
| Other           |                                                         |

## CONTROL MEASURES:

| Action Required                                                                                  | Applicable | Specify                                                  |
|--------------------------------------------------------------------------------------------------|------------|----------------------------------------------------------|
| Method Statement                                                                                 | NO         |                                                          |
| Exposure Monitoring                                                                              | NO         |                                                          |
| Health Surveillance                                                                              | NO         |                                                          |
| Product Specific Training                                                                        | NO         |                                                          |
| First Aid                                                                                        | YES        | If large quantities of dust inhaled, seek medical advice |
| Fire/Explosion                                                                                   | NO         |                                                          |
| Handling                                                                                         | YES        | As manufacturers instructions.                           |
| Storage                                                                                          | YES        | As above.                                                |
| Transport                                                                                        | YES        | As above.                                                |
| Spillage                                                                                         | NO         |                                                          |
| Disposal                                                                                         | YES        | Inert, Local landfill.                                   |
| Other                                                                                            | NO         |                                                          |
| <b>Emergency Action</b><br>Large quantities of Silica dust can cause Silicosis, avoid inhalation |            |                                                          |

## DEGREE OF RISK: (IF ALL ABOVE CONTROLS ARE INSTIGATED)

| HIGH | MEDIUM | LOW |
|------|--------|-----|
|------|--------|-----|

Assessed by (print):

M. J. KILLETT

Signature:

*M. J. Killett*

Date:

19/11/2000

Comments:

# C.O.S.H.H. Assessment

Product: Anti Freeze  
Ref. No: CA/024/A

Contract No:

## Hazardous contents:

Ethenediol, Ethylene Glycol, which is mildly irritant to eyes and skin. Toxic, even small quantities (100 ml) can be fatal if ingested.

## Appearance:

Colourless liquid.

## HAZARD:

| Toxic | Corrosive | Oxidiser | Irritant | Explosive | Flammable |
|-------|-----------|----------|----------|-----------|-----------|
| YES   | YES       | YES      | YES      | YES       | YES       |

## ROUTE OF EXPOSURE:

| Ingestion | Inhalation | Skin (including cuts) | Eyes |
|-----------|------------|-----------------------|------|
| YES       | YES        | YES                   | YES  |

## PERSONNEL EXPOSED: (TO BE COMPLETED)

| Employees | Contractors | Clients Personnel | General Public |
|-----------|-------------|-------------------|----------------|
| YES/NO    | YES/NO      | YES/NO            | YES/NO         |

## PROTECTIVE EQUIPMENT:

| Items Required  | Details                           |
|-----------------|-----------------------------------|
| Goggles         | If contact with eyes is likely.   |
| Gloves          | Impervious.                       |
| Coveralls       | Impervious.                       |
| Respirator/Mask | If not in a well ventilated area. |
| Other           |                                   |

## CONTROL MEASURES:

| Action Required           | Applicable | Specify                                                             |
|---------------------------|------------|---------------------------------------------------------------------|
| Method Statement          | NO         |                                                                     |
| Exposure Monitoring       | NO         |                                                                     |
| Health Surveillance       | NO         |                                                                     |
| Product Specific Training | NO         |                                                                     |
| First Aid                 | YES        | Obtain immediate medical attention if ingested.                     |
| Fire/Explosion            | YES        | Slight explosion hazard if exposed to flame.                        |
| Handling                  | YES        | Avoid contact with acids, oxidising agents and direct heat sources. |
| Storage                   | YES        | As above and away from heat.                                        |
| Transport                 | YES        | In minimum quantities in labelled containers.                       |
| Spillage                  | YES        | Absorb with sand/granules and drench the area with water.           |
| Disposal                  | YES        | Incinerate absorbed material.                                       |
| Other                     | NO         |                                                                     |

## Emergency Action

If ingested give copious water to drink and seek urgent medical advice. Advise doctor of product ingested.

## DEGREE OF RISK: (IF ALL ABOVE CONTROLS ARE INSTIGATED)

| HIGH | MEDIUM | LOW |
|------|--------|-----|
|------|--------|-----|

Assessed by (print):

M. J. KILLETT

Signature:

*M. J. Killett*

Date:

19/11/2010

Comments:

# C.O.S.H.H. Assessment

Product: Disinfectant  
Ref. No: CA/026/A

Contract No:

**Hazardous contents:**  
Quaternary Ammonium compound, surfactants hydrotape.

**Appearance:**  
Green, blue, yellow or clear liquid.

## HAZARD:

| Toxic | Corrosive | Oxidiser | Irritant | Explosive | Flammable |
|-------|-----------|----------|----------|-----------|-----------|
| YES   | NO        | NO       | YES      | NO        | NO        |

## ROUTE OF EXPOSURE:

| Ingestion | Inhalation | Skin (including cuts) | Eyes |
|-----------|------------|-----------------------|------|
| YES       | NO         | YES                   | YES  |

## PERSONNEL EXPOSED: (TO BE COMPLETED)

| Employees | Contractors | Clients Personnel | General Public |
|-----------|-------------|-------------------|----------------|
| YES/NO    | YES/NO      | YES/NO            | YES/NO         |

## PROTECTIVE EQUIPMENT:

| Items Required  | Details                         |
|-----------------|---------------------------------|
| Goggles         | If dispensing large quantities. |
| Gloves          | Impervious.                     |
| Coveralls       |                                 |
| Respirator/Mask |                                 |
| Other           |                                 |

## CONTROL MEASURES:

| Action Required           | Applicable | Specify                                                   |
|---------------------------|------------|-----------------------------------------------------------|
| Method Statement          | NO         |                                                           |
| Exposure Monitoring       | NO         |                                                           |
| Health Surveillance       | NO         |                                                           |
| Product Specific Training | NO         |                                                           |
| First Aid                 | YES        | Irrigate eyes with copious water and seek medical advice. |
| Fire/Explosion            | YES        | Not flammable.                                            |
| Handling                  | NO         |                                                           |
| Storage                   | YES        | Prevent freezing.                                         |
| Transport                 | NO         |                                                           |
| Spillage                  | YES        | Dilute with water to foul sewer.                          |
| Disposal                  | YES        | As above                                                  |
| Other                     | NO         |                                                           |

