

# ENVIRONMENTAL & WASTE MANAGEMENT

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## 1.0 INTRODUCTION

This Environmental and Waste manual is based on the requirements of ISO 14001 for a construction project. It describes the mitigating measures that USSL will undertake to evaluate and control any potential impact which the construction may have on the environment of the surrounding area and sets out the basic framework and constraints within which the work will take place. The Environmental Management Plan is comprehensive and includes Waste Management and Pollution Prevention Procedures. Relevant sections will be repeated in many of the USSL Environmental Instructions and Guidance notes.

The Environmental and Waste Management Plan will be a living document, which will be continuously reviewed to take cognizance of additional environmental information and the lessons learnt during the works. It will allow for the inclusion of any further conditions and amendments that arise from the granting of consents or the legitimate concerns of Third Parties. Ultimately all documents will record actual practice.

## 2.0 ENVIRONMENTAL MANAGEMENT SYSTEM AND STAFF TRAINING

### 2.1 GENERAL ORGANISATION

Good mechanism of communication between all levels is essential for the smooth running of this project. An organisation chart showing the level of responsibilities given to Management Team and Site-based Staff on environmental issues will be held by the Operations Manager. The Health & Safety Consultant will liaise closely with the Operations Manager throughout the project. Key Team members, and their main environmental responsibilities, are as follows:

Team Management (See organisation chart)

#### **Director:**

- Will be head office based
- Will ensure sufficient resources to execute and monitor environmental aspects of the project
- Will ensure communications within the team are maintained to a high standard
- Will keep CLIENT fully informed on environmental issues

#### **Operations Manager:**

- Will be site based
- Will ensure sufficient resources to execute and monitor environmental aspects of the project
- Will conduct environmental audits
- Will ensure communications within the team are maintained to a high standard
- Will keep the Director fully informed on environmental issues

### 2.2 GENERAL INDUCTION TRAINING

All personnel will have received relevant training on both general and site specific environmental matters prior to the commencement of any pre-construction and construction activities. USSL is committed to a sound training policy and employees and subcontractors will be given a comprehensive induction before they start work.

#### **The Induction Course will include:**

- Contents of the Environmental Management Plan, goals and objectives.
- Rationale for environmental responsibility, including legislative requirements, client environmental policy objectives, corporate environmental liability.
- Individual environmental responsibilities and environmental constraints to specific jobs.
- Emergency procedures.
- Areas of environmental sensitivity, how activities may effect them, methods and timing necessary to protect them and activities to be avoided.
- Integration of the Environmental Management Plan into the construction process.

On completion of the induction training all personnel who attended will have details recorded on a induction attendance form.

## 2.3 TOOLBOX MEETINGS

Toolbox meetings will be given high priority as a means of effective on-site communication. They tend to be more effective than induction talks as they take place on-site and focus on a particular issue that is immediately relevant. They are also more conducive to questions and feedback than the more formal induction Talks.

The Supervisor will organise toolbox meetings for the staff at least once every four weeks to reinforce aspects of Site Rules, working methods and responsibilities for environmental matters. They will also be held more frequently, if necessary on a weekly or daily basis, in areas or during activities that demand extra vigilance. Attending toolbox meetings is obligatory, personnel are registered on a toolbox talk attendance form. The client is given the opportunity to attend toolbox meetings.

A comprehensive, although not exhaustive, list of the environmental topics that may be covered in toolbox meetings are as follows:

- Trafficking rules
- Construction Site - basic environmental requirements
- On-Site Recognition of Contaminants
- Local traffic plan
- Noise control
- Control of dust
- Use of temporary site lighting
- Working in environmentally sensitive areas, with special reference to site specific sensitivities
- Tree, shrubbery and hedgerow removal and care
- Storage, use and disposal of fuels, lubricants and chemicals
- Watercourse crossings and the potential for pollution
- Housekeeping
- Controlling and removal of mud on roads
- Environmental incident reporting - supervisor's responsibilities and the responsibility of all to report incidents and act appropriately to a given event
- Emergency procedures
- Archaeology. The reporting and ownership of finds and the reporting of the discovery of human remains.
- Inspection and Maintenance of Vehicles and Plant (on delivery and daily), specifically Leaks, Noise and Fumes
- Removal of unsatisfactory equipment
- Incidents and sharing the learning points
- Soil removal and storage

## 2.4 COMMUNICATION

### 2.4.1 Communication (internal)

The Operations Manager consults orally with his project team every day. There will also be regular meetings between the Director and the Operations Manager.