## Emergency Action

N/A

## DEGREE OF RISK: (IF ALL ABOVE CONTROLS ARE INSTIGATED)

| HIGH | MEDIUM | LOW |
|------|--------|-----|
|------|--------|-----|

|                                           |           |
|-------------------------------------------|-----------|
| Assessed by (print): <u>M. J. KILLETT</u> | Comments: |
| Signature: <u>M. J. Killett</u>           |           |
| Date: <u>19/11/2010</u>                   |           |

## **APPENDIX 4**

### **DUST MANAGEMENT SCHEME**

#### **4.1 POTENTIAL SOURCES OF DUST**

4.1.1 Given that the operation of the crushing and screening plant is adequately covered by its PPC Permit the main long-term source of potential dust emissions on the project will be the internal, granular material surfaced haul roads that could potentially be a significant source of dust, which may then become entrained and distributed by the passage of vehicles. Further general factors include a continuous breakdown of the surface layer and potential dust emission via passage of vehicles, liberation of loose material during site excavation works via wind and the loading /unloading of vehicles and plant.

4.1.2 Thus the following specific areas are addressed;

- the excavation of materials and loading onto lorries and/or dump trucks;
- the transporting of materials from the excavation faces to the processing area;
- the loading of materials from the processing area onto road and rail wagons for disposal off site;
- the management of stockpiles of both excavated and processed granular materials.

#### **4.2 CONTROL MEASURES**

4.2.1 The most effective abatement measures for the control of fugitive dust on roads are good road design, layout, repair and maintenance – and cleaning if necessary and possible.

4.2.2 The following measures will be applied;

- The most regularly adopted, simple and effective method of reducing fugitive dust emission is by watering of haul roads during dry weather. Total suspended particle dust emissions are generally reduced by up to 97% by the application of water to haul roads. Sufficient water bowser capacity will be provided on site.
- A road sweeper will be made available in the event that it becomes necessary to sweep the concrete surfaced site access road and the adjacent public highway of excess dirt and debris.

- All new vehicles are fitted with upward facing exhausts and radiator cowls and the use of such vehicles is moderately effective in reducing potential dust emissions.
- The design of haul roads has been undertaken to avoid sharp corners of very steep gradients, which would encourage sharp braking.
- The regular grading of site haul roads removes loose material from the surface, it also increases fuel efficiency and minimises “wear and tear” on the vehicles and mobile plant. It is also a highly effective method of dust control as it removes loose debris and mud, one of the main potential sources of dust. However, it is important to note that the colliery spoil material consists mainly of granular materials.
- Stockpiles of materials of different types will be clearly delineated to avoid mixing and will be lightly tamped to confine moisture and to seal against erosion.
- Stockpiles will be graded to minimise wind blown dust and normally kept damp by the application of water in sprays as and when necessary, but particularly during periods of dry weather.
- An adequate supply of water will be provided on site.
- The location of the materials stockpiles within the processing and distribution area will take advantage of shelter from the prevailing wind following the construction of appropriately placed bunds. Additionally, the stockpiles will be located to the south of the site within a low-lying area being the furthest distance available away from residential and commercial properties. This will reduce ground level wind speed and thus the potential for dust emissions.
- The handling of these stockpiles will be by conventional construction equipment, either a 360-degree excavator or front loader. The material being loaded will be from an area that is thoroughly soaked

### **4.3 RESPONSIBILITIES**

|                   |                                                                                    |
|-------------------|------------------------------------------------------------------------------------|
| Project Director: | Overall responsibility                                                             |
| Site Manager:     | Coordination and reporting of monitoring<br>Local handling of complaints procedure |
| Site Foreman:     | Visual dust monitoring                                                             |
| Site Operatives:  | Visual dust monitoring                                                             |

#### **4.4 GENERAL CONTROL MEASURES**

4.4.1 Monitor weather reports to ensure appropriate dust suppression or road cleaning is available if required.

##### **4.4.2 Mud on Roads**

- Road Sweeper to be deployed to clean roads where appropriate
- Banks-men to clear large debris immediately
- Only designated routes are to be used site directions to be provided to supplier and sub contractors
- Wagons to be covered to prevent material being blown to road during transport

##### **4.4.3 Dust & Emissions**

###### **a) Haul Routes**

- Site traffic to keep to designated well maintained haul routes.
- Good quality concrete surface access to and from the highway is provided.
- Site vehicle speed limits set at 10mph to be enforced
- Damping down using water bowsters and sprays if required – however consideration must be given to proximity of drains
- All vehicles transporting materials to and from site will be sheeted to prevent dust and debris escape during transport

###### **b) Plant**

- All plant to be maintained and checked on a daily basis
- Ensure exhausts do not discharge directly at the ground
- Ensure engines are switched off when not in use
- Only established refuelling areas to be used

###### **c) Crushing of hard materials**

- crushing of hard materials to the WRAP Quality Protocol
- Shielded crushing area
- Shielded, separate areas for crushed rock and graded material stockpiles
- Dust suppression system used when crushing material

###### **d) Materials handling and storage**

- Locate stockpiles out of the wind where possible
- Keep stockpiles to a minimum practicable height and use gentle slopes
- Damp down stockpiles using water misting/sprays as appropriate
- Store materials away from the site boundaries and downwind of sensitive areas.
- Waste will be stored in a designated area within the identified compound
- Use covered containers for waste wherever possible
- NO burning of materials on site.

#### **4.5 SPECIFIC CONTROL MEASURES**

Wheel Cleaning Facilities will be provided at the site exit to ensure vehicles do not track mud or debris onto the public highways.

#### **4.6 MONITORING AND MEASUREMENT**

The site-specific dust monitoring scheme is included at Appendix 5 within this document.

#### **4.7 TRIGGER LEVEL ACTION RESPONSE**

If one or more monitoring points exceed the lowest trigger level (100mg/m<sup>2</sup>/day) the result will be investigated to confirm cause of dust (project activities or alternative source) Check against the meteorological data for the period of sampling and for other dust generating activities occurring in the vicinity of the dust sampler.

If deemed caused by Project activities:

- Review activities
- Discuss with SHE Manager & Third Party Liaison
- Raise matter at Project Progress Meeting
- Complaints procedure will be implemented and records to be kept in the site office reception.
- Complaints could be received via the local authority or direct to the Project.
- In the event that a complaint or concern is raised, an immediate review will be completed to determine what has caused the problem (site activities or other causes), check dust levels at monitoring points and rectify the problem.
- In the event that the limits have been exceeded the operation will be modified wherever possible and the dust levels rechecked from that operation to verify that the corrective action has been effective. These actions may include changing the method of working or further damping down.
- In the event that the dust levels have not been exceeded, the complaint will be reviewed and discussions held with the third party to understand the problem further and evaluate whether the particular problem can be rectified or at least improved. Communication will be maintained in conjunction with the interested authorities.

#### **4.8 RELATED DOCUMENTS**

- Quality Statement for production of aggregates (WRAP Quality Protocol)
- Traffic management plan – deliveries, vehicle routes etc incorporating health and safety considerations for road users, construction staff and pedestrians
- Dust monitoring records.

## **4.9 ENVIRONMENTAL CONTROL PROCEDURES**

| <b>Control Ref.</b> | <b>Description</b>                                                     |
|---------------------|------------------------------------------------------------------------|
| ENV/001             | Control measures for storage and handling of loose granular materials. |
| ENV/002             | Control measures for site operations                                   |
| ENV/003             | Control measures for vehicle movements on site                         |
| ENV/004             | Control measures for the avoidance of nuisance from exhaust emissions. |

### **ENV/001**

#### **CONTROL MEASURES FOR STORAGE & HANDLING OF LOOSE GRANULAR MATERIALS**

Control measures will include the following;

- Fine, dry materials shall be stored, where possible, with adequate protection from the wind;
- Stockpiles shall be located, as far as is reasonably practicable, away from residential areas, places of public access or other sensitive receptors as identified by the facility management team;
- Slopes of stockpiles, tips and mounds shall be maintained at an angle not greater than the natural angle of repose and sharp changes of shape shall be avoided;
- The surface of stockpiles of dry, fine or friable materials shall be dampened by controlled application of water sprays, or shrouded or screened as appropriate and necessary;
- Handling areas shall be maintained as far as reasonably practicable to reduce the risk of dust emission;
- Static and/or mobile sprinklers, bowzers and other watering methods shall be deployed as necessary to reduce or prevent dust emissions;
- All lorries leaving site shall be sheeted to prevent materials spillage and windblown dispersal.

**CONTROL MEASURES FOR SITE OPERATIONS**

In addition to the site access and haul roads, there is the potential for the generation of dust from the excavation, processing by power screening, loading materials for disposal and general site operations. The control measures to be implemented to reduce these emissions are described as follows;

- Burning on site of any waste arising from any and all site activities is prohibited;
- Equipment likely to generate excessive quantities of dust shall be enclosed, shielded or otherwise controlled;
- The number of materials handling operations shall be kept to a practicable minimum;
- Drop heights of materials onto vehicles, conveyors and stockpiles shall be kept to a practicable minimum;
- Dry conveyor loads shall be dampened so as to reduce dust emissions;
- Where necessary, water sprays shall be deployed to control dust emissions generated during the site works;
- Long term stockpiles (greater than 6 months) shall be sealed as appropriate.

## **ENV/003**

### **CONTROL MEASURES FOR VEHICLE MOVEMENTS ON SITE**

To ensure that dust emissions from vehicle movements are minimised, the following control measures will be implemented on site;

- Paved haul roads and associated vehicle waiting areas shall be regularly inspected and kept free of mud and materials which may give rise to emissions of dust;
- Plant crossings, site access and egress points will be regularly swept and dampened down;
- Unpaved haul roads shall be maintained in a compacted condition as appropriate and necessary;
- Static and / or mobile water sprinklers and / or bowsers will be provided to damp down haul and access roads as necessary;
- All vehicle deliveries to site will be sheeted;
- All lorries leaving site will be sheeted;
- General site traffic shall be restricted to watered or treated haul roads;
- The established Speed limit shall be enforced on site (speed limits shall be reduced in the event of extreme dry conditions to further reduce the potential for the generation of dust).

**CONTROL MEASURES FOR THE AVOIDANCE OF NUISANCE FROM EXHAUST EMISSIONS**

A number of items of earthmoving and materials processing plant, equipment and vehicles will be used on the site. Measures will be established to ensure that exhaust emissions do not give rise to nuisance;

- No vehicle or item of plant and equipment emitting visible black smoke, other than during ignition, shall be used on the site or public highway;
- Combustion engines (on all items of plant and equipment) shall not be left running unnecessarily;
- All vehicle, plant and equipment engines and exhaust systems shall be maintained so that the exhaust emissions do not breach statutory limits set for the item of equipment and mode of operation;
- All vehicle, plant and equipment shall be maintained in accordance with the manufacturers' recommendations;
- Exhausts of vehicles, plant and equipment shall be positioned at a sufficient height to ensure dispersion of exhaust emissions.