### 2.4.2 Communication (external Client)

Prior to commencement of the project, a meeting will be held with the client, dealing with specific project-related points for attention as regards health, safety and environmental. Any agreements and special details are recorded in writing. Following this, progress meetings will be held with the client. Any agreements and special details are recorded in writing.

### 2.4.3 Communication (external Sub-contractors)

Prior to commencement of the project, a meeting will be held with the sub-contractor, dealing with specific project-related points for attention as regards health, safety and environmental. Any agreements and special details are recorded in writing. Following this, meetings will be held with the sub-contractor. Any agreements and special details are recorded in writing.

## 3.0 ENVIRONMENTAL INSPECTION, AUDITING AND INCIDENT REPORTING

Environmental documentation will reflect the structure of the Environmental Management System. There will be a coherent and comprehensive record compiled of all environmental issues for the duration of the project.

### 3.1 ENVIRONMENTAL INSPECTION AND/OR MONITORING

Environmental inspections, spot checks and/or monitoring will be carried out as necessary. Inspections and/or monitoring can be carried out by the Director, Operations Manager, Health & Safety Consultant, Independent Expert or Site Manager.

This inspection and/or monitoring will include monitoring requirements into Method Statements / Environmental Instructions e.g. river crossings, baselines water sample prior to start of construction work. Gas monitoring will take place prior to any excavation if the route runs close to landfill sites.

Water and soil sampling will be carried out if necessary and under consultation with the relevant environmental legislation. Sample bottles will be kept on site should water or soil sampling prove necessary. Hedgerow and Drainage reinstatement will be monitored as part of the aftercare programme.

### 3.2 INTERNAL AUDITING PROCEDURES

There will be an internal Environmental Audit on a monthly basis involving the following tasks:

- Check that all records for Environmental Inspections are in place.
- Provide an Audit Report.
- Review the Environmental Management System and provide a review
- Time permitting, interview a cross section of the workforce to ensure quality of the training system

### 3.3 ENVIRONMENTAL INSPECTIONS AND INCIDENT REPORTING

An Environmental Checklist will be completed regularly. This will pinpoint areas for improvement and heighten awareness amongst the workforce.

The checklist includes:

- Checks on the security of storage, adequate segregation and handling of waste produced on site.
- Checks that waste transfer notes, carrier and disposal licences have been adequately filled in and filed.
- Check the site for any potential for pollution and instigate preventive measures
- Check Trees and Hedgerows for damage
- Checks to ensure compliance with other commitments in this EMP.
- Check the Environmental Incident Record daily and ensure that the causes of any incident have been investigated and measures taken to minimise the chance of a recurrence.
- Provide recommendations on how waste management and recycling, or any other aspect of environmental performance could be practically improved.
- Reinstatement and land drainage and top cover.

The results of the checklist will form the basis of an Action List that will be discussed between the Health & Safety Consultant and Operations Manager who will delegate the appropriate corrective action to be taken. If there is no response the Health & Safety Consultant will discuss this with the Director. All environmental incidents, and areas where it is considered there is potential for an incident, will be recorded. The aim is to prevent incidents by being aware of the potential as well as to accurately record an accident should it happen. A summary of incidents will be compiled to ensure that all incidents have been satisfactorily dealt with. This summary sheet will also provide data for targeting areas where improved performance is necessary.

USSL will notify all stakeholders within 24hours. The Local Authority or EA also be informed immediately if there is any pollution to a watercourse.

Definitions of incidents are listed as:

- Pollution of the air
- Pollution of the ground
- Pollutants entering watercourses
- Pollution of topsoil
- Excessive noise pollution
- Harmful emissions to the atmosphere
- Incidents involving chemical wastes
- Mishandling, or illegal disposal of, general wastes
- Damage to environmentally sensitive areas
- Damage to Flora and Fauna
- Complaints from farmers or the public
- Samples of Soil or Water

The date, location, description and any cleaning up action taken will be recorded. The relevant pages will be photocopied every evening and passed to the Operations Manager. They will be reviewed by the Health & Safety Consultant and cross referenced with the Action List and Incident form Environmental Pollution. The Logs from all the Supervisors will be summarised for the Progress meetings.

### 3.4 SUBCONTRACTORS

Subcontractor's Method Statements will be reviewed prior to employment. Subcontractors will also be subject to the regular inspections and monitoring. Deviation from the accepted practice will not be tolerated. Subcontractor documentation and site performance will be audited under the same rules as those for USSL.