[illegible]

|                                                              |      |                        |                     |             |       |  |  |
|--------------------------------------------------------------|------|------------------------|---------------------|-------------|-------|--|--|
|                                                              |      |                        |                     |             |       |  |  |
|                                                              |      |                        |                     |             |       |  |  |
|                                                              |      |                        |                     |             |       |  |  |
|                                                              |      |                        |                     |             |       |  |  |
|                                                              |      |                        |                     |             |       |  |  |
| <b>Weather and ground conditions (circle as appropriate)</b> |      |                        |                     |             |       |  |  |
|                                                              |      |                        |                     |             |       |  |  |
| Wind Speed                                                   | Calm | Breezy                 | Windy               | Very Windy  | Gales |  |  |
|                                                              |      |                        |                     |             |       |  |  |
| Rain                                                         | None | Intermittant (showers) | Prolonged (>1 hour) | Light       | Heavy |  |  |
|                                                              |      |                        |                     |             |       |  |  |
| Ground surface                                               | Dry  | Damp                   | Wet (puddles)       |             |       |  |  |
|                                                              |      |                        |                     |             |       |  |  |
| <b>Name (PRINT)</b>                                          |      |                        |                     |             |       |  |  |
|                                                              |      |                        |                     |             |       |  |  |
| <b>Signature</b>                                             |      |                        |                     | <b>Date</b> |       |  |  |

## APPENDIX 5

### DUST MONITORING SCHEME

#### 5.1 MONITORING DEVICES

Dust monitoring will be carried out using combined deposit / direction gauges. Each gauge will comprise a „frisbee“ deposition gauge with a collecting bottle, around which a directional adhesive strip is fixed. Sampling and analysis will be carried out on a monthly basis. The analysis of the deposit samples and adhesive strips will be undertaken at a UKAS accredited laboratory. The directional strip will permit an assessment of the main direction(s) from which any dust arises. The results will be reported to the MPA each month.

#### 5.2 LOCATION OF MONITORING DEVICES

Dust deposition gauges will be established within sensitive locations as follows;

- Adjacent to the Railway on the southern boundary;
- At the Bersham Enterprise Centre;
- Adjacent to the residential area north of the site;
- Adjacent to the light industrial and commercial units north of the site.

These locations will be monitored prior to work commencing to establish existing conditions and thereafter to maintain the efficiency of the site dust control measures adopted.

#### 5.3 TRIGGER LEVELS

The trigger values for the project have been established as follows;

Open Areas less than **100mg/m<sup>2</sup>/day**;

Residential areas less than **150mg/m<sup>2</sup>/day**;

Urban areas less than **200mg/m<sup>2</sup>/day**.

*(Ref – London Best Practice Guide – Control of Dust and Emissions from Construction and Demolition)*

Glass slides will be exposed for 7 days and analysed on a monthly basis against trigger levels, the records of this to be held with this control plan.

### **5.3 TRIGGER LEVEL ACTION RESPONSE**

One or more monitoring point exceeds trigger level 100mg/m<sup>2</sup>/day:-

- Investigate result to confirm cause of dust (project activities or alternative source)
- Check against the meteorological data for the period of sampling and
- for other dust generating activities occurring in the vicinity of the dust sampler.

If deemed caused by Project activities:

- Review site activities
- Discuss with SHE Manager & Third Party Liaison
- Raise matter at Project Progress Meeting
- Complaints procedure will be implemented and records to be kept in the site office reception.
- Complaints could be received via the local authority or direct to the project from a complainant.
- In the event that a complaint or concern is raised, an immediate review will be completed to determine what has caused the problem (site activities or other causes), check dust levels at monitoring points and rectify the problem.
- In the event that the limits have been exceeded the operation will be modified wherever possible and the dust levels rechecked from that operation to verify that the corrective action has been effective. These actions may include re-locating the equipment, changing the method of working or further damping down.
- In the event that the dust levels have not been exceeded, the complaint will be reviewed and discussions held with the third party to understand the problem further and evaluate whether the particular problem can be rectified or at least improved. Communication will be maintained in conjunction with the interested authorities.

### **5.4 SITE MONITORING**

- a) Due to the potential for dust emissions from the works, dust monitoring will be undertaken around the perimeter of the site, near to potentially sensitive receptors.
- b) The site manager will complete the site inspection record (see Fig. 5 - form ENV/005) a minimum of three times daily.
- c) If visible dust emissions are evident at the location of any site activity then airborne particulate sampling will also be carried out upwind and downwind of the subject area. „Total suspended particulates“ (TSP) and PM10 concentrations will be determined, upwind and downwind of the areas and downwind at potentially sensitive receptors.
- d) Form ENV/005 will also be used to record all visible emissions of dust. Copies of the forms will be held on site and made available to the MPA as required.

## **APPENDIX 6**

### **PROCEDURE FOR RESPONDING TO DUST COMPLAINTS**

#### **PROCEDURE**

#### **HSP5a**

#### **DUST COMPLAINTS**

In the event that a complaint relating to dust emissions from the site is received at the facility then the following procedure is to be followed.

1. Inform the complainant that the Company has an established procedure for handling such complaints and that a senior member of staff will respond to the complainant in due course.
2. Take the details of the complainant ie: Name, Company (if appropriate), Address and contact telephone number.
3. Record the location, time and date of the incident.
4. Take a description of the incident & complaint.
5. Take details of registration or markings on any vehicles involved.
6. Note the weather conditions at the time of the incident.
7. Note any other relevant information.
8. Pass a written report to head office.
9. Instruct an immediate review of site working procedures at each works location to determine if excessive dust is being generated.
10. In the event that excessive dust is being generated cease operations immediately and instigate damping down procedures.
11. Do not re-commence operations until such time as dust control measures are effective and excessive dust emissions have ceased.

#### **Action by Head Office**

12. Contact the complainant at the earliest opportunity to confirm the facts as initially provided by the complainant to the site contact.
13. Inform the complainant that a full incident investigation will be carried out.
14. Provide the complainant with an anticipated duration for the investigation and the likely date of determination.
15. Inform the complainant that the Company has a policy of continually reviewing operations with the aim of reducing incidents and complaints arising.
16. Record all details in Office Complaints Log.
17. Contact the appropriate established liaison / enforcing and/or regulating authorities as required.

## **APPENDIX 7**

### **THE CONTROLLED IMPORT & PLACEMENT OF INERT FILL MATERIAL**

## **7.1 INTRODUCTION**

Condition No. 25 included within the planning permission for the project specifies as follows:-

“Nothing other than uncontaminated, inert, non-polluting materials shall be imported into the site.”

This section of the Working Plan details the provision of an established „waste acceptance criteria“ in order to demonstrate the controls and procedures that have been adopted to fulfil the requirements of this condition.

## **7.2 WASTE ACCEPTANCE CRITERIA AND PROCEDURES**

The materials to be imported to this site for restoration purposes shall be only inert waste. The site permitted wastes for the purpose of restoration are defined as;

### **7.3 Waste Acceptance Criteria (Based on National Waste Acceptance Criteria)**

All wastes shall be assessed and pre-characterised to ensure that acceptance will not:

- a) Result in unacceptable emissions to groundwater, surface water or the surrounding environment;
- or
- b) Endanger human health.

## 7.4 Waste Acceptance Procedures

### 7.4.1 Level 1 Basic characterisation of wastes.

The initial stage of the waste acceptance procedure commences via an enquiry from a potential source. Details of the proposed waste are assessed on completion of the waste information form (WIF). A copy of the information form is presented at Figure 1. Information is received via a number of methods, the most common being fax, and post.

The site is only to accept waste that is deemed inert within the Schedule 3 list and previous characterisation testing. The definition of inert waste in Regulation 7(4) is that it:-

- a) will not undergo any significant physical, chemical or biological transformations;
- b) will not dissolve;
- c) will not burn;
- d) will not physically or chemically react;
- e) will not biodegrade;
- f) will not adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or to harm human health;
- g) has insignificant total leachability and pollutant content;
- h) produces a leachate with an ecotoxicity that is insignificant (if it produces a leachate).

The site will accept only strictly inert wastes for use in haul road construction, to make up levels on site and to create landscaping features.

**Table 1; Inert waste list**

| EWC Code | Description                                      | Restrictions                                                         |
|----------|--------------------------------------------------|----------------------------------------------------------------------|
| 17 01 01 | Concrete                                         | Selected C&D Waste only                                              |
| 17 01 02 | Bricks                                           | Selected C&D Waste only                                              |
| 17 01 03 | Tiles and ceramics                               | Selected C&D Waste only                                              |
| 17 01 07 | Mixtures of concrete, bricks, tiles and ceramics | Selected C&D Waste only                                              |
| 17 05 04 | Soil and stones*                                 | Excluding peat;<br>excluding soil and stones from contaminated sites |
| 20 02 02 | Soil and stones*                                 | Only from garden and parks waste: excluding peat                     |

The origin of the waste must be known. No demolition wastes from construction polluted with inorganic or organic dangerous substances, or covered with painted materials, are permitted.

If the wastes as presented on the waste enquiry form are as listed above then no further pre characterisation testing will be required as per the Regulations.

The only wastes accepted within Schedule 3 that are outside the Table are wastes from mineral extraction which for the purpose of this facility is deemed to be sand, gravel, clay and associated mine and quarry wastes and are therefore considered as inert covering 01 01 01, 01 01 02, 01 04 08 and 01 04 09. These wastes will not need any further testing.

Bricks and tiles following the production from a producer would be considered as inert covering 10 12 08. These wastes will not need any further testing.

Construction and demolition wastes will cover inert wastes such as bricks and tiles and concrete as 17 01 01, 17 01 02, 17 01 03, 17 01 07. These wastes will not therefore need any further testing.

The following details shall be gathered and a copy of all information for all wastes kept on site:

- a) Data on the composition of the waste and the levels of contamination based on  
SGV values and WAC test data if not as listed in Table 1;
- b) Details of the history of the place where the inert waste originates;
- c) Any additional precautions required to be taken at the landfill;

Once the initial screening assessment is completed and the waste approved for disposal at the site the enquiry is allocated a specific Approval Number and the number is entered into the Site Waste Acceptance Log Book. The log book shall detail the enquiry reference number, the origin of the waste and a reference to any site investigation data that may be available. The site data will be kept in a separate file with the corresponding number. If the waste is rejected the reasons for rejection are entered onto the Non Conformance Forms so that a letter of rejection may be generated informing the customer of the decision.

#### **7.4.2 Level 2 Compliance Testing of wastes.**

The testing of loads shall be as follows:

If waste is listed in Table 1 and the origin is known as a non polluting source then the waste will be accepted and basic on site characterisation testing will be required.

If waste is from an unknown origin source then a WAC test will be required to determine if the waste complies with Acceptance Criteria for inert waste.

**Leaching limit values for landfills for inert waste Component L/S = 10 l/kg  
mg/kg dry weight**

As 0.5mg/kg  
Ba 20.0mg/kg  
Cd 0.04 mg/kg  
Cr total 0.5 mg/kg  
Cu 2.0 mg/kg  
Hg 0.01 mg/kg  
Mo 0.5 mg/kg  
Ni 0.4 mg/kg  
Pb 0.5 mg/kg  
Sb 0.06 mg/kg  
Se 0.1 mg/kg  
Zn 4.0 mg/kg  
Cl 800 mg/kg  
F 10 mg/kg  
SO<sub>4</sub>\* 1,000 mg/kg  
Phenol index 1.0 mg/kg  
DOC\*\*\* 500 mg/kg  
TDS\*\* 4,000 mg/kg

\*This limit value for sulphate may be increased to 6,000, provided that the value of C<sub>0</sub> from a percolation test does not exceed 1,500 mg/l at L/S = 0.1 l/kg. It will be necessary to use a percolation test to determine the limit value at L/S = 0.1 l/kg under initial equilibrium conditions (C<sub>0</sub> is the concentration at L/S = 0.1 l/kg). \*\*The value for total dissolved solids (TDS) can be used as an alternative to the values for sulphate and chloride.