## 4.0 PROCEDURES FOR MANAGEMENT OF ENVIRONMENTAL CONSTRAINTS AND THE PROTECTION AND REINSTATEMENT OF PHYSICAL FEATURES

### 4.1 EXISTING AND PLANNED LAND USES

The client will address all constraints relating to existing and planned land uses during the original environmental appraisals. CLIENT will address all potential conflicts of use or interest, during the route selection process.

#### 4.1.1 Establishing Site and Fencing

No personnel will walk, or drive vehicles or plant, outside the demarcated areas, except on public highways as approved in the Highways and Access section.

#### 4.1.2 Highways and Access

Access to the Site will be from agreed access points only. All accesses will be gated and appropriately signed to prevent unauthorised access outside working hours. In order to maintain public highways in a safe and useable condition, roads will be mechanically and/or manually brushed as required.

Where cleated equipment crosses the Public Highway, rubber sheeting and/or tyres will be placed to prevent damage to the metalled surface.

Temporary control with stop/go boards for deliveries of equipment and materials may be required at specific accesses. These may be electronic or manual using two persons with radio contact.

Provision will be made for public footpaths to be kept open at all times. Minor, temporary diversions, gates, stiles and mobile bridges will be used where appropriate. The local authorities will be contacted with respect to footpath diversions. It is possible that the local authority would prefer to close the footpaths during the short period when there is an open trench; their preference will be respected.

#### 4.1.3 Landscape quality

USSL undertake to carry out the construction work in a way that will minimise the impact on the quality of the existing landscape. Reinstatement will match the existing land/soil type in order to maintain the hydrology and the contouring of the landscape. Field boundaries and profiles will be re-established, suitable trees/shrubs replanted as required.

A visual impact will be evident during construction and for a short term afterwards. With careful reinstatement of all field boundaries and watercourses, the visual impact will diminish to negligible proportions within two to three years.

#### 4.1.4 Existing Trees and Hedgerows & Removal

##### **Woodlands**

There is a range of woodland types and the cabling route may impact, to some extent, on these. Where possible, the cabling route will utilise naturally occurring gaps, or established tracks. To further minimise disruption the Working Width will be reduced through woodland, hedgerows, watercourses and other areas of concern.

##### **Hedgerows**

Hedgerows are invaluable habitats for a wide range of species and are often the last refuge. Not only do they have value in themselves but they act as a corridor allowing the passage of animals and plants and linking 'islands' of otherwise isolated habitats. In recognition of their importance the Hedgerow Regulations came into being in 1997 requiring permission for the removal of either the whole, or parts, of a hedge.

A hedgerow survey will be carried out which identifies and describe the hedgerows affected by the ducting line. The minimum width (3 metres) of hedgerow will be removed, in accordance with the specific method statement, consistent with good environmental practices and safe working conditions.

During the Construction period the following measures will be adopted to minimise the extent and duration of the impact of the ducting line on wildlife and landscape value of hedgerows:

- Alternative access around hedgerows will be negotiated if practicable.
- Any damaged hedge plants will be pruned or replaced as necessary.
- Hedgerow and tree protection will be included in induction and toolbox meetings to all personnel including subcontractors.

##### **Nesting Birds in Hedgerows**

All British wild birds, and their nests, are protected under the Wildlife and Countryside Act 1981. At present the mitigation measures required for specific birds is not known, however, in a predominantly agricultural landscape hedgerows are of particular importance to birds. Where possible hedgerow removal will take place outside the nesting season to avoid the possibility of work stopping due to nesting birds.

##### **Grasslands**

USSL will minimise impact on unimproved and semi-improved grasslands by ensuring that good cable laying construction techniques are employed. Mitigation measures to minimise damage will be put in place in areas identified as having conservation value. It is envisaged that this will include areas of bog, heath and acid grassland and also the wetter meadows. Measures may include a reduced working width, special procedures such as storing turf rather than topsoil stripping and seed collection programmes.

#### 4.1.5 Watercourses

The crossing of all watercourses does require formal consents. Specific Method Statements will be compiled which detail the precise crossing method for each main watercourse. Extreme care will be taken with all watercourse crossings.

##### **Water Pollution Prevention**

Full details for the protection of watercourses from pollution are documented in the Pollution Prevention Procedures, which form Section 7 of this document.

In summary:

All practicable steps will be taken to prevent silt "run off" into watercourses. All personnel will be made aware that pollution from silt run off is a prosecutable offence.

Water generated from dewatering, seepage into trenches or rainfall will be filtered before it is discharged. No water will be pumped directly into any watercourse.

A variety of methods will be used according to the nature of the situation:

- Water may be filtered through a suitable medium such as straw bales.
- Water may be over pumped while the watercourse is dammed.
- Water may be pumped into settlement tanks, and then released under controlled slow flow into the watercourse.
- Soil will be stored 10m away from any watercourse.
- Any contaminated Water will be disposed of as Special Waste.

Good housekeeping principles will be exercised during construction. The use of drip trays under stationary equipment will be mandatory, prohibition of fuel storage and plant refuelling within 30 metres of any watercourse.

Spill Kits and granules will be carried on every fuel bowser. Every Contractor's vehicle will be equipped with a Spill Kit to deal with any spillage that may occur. Absorbent booms and floating absorbents are contained within the Spill Kit

All site personnel, including sub-contractors, will be trained and fully conversant with procedures for both avoiding and quickly dealing with any pollution incident.

#### 4.1.6 Soil Stripping and Storage

Where stripping and storage of topsoil is required, this will be carried out using accepted good practice amplified in the Method Statement.

As various types of top soil will be encountered during the construction of the ducting line, mixing of soils will be avoided, unless exceptional circumstances prevail, by implementation of the following procedures:

- Topsoil will not be removed in extremely wet weather or when the soil is waterlogged (criteria will be definite) see winter working criteria attached.
- Topsoil will be stripped and stored separately from subsoil; to ensure there is no mixing topsoil and subsoil will be stored on opposite sides of the working width.
- If there are recognisable strata, e.g. peat layers or large stones and boulders, in either topsoil or subsoil these will be stored in a manner that enables them to be replaced in reverse order to that excavated.
- Soil will be stored adjacent to the area from which it has been taken. Soil from hedgerows, ditches and woodland will be stored separately very close to the original location.
- Soil will be stored 10m away from any watercourse.
- Soil stores will not exceed 2.5 metres in height and will not be driven on, or otherwise compacted by plant or vehicles.
- Refuelling of vehicles or plant will not be carried out in the immediate vicinity of stored soil and no waste will be allowed to contaminate stored soil.
- In the areas identified as having Working Width restrictions it may be necessary to remove the soil outside the restricted area and store it in a suitably designated area.
- Disposal of contaminated soils and excess surplus will comply with waste regulations and be disposed of at suitable tips. There will be no movement of surplus material without relevant waste disposal licences.

#### Soil Reinstatement

Topsoil will not be replaced when it, or the subsoil, is soaked or waterlogged. The subsoil will be ripped to remove soil compaction prior to topsoil replacement. Debris will be removed prior to topsoil replacement. After replacement, the topsoil will be cultivated as necessary.

#### 4.1.7 Reinstatement of Fields. Road Verges and Hedgerows

The Working Width will be re-graded to reflect the original profile wherever possible. Surplus subsoil, if suitable for deposition under topsoil, will be spread on a field-by-field basis.

All surplus materials, including imported fill, temporary culverts and geotextile membrane will be progressively removed to a licensed tip on completion of the works. Where necessary, additional or replacement land drains will be installed within the Working Width, in addition to reconnection of severed drainage. The reinstatement of the drainage will be recorded.

Field boundaries will be carefully replaced and dry stone dykes rebuilt in the local style. Hedgerow sections that are removed will, be replanted using a suitable mix of native species. Quality container grown stock will be used, followed by maintenance and weed control.

River/stream corridor vegetation will be reinstated according to the requirements of EA or other Local Authority. If necessary, vegetation will be transplanted and stored for reinstatement.

#### 4.1.8 Other Ecological Features

The following issues will be dealt with in the site Induction course and reinforced with Toolbox Meetings at the relevant locations.

##### **Badgers**

Badgers are protected under the Protection of Badgers Act 1992, the Wildlife and Countryside Act 1981 and the Bern Convention. It is illegal for either an animal or its set to be damaged and disturbed. For this reason the exact locations of sets is confidential information.

Where there is significant Badger activity along the ducting line route close liaison will take place with a Badger Consultant and the following measures will be put in place:

- At known badger crossing points gaps will be left at the base of the fencing to allow free access.
- Sub soil bridges or planks will be laid at the appropriate locations to facilitate badgers crossing the trench line.
- Escape ramps of subsoil or planks will be ramped up the trench every 50m so Badgers can climb out should they get into the trench.
- Should a Badger be encountered nobody will approach the animal and the Badger Consultant will be called immediately. They are wild animals and prone to stress should they be cornered, they also have extremely powerful jaws and strong teeth. The Badger contact number will be held in the Site Office.