\*\*\* If the waste does not meet this value for dissolved organic carbon (DOC) at its own pH value, it may alternatively be tested at L/S = 10 l/kg and a pH between 7.5 and 8.0. The waste may be considered as complying with the acceptance criteria for DOC, if the result of this determination does not exceed 500 mg/kg.

If it is suspected that other species may be present with the potential for pollution or harm then a leaching test must be completed.

The maximum value obtained is used to confirm that the leachate source term for the facility is covered by the Groundwater Regulations.

**Additional limit values for inert waste**

**Parameter Value mg/kg**

TOC 30,000 mg/kg  
BTEX 6.0 mg/kg  
PCBs (7 congeners) 1.0 mg/kg  
Mineral oil (C<sub>10</sub> to C<sub>40</sub>) 500 mg/kg  
Polycyclic aromatic hydrocarbons (total of 17) 100  
Polycyclic aromatic hydrocarbons (PAHs) are Naphthalene, Acenaphthylene, Acenaphthene, Anthracene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(g,h,i)perylene, Benzo(a)pyrene, Chrysene, Coronene, Dibenzo(a,h)anthracene, Fluorene, Fluoranthene, Indenol(1,2,3-c,d)pyrene, Phenanthrene and Pyrene.

WAC test data will be required for all construction jobs where the origin or history of the waste is unknown. All of the WAC parameters for inert waste will be required.

Soil guideline values from the source site contamination testing will be used as a guide for requiring a WAC test. If all of the results reported in a site investigation report are acceptable for gardens and allotments then no further testing will be required prior to acceptance on site.

Results of compliance testing shall be appended to the basic characterisation information and filed at site.

Any waste containing any chemical or compound falling outside the waste acceptance criteria as detailed above will not be accepted at the site.

Random WAC testing will be based on the annual leachate values. If these do not exceed trigger levels then no WAC testing will be carried out.

#### **7.4.3 Level 3 On-site Verification of wastes.**

- a) Each load of waste delivered to the facility shall be visually inspected before unloading at the site and the driver of the carriers vehicle will be asked for the origin of the material to confirm its source and that it matches the Enquiry Form. If the waste does not match the original source the waste will be rejected and a Non-Conformance load rejection form completed as part of the Non Conformance Procedure.
- b) Each and every load shall be inspected after unloading at the working face by the plant operator. The visual inspection will ensure that the waste conforms to the description gathered as part of the basic characterisation of the waste, and the description on the accompanying documents. In addition basic olfactory monitoring shall be carried out to ensure that there are no direct and obvious odours such as TPH"s.
- c) In cases where the basic characterisation has shown that the waste may vary outside limits of the facility, the material will be rejected.
- d) Results of any on site verification testing shall be appended to the basic characterisation and compliance testing information and filed at site.
- e) Unauthorised and Rejected wastes  
Any loads identified as unacceptable prior to disposal shall be isolated prior to removal. A Non-Conformance Form will be completed and attached to the original enquiry form.
- f) Details of the rejected waste will be kept on site; this will include time and date, haulier and vehicle registration, customer, type of waste, and reason for rejection.

## **g) Prohibited wastes**

The following wastes shall not be accepted for use as fill on site:

- a) Any waste in liquid form (including waste waters but excluding sludge);
- b) Waste which, in the conditions of landfill, is explosive, corrosive, oxidising, flammable or highly flammable;
- c) Hospital and other clinical wastes which arise from medical or veterinary establishments and which are infectious;
- d) Chemical substances arising from research and development or teaching activities, such as laboratory residues, which are new or not identified, and the effects of which on man or on the environment are not known;
- e) Whole used tyres other than tyres used as engineering material; bicycle tyres; and tyres with an outside diameter above 1400mm;
- f) Shredded tyres other than– bicycle tyres; and tyres with an outside diameter above 1400mm;
- g) Any waste that does not fulfil the waste acceptance criteria as set out above.