##### **Reptiles and Amphibians**

These animals are protected under the Countryside and Wildlife Act 1981. A license, issued by English Heritage Scottish Natural Heritage, is usually needed for handling. On present evidence there does not seem to be a need for specific mitigation measures, however, should they be required Method Statements describing the erection of the fencing and search and handling techniques for amphibians

##### **Birds**

All British wild birds, and their nests, are protected under the Wildlife and Countryside Act 1981. A wide range of birds will be particularly abundant around the hedgerows. Hedgerow sections will be removed out with the nesting season. In areas attractive to ground nesting birds, wet meadows and unimproved grassland, searches will take place throughout the nesting period and if any inhabited bird nests are found they will be reported and cordoned off and will not be disturbed until the fledglings have flown. Mitigation measures for owls will be similar to those for bats.

##### **Water Voles**

Law protects Water Vole habitats. There are no survey results at present; however, should mitigation measures be required they will include the use of bridges rather than a flume pipe crossing and the strimming and searching of the trench area prior to excavation. Reinstatement will be consistent with re-creating a suitable bank profile and vegetation cover for Water Voles.

#### 4.1.9 Archaeological and Heritage Features

If archaeological finds or sites are encountered, work will stop and the Operations Manager and archaeologist notified immediately. Detailed investigations will be needed to define the boundaries of the find and work will only commence when the archaeologist gives approval. This will be after recording and, possibly, excavation of the archaeological site in advance of construction.

All human remains discovered must be reported to the police and coroner immediately. It is a legal obligation.

#### 4.1.10 Existing and Planned Land Uses

All constraints relating to existing and planned land uses will be addressed during the original environmental appraisals by the client. The client will address all potential conflicts of use or interest during the route selection process.

##### **Rights of Way**

There are numerous Rights of way, including bridleways and byways that are crossed by the ducting line. All efforts will be made to maintain rights of way during the short construction period if this is compatible with public safety. Diversions may be necessary in some areas. Stiles, and where necessary signs and/or an escort across the spread, will be provided by USSL. Consultation will take place with the relevant the local authorities.

#### 4.1.11 Aftercare and Monitoring

USSL has an obligation to maintain the site for two years.

## 5.0 POLLUTION PREVENTION PROCEDURES

### 5.1 SCOPE

The following are Pollution Prevention Procedures for implementation during this Project. It is the policy of USSL to conduct its operation in such a manner as to:-

- Prevent adverse environmental impacts
- Ensure mitigation measures are implemented for non-preventable environmental impacts
- Reinstate/restore, as far as is practicable, the environment to its pre-project state

The Procedures cover the actions to be taken in the event of a pollution incident on land or into a watercourse. All staff and sub-contractors will be made aware of the requirements of this Plan at site Induction courses and Toolbox Meetings. High risk areas will be identified and all Site Manager notified.

### 5.2 SAFETY AND LEGISLATION

Pollution control shall be carried out in accordance with the following:

- Health & Safety At Work Etc. Act 1974
- Construction (Health, Safety & Welfare) Regulations 1996
- Control Of Substances Hazardous To Health Regulations 1994
- Control Of Pollution (Amendment) Act 1989
- Environmental Protection Act 1990
- Noise and Statutory Nuisance Act 1993
- British Standard 5228: Noise control on construction sites and open sites (BSI 1997)
- Water Resources Act 1991
- Groundwater Regulations 1998
- Anti-Pollution Works Regulations 1999

Pollution prevention and control will also be carried out in accordance with the guidelines of the Ministry of Agriculture, Fisheries and Food and the Environment Agency's Pollution Prevention Guidelines. There are 22 of these Guidelines, about half directly relating to cable laying construction works. However, they are 'guidelines' only and cannot be used directly as 'procedures'. One of the purposes of an Environmental Management Plan is to develop site specific methods and procedures for protecting the environment from pollution and to design a system of accountability within the project team.

All site personnel, including sub-contractors, will attend a project specific induction briefing, which will cover the requirements of these Procedures. All personnel working on site will adhere to the Company safety policies, site rules and method statements at all times, with emphasis on using and wearing the correct personal protective equipment relative to the type of operation being performed.

Additional safety precautions will be implemented to prevent danger to the public. Any operations, which are carried out adjacent to the public access or thoroughfare, will be closely monitored.

### 5.3 TRAINING

To be effective the implementation of the Environmental Management Plan and relevant Method Statements requires that all staff on site are aware of its contents and their environmental responsibilities. All staff, including sub-contractors, commencing employment on the site will attend an induction training course as specified earlier in this document.

### 5.4 MONITORING OF THE POLLUTION PREVENTION PROCEDURES AND INCIDENT REPORTING

To ensure the Environment Management Plan procedures are being implemented and are effective, a comprehensive inspection, monitoring and reporting system will be put in place as detailed in the Section 4 of this document. All spillages and leaks will be reported to the Site Manager who will investigate and record the situation

In the event of a spillage, which is greater than 2 litres, the incident reporting procedure will be followed. All incidents will be investigated and records kept, including details on ways of preventing a recurrence. Where required, the Operations Manager will inform the appropriate authority. The clients Project Supervisor will be notified immediately. USSL will employ the services of a 24hr Emergency Call Out contractor in the event of a large spill.

Any spillage into watercourses will be reported immediately to the Director, emergency procedures will be implemented and the Operations Manager will make immediate contact with the client and EA or other Local Authority. Complaints from the public will be referred to USS's Operations Manager who will inform the client.

## 5.5 RESPONSIBILITIES

In the unlikely event of any substance or material being accidentally discharged, USSL and its sub-contractors will be wholly responsible for immediate recovery, whether or not it is on the work site. Project management shall submit an Environmental Incident Report within 24 hours of the incident occurring. This report will be fully completed and include the initial measures taken, measures for preventing a recurrence and details of any compensation claims that may arise. CLIENT will be notified immediately.

Care will be taken to ensure complete adherence to third party requirements (EA, local authorities, local landowners etc). All Site Managers will be fully conversant with this document and will be responsible for ensuring their teamwork within its constraints. Pollution prevention is the most significant item within the system of daily and weekly checks. Deviation from the set procedures will not be tolerated.

## 5.6 IDENTIFICATION OF POTENTIAL POLLUTANTS AND CONTAMINATED AREAS

It is anticipated that there will be the usual types of potential pollutants, which may arise from the construction of this ducting line and associated works. The following list includes, but will not be limited to:

- Plant fuels and lubricating oils
- Detergents and Degreasers
- Silty water (surface water from construction site)
- Construction waste (see chapter 8)
- Emissions to the atmosphere of fumes and dust
- Noise (from construction operations)
- Light

Under the Control Of Substances Hazardous To Health Regulations 1994 assessments will be carried out on all substances which are intended for use on the project. A manufacturer's Health & Safety Data Sheet (H.S.D.S.) will accompany all new substances brought onto site.

## 5.7 STORAGE AND BUNDING

The avoidance of environmental damage, as a result of the inadequate storage or misuse of any substance hazardous to health, will be ensured through strict adherence to the company COSHH procedures and the principles identified in project specific risk assessments. The main substances to be used on Site that will fall under COSHH will be diesel and lubricating oil.

Hazardous materials will be stored in suitable containers. Diesel fuel will be stored in special tanks. All tanks, gauges and pipework will be constructed in accordance with the appropriate British Standard.

In areas of potential risk, emergency procedures will be prepared and pollution control equipment provided, such as Spill Kits and absorbent granules. These will also be carried by all the Contractor's vehicles on the site and by refuelling bowsters.

Absorbent booms are part of the Spill Kit. Every watercourse will also store a supply of straw bales. No potentially polluting materials or substances will be stored near watercourses or in such a situation that these can fall or be carried into a watercourse. Areas of peaty soil will also be avoided. Any drainage from the storage of such materials will not be allowed to enter a watercourse.

Drip trays will be placed under all pumps, checked daily and emptied in accordance with the Waste Management Procedures. All vehicle maintenance and fitting work will be done with an attendant drip tray.

## 5.8 SPILLAGES OF POLLUTANTS AND EMERGENCY RESPONSE

### 5.8.1 General

All response requirements will be in accordance with statutory legislation and Environmental Management Plan.

At all times the approach adopted will be to:

- Contain - by using inert material such as sand or earth, digging trenches etc.
- Recover - by using absorbent pads, booms or skimmers. Bag all contaminated materials.

- Dispose - by an approved contractor to a licensed site. Waste transfer notes to be completed and kept on the Environmental Management Plan.
- Report - all pollution incidents to the Forman who will take the appropriate administrative action.