FIGURE 1

**WIF (Waste information Form)**

|                                                                                                                                                                                                                                                                                                                                                                        |                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| Waste Producer:    Contact Name:    Telephone No. <span style="float: right; border: 1px solid black; padding: 2px 20px;"></span>                                                                                                                                                                                                                                      |                                                                                          |
| Please tick box if person completing the form    Fax No.                                                                                                                                                                                                                                                                                                               |                                                                                          |
| Waste Carrier: <input type="checkbox"/> Contact Name:    Telephone No.                                                                                                                                                                                                                                                                                                 |                                                                                          |
| Please tick box if person completing the form    Fax No.                                                                                                                                                                                                                                                                                                               |                                                                                          |
| Anticipated Volume of Waste: <span style="border: 1px solid black; padding: 0 10px;"></span> m <sup>3</sup>                                                                                                                                                                                                                                                            | Anticipated Date(s) Of Disposal:                                                         |
| Indicate whether estimate is in - <span style="border: 1px solid black; padding: 0 10px;"></span> loose/solid                                                                                                                                                                                                                                                          | Address                                                                                  |
| of Source of Waste:                                                                                                                                                                                                                                                                                                                                                    |                                                                                          |
| Process from which waste arises                                                                                                                                                                                                                                                                                                                                        |                                                                                          |
| Standard Industrial Classification (SIC) Circle                                                                                                                                                                                                                                                                                                                        | Type of Waste    Inert    Non Hazardous    Hazardous                                     |
| Will the waste being delivered to the facility have been treated (e.g. crushed or screened)?    YES / NO If <b>NO</b> give reason:                                                                                                                                                                                                                                     |                                                                                          |
| Description and/or composition of Waste                                                                                                                                                                                                                                                                                                                                |                                                                                          |
| (as detailed as possible):<br>EWC<br>COD                                                                                                                                                                                                                                                                                                                               |                                                                                          |
| E:                                                                                                                                                                                                                                                                                                                                                                     |                                                                                          |
| Can the waste be recycled or recovered?                                                                                                                                                                                                                                                                                                                                |                                                                                          |
| Details of Existing and/or Previous Use of Site (if known):<br>(Identify any known previous potentially polluting uses.<br>Contact Waste Producer for information)                                                                                                                                                                                                     |                                                                                          |
| Is waste being generated as a result of site decontamination works? <b>YES / NO / DON'T KNOW</b>                                                                                                                                                                                                                                                                       |                                                                                          |
| Does waste contain any biodegradable material? (e.g. Wood, paper, grass, etc) <b>YES / NO / DON'T KNOW</b>                                                                                                                                                                                                                                                             |                                                                                          |
| Has a Site Visit/Inspection been carried out? <b>YES / NO</b>                                                                                                                                                                                                                                                                                                          |                                                                                          |
| Has a Site Investigation been carried out? (If yes, attach ALL available information) <b>YES / NO</b>                                                                                                                                                                                                                                                                  |                                                                                          |
| Are Chemical Analyses available? (If yes, attach ALL available analyses) <b>YES</b>                                                                                                                                                                                                                                                                                    |                                                                                          |
| <b>/ NO</b> Is a Site Plan available    (If yes, attach site plan)                                                                                                                                                                                                                                                                                                     |                                                                                          |
| <b>YES / NO</b>                                                                                                                                                                                                                                                                                                                                                        |                                                                                          |
| Proposed Disposal Site:                                                                                                                                                                                                                                                                                                                                                |                                                                                          |
| Where "YES", I/we confirm that to the best of our knowledge the samples That have been taken are representative of the material to be disposed of, <b>Carrier</b> And that any chemical analysis have been carried out using accredited Analytical methods (where possible) and by a UKAS accredited laboratory. <b>This section to be signed by Waste Producer or</b> |                                                                                          |
| ..... For .....                                                                                                                                                                                                                                                                                                                                                        |                                                                                          |
| Date WIF sent to Assessor:.....Sent by:.....                                                                                                                                                                                                                                                                                                                           | <div style="border: 1px solid black; width: 100px; height: 40px; margin: 0 auto;"></div> |
| <b>TO BE COMPLETED BY WASTE ASSESSOR</b>                                                                                                                                                                                                                                                                                                                               |                                                                                          |
| Do any determinants exceed Waste Management Licence / PPC Permit criteria?    YES / NO                                                                                                                                                                                                                                                                                 |                                                                                          |
| <b>Comments:</b>                                                                                                                                                                                                                                                                                                                                                       |                                                                                          |
| The waste is suitable for disposal at .....                                                                                                                                                                                                                                                                                                                            |                                                                                          |
| The waste is not suitable for disposal at .....                                                                                                                                                                                                                                                                                                                        |                                                                                          |
| Signature of Waste Assessor:.....Date Returned:.....                                                                                                                                                                                                                                                                                                                   |                                                                                          |

NOTE: Please complete all parts of upper section of form – refer to Waste Producer for any missing information

## **APPENDIX 8**

### **NOISE MONITORING**

## **CONTENTS**

- 8.1 INTRODUCTION**
- 8.2 FREQUENCY OF NOISE SURVEYS**
- 8.3 NOISE SURVEY PARAMETERS**
- 8.4 ACTIONS IN THE EVENT THAT NOISE LEVELS ARE EXCEEDED**
- 8.5 NOISE MONITORING EQUIPMENT**

## 8.1 INTRODUCTION

Planning Condition No. 14 states:-

*“During normal operations the level of noise emitted from the site shall not exceed 55 dB(A) Laeq(1 hour) as measured at any noise sensitive receptor outside the site. Noise in excess of this limit, up to a limit of 70 dB(A) Laeq(1hour), may be emitted for up to 8 weeks in any year in connection with short term activities such as the construction of screening mounds, temporary haul roads, and permanent landforms. The Minerals Planning Authority (MPA) shall be notified in advance of such periods.”*

## 8.2 FREQUENCY OF NOISE SURVEYS

At the commencement of each phase of works an attended noise monitoring survey will be carried out at each off-site noise sensitive receptor. The MPA will be informed in advance of the programmed date and time for the survey in order that they may be given the opportunity to witness the survey.

Readings will be taken on commencement of site works once all plant applicable to the phase of works is operating.

Any variation in the method of work, or the plant and equipment deployed, will trigger a further survey at each specified and agreed location.

## 8.3 NOISE SURVEY PARAMETERS

Figure 1 below shows the noise survey parameters.

**Figure 1: Noise Survey Parameters**

|                         |  |
|-------------------------|--|
| Location                |  |
| Date and time of survey |  |
| Survey carried out by   |  |
| Other persons present   |  |
| Reason for survey       |  |
| Equipment used          |  |
| Test run time           |  |
| Date of calibration     |  |

## 8.4 ACTIONS IN THE EVENT THAT NOISE LEVELS ARE EXCEEDED

In the event that the specified noise level limit is exceeded, detailed noise assessments will be completed on site in order to isolate the cause of the excess noise emission.

Figure 2 below shows the checklist to be used as a control measure to remedy excess noise associated issues.

**Figure 2: Noise Control Checklist**

|   | <b>Control measures</b>                                                                                                                                                            | <b>Yes</b> | <b>No</b> |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------|
| 1 | Can the noise source be eliminated?                                                                                                                                                |            |           |
| 2 | Is additional maintenance required to reduce noise levels e.g. by lubrication, tightening, cleaning etc of equipment?<br>(Reassess noise level after maintenance work is complete) |            |           |
| 3 | Can the equipment be modified to reduce noise at source e.g. damping, silencer, baffles?                                                                                           |            |           |
| 4 | Can inherently quieter components be selected? (Reassess after replacement)                                                                                                        |            |           |
| 5 | Can the equipment be Isolated i.e. removed to another location?                                                                                                                    |            |           |
| 6 | Can the equipment be enclosed?                                                                                                                                                     |            |           |
| 7 | Is a noise refuge area needed?                                                                                                                                                     |            |           |
| 8 | Can absorptive material be used to deaden noise in the workspace or a noise attenuation bund be installed?                                                                         |            |           |
| 9 | Is staff training or information on noise emission required?                                                                                                                       |            |           |

Once determined, the source of the excess noise emission will be remedied and, if necessary, the offending item of plant will be replaced, or the method of work revised. The survey will then be repeated to verify compliance with the specified limits.

## 8.5 NOISE MONITORING EQUIPMENT

The instrument to be used for the determination of noise levels is the Pulsar Instruments Model 14, a general-purpose sound level instrument meeting the requirements of IEC 61672 to Class 2.

Noise levels can be checked quickly and simply, through the instrument's large and easy-to-read display, which shows the Sound Level (SPL) with the standard dB(A) frequency weighting. Also included is the dB(C) frequency weighting.

A maximum hold function allows the unit to freeze the display showing the highest level measured.

The instrument can be calibrated for compliance, using the Model 106 Acoustic Calibrator.

Two measurement ranges are included in the Model 14, measuring the most typically encountered levels from 35dB(A) to 130dB(A).

### **Technical Specification**

- a) Applicable standards: IEC 61672:2002-1 Class 2; IEC 60651:1979 Type 2
- b) Measurement Range: 35dB(A) to 130dB(A), 40dB(C) to 130dB(C)
- c) Range Information: L (Low) = 35dB(A) to 100dB(A); H (High) = 65dB(A) to 130dB(A)
- d) Frequency Weighting: dB(A) & dB(C) to IEC 61672: 2002-1 Class 2
- e) Time Weighting: Fast to IEC 61672:2002-1 Class 2
- f) Display Functions: Normal (Sound Level), Maximum Hold
- g) Measurement Functions: LAF, LCF, LAFMax, LCFMax
- h) Display Flags: Overload (Green Light), Under range (Red Light)
- i) Maximum Hold (HOLD), Low battery (LOWBAT)
- j) Display: 3 1/2" digit LCD with 0,1dB Resolution
- k) Outputs: AC Out Max output = 2V
- l) Power: 1 x 9V (6F22, PP3), External DC Power, 7V to 10V
- m) Microphone: 1/2" pre-polarised electret condenser (Typically Type MK:268)
- n) Temperature: Operating: -10°C to +50°C,
- o) Storage: -20°C to +60°C
- p) Dimensions: Length 248mm, Width 66mm, Depth 30mm
- q) Weight: 227 gms (8oz) with battery
- r) CE classification: EMC EN50081-1, EN 50082-1 Safety EN 61010-1, 1993 portable equipment pollution category 2

## **APPENDIX 9**

### **JAPANESE KNOTWEED CONTROL**

## **THE CONTROL OF JAPANESE KNOTWEED**

There is a significant quantity of mature Japanese Knotweed growing adjacent to the northeastern site boundary with Plas Grono Road and other minor outcrops within the site area.

The control works will be carried out by a specialist weed control company over an eradication process of a minimum of 3 years. All outcrops shall be fully identified by site inspection during the spring 2011 growing season.

The Knotweed shall be controlled by the correct use of herbicides without the necessity for removing any contaminated plant material from site.

### **Application methods**

- Where stands are self-contained and of an accessible size these will be sprayed, starting with an early application in 2011 as the stems achieve a growth of approx 0.60m - 1m height.
- Outcrops in inaccessible areas will be stem injected to help prevent the herbicide damaging surrounding bushes.
- The Contractor will inspect the entire site area at each visit to identify any new growth or outcrops and treat as appropriate.

The Contractor will be required to provide full COSHH and risk assessments & Method Statements and to select appropriate herbicides to be effective whilst safe to the path users, wildlife and pets.

Typical Herbicides to be used include:

- Triclopyr – a systemic selective herbicide that enters the JKW through the leaf and is therefore safe to use around trees and shrubs
- Picloram – a powerful and very effective systemic and soil acting herbicide. As it can enter the JKW via the roots it cannot be used around desirable trees. It can be applied at any time of the year.
- Glyphosate – a herbicide safe to use close to the watercourse, only effective on actively growing plants.

### **Treatment Program – Herbicide**

#### **2011**

- Early 2011: cut down all above ground stems and treat all the areas where possible with the herbicide Picloram
- June: Monitor and spray with approved herbicide – Glyphosate, Picloram & Triclopyr
- Late July: Check visit – Glyphosate, Picloram & Triclopyr
- September: Check visit – Glyphosate, Picloram & Triclopyr

**2012**

- May: Monitor and spray with approved herbicide – Glyphosate, Picloram & Triclopyr
- July: Check visit – Glyphosate, Picloram & Triclopyr
- September: Check visit – Glyphosate, Picloram & Triclopyr

**2013**

- May: Monitor and spray with approved herbicide – Glyphosate, Picloram & Triclopyr
- July Check visit – Glyphosate, Picloram & Triclopyr
- September Check visit – Glyphosate, Picloram & Triclopyr

## **APPENDIX 10**

### **PROGRAMME OF WORKS**

**(YEAR 1 TO YEAR 3)**