A supply of pollution control equipment will be available at the work site, particularly in high-risk areas. This supply must be capable of dealing with small incidents (5 litres or less) and medium scale incidents (between 6 and 20 litres).

An emergency 24 hour call out number for oil spill clean up specialists will be held on site to facilitate a rapid response in the event of a major incident, where additional pollution control equipment may be required.

#### 5.8.2 Spillages On Land

The probability of small (5 litres or less) and medium scale (between 6 and 20 litres) spillages is greatest during refuelling operations. Staff must be conversant with all the refuelling equipment. Refuelling will be carried out using the correct equipment i.e. nozzles of the appropriate size and self-closing, funnels etc. Each refuelling bowser will carry: -

- spill kits
- 1 bag of absorbent granules

In each area of high-risk activity, the following equipment to deal with spillages of polluting material should be made available: -

- spill kits
- 3 bags of absorbent granules
- Sand bags
- Large heavy duty plastic bags
- A small spillage =< 5 litre
- A medium spillage = 6 to 100 litres
- A major spillage => 100 litres

#### Action in the event of a small spillage

1. Stop the leak.
2. Use absorbent material to mop up spill.
3. Dispose of contaminated soil in heavy plastic sacks.
4. Dispose of sacks at an approved licensed facility following waste management plan.

#### Action in the event of a medium spillage

1. Stop the leak.
2. Contain the spread of the spill using inert material or sand bags as appropriate.
3. Inform the Employer and obtain assistance from Environment Agency.
4. Dig trench downhill of spill to intercept water. Place absorbent material in trench.
5. Dispose of contaminated material in heavy duty plastic sacks and arrange for disposal to suitable licensed site.
6. Notify Safety Advisor and complete Incident Report (See Section 4.0 of this document).

#### Action in the event of a major spillage

1. Stop the leak.
2. Contain the spread of the spill using inert material or sand bags as appropriate.
3. Inform the Employer and seek assistance from EA or USSL's 24hr. Emergency Call Out arrangement.
4. Dig a trench downhill of spill to intercept water. Place absorbent material in the trench.
5. Dispose of contaminated material in heavy duty plastic sacks and arrange for disposal to suitable licensed site.
6. Contact pollution equipment suppliers for emergency deliveries of additional equipment.
7. Notify the Safety Advisor and complete the Incident Report within 24 hours (See Section 4.0 of this document).

#### 5.8.3 Spillages into water

#### Prevention

Storage tanks will not be located near any watercourse or peaty soil. Refuelling near watercourses will be permitted only when construction on that crossing is in progress. At all other times refuelling will take place at least 30 metres from the watercourse. An absorbent boom will be installed downstream of the crossing point prior to commencement of the work.

## Response

In the event of any spill reaching a watercourse, a boom will immediately be deployed downstream of the spillage. It will be secured on each bank and span the entire watercourse.

To enable the recovery of the pollutant, the boom should be deployed at an angle to direct the pollutant to one bank. The pollutant will be removed using floating absorbents and if necessary, skimmers.

All the contaminated material and absorbents will be disposed of in accordance with the Waste Management Procedure. All spillages into a watercourse will be reported immediately to CLIENT, Environmental Agency or other local authority as soon as possible.

## 5.9 CONTAMINATION OF WATERCOURSES - PREVENTION AND RESPONSE

### 5.9.1 Legislation and background

- Water Resources Act 1991
- Environment Act 1995
- Groundwater Regulations 1998
- Anti Pollution Works Regulations 1999

It is the stated policy of EA to target the Construction Industry and prosecute in the event for pollution incidents. Recent legislation has given EA powers to serve notices, not just in the event of a pollution incident, but if they perceive there to be a risk of one.

### 5.9.2 Dewatering

Dewatering, in this document, refers the method whereby well points are sunk into the groundwater in a circle around the area to be excavated. The purpose is to lower the groundwater in the immediate vicinity so the proposed excavations will be as dry as possible. This avoids trench collapse and the necessity for large scale pumping operations. Water so abstracted tends to be crystal clear and silt free. It is discharged, indirectly, into an appropriate watercourse in a controlled manner so as not to undermine banks or stir up silt.

### 5.9.3 Groundwater management

The ducting line does not appear to pass through any defined Public Water Supply Source Protection Zones although the corridor is close to water supply boreholes. Vulnerability of aquifers is dependant on the permeability of the overlying drift deposits.

### 5.9.4 Suspended solids

Pollution can be caused by the discharge of suspended solids into a watercourse. It is classed as a Pollution Incident and as such is a prosecutable offence. EA is treating this type of pollution seriously. Pollution from suspended solids is most likely to occur from pumping out excess rainwater from the trench, which has accumulated from seepage or rainfall, or from uncontrolled run-off from the work site into the watercourse.

## Prevention

This type of pollution is easily preventable if guidelines are rigidly adhered to.

- The first message expounded in the initial Induction training will be "Take 5 minutes to think about what you are going to do. Does it comply with the guidelines
- No water will ever be pumped directly into a watercourse
- When the running track and flume pipes are installed a slit trench, filled with straw like deep litter, will be excavated parallel and close to each watercourse with running water and a sloping bank. This is a quick, cheap and effective way of preventing run off from the spread due to rainfall.
- The running track will be 'lipped' as it crosses a watercourse to prevent run off.
- Straw bales and pollution will be stored at all watercourses.
- Spill Kits will be held on all Fuel Browsers and on all Contractor's vehicles.
- All watercourses will have a sign stating 'pumping without a permit and directly into a watercourse is prohibited'

- All pumps will be checked to make sure they are in good working order before coming on site.
- All pumps, or series of pumps in a confined location, will have a designated attendant responsible for ensuring the pump is in good working condition and is complete with drip trays. He will check that the appropriate consents to discharge water are in place before operating the pumps.
- All pumps will be security protected to ensure there is no unauthorised discharge.
- Pump attendants will be responsible for discharge permits.
- Water will be pumped at low volume and filtered through straw bales. A settlement tank and straw bales will be used if the quantity of water justifies this.
- Care will be taken to avoid soil erosion of river and stream banks.

## Responses

In the event of ingress of suspended solids into a watercourse, immediate action will be taken to prevent further contamination. Any activity, which is causing the pollution, will stop immediately.

Straw bales will be used extensively and deposited to filter and slow down the rate of precipitation. The Site Manager will contact the Operations Manager immediately.

The Operations Manager will contact EA or other local authority immediately and will comply with the full reporting procedure given in the Environmental Management Plan.

The Incident will be subject to a thorough analysis and review.

### 5.10 CONSTRUCTION WASTE

Items such as discarded ducting pipe, wrapping materials, plastic and metal banding, packing, plastic sheeting, can cause pollution of soils or subsoil, damage to equipment and can be a hazard to animals. All waste materials will be cleared regularly to the nearest road crossing where it will be picked up and transported to the relevant skip in the yard.

Full details are included in the Waste Management Procedures, Section 8 of this document.

### 5.11 EMISSIONS

These can be exhaust fumes from plant and machinery, fumes from chemicals, coatings and solvents or mechanical processes, dust and grit generated by site operations.

All plant used on site will be in good operative condition. Exhaust emissions from all plant will be reduced as much as possible by effective and regular maintenance.

Care will be taken to ensure that no emissions can into excavations, shafts or tunnels by removing the source from the immediate area. Where such risks occur, adequate ventilation or forced airflows need to be installed. Plant and generators will be switched off when not in use.

### 5.12 DUST, GRIT AND MUD

During prolonged periods of dry weather, dust may cause a nuisance to local residents and damage nearby crops, vegetation and animal habitats. For major dust control on the working width, a water sprinkling system will be used as necessary. Adequate P. P. E. will be provided for personnel working in these environments.

Precautions will be taken to minimise the deposition of mud on the roads, but this cannot be avoided completely. Heavy deposits will be removed by plant/vehicle operators prior to accessing the public highway. A mechanical brush will remove the remaining deposits that contaminate the roads. This mechanical brush will operate at each of the vehicular access points (road crossings) and provision for additional labour for manual brushing during intensive operations.

### 5.13 NOISE

The Control of Pollution Act 1974 and Noise and Statutory Nuisance Act 1993 contain powers to control noise emission and to require the employment of the best practicable means for preventing or counteracting the effect of noise. Well defined noise control procedures will be implemented for all construction plant equipment and all site activities.

#### 5.13.1 Noise mitigation

All plant and machinery will have effective silencers fitted and kept in good condition. Full protective equipment, particularly ear defenders and/or plugs will be provided on site and available to all operatives. Noise pollution measures such as controlled venting, silenced equipment, preferred time of day and screening will be introduced at all testing and commissioning operations.

#### 5.13.2 Noise levels

Noise levels can be predicted from knowledge of the type and number of plant to be used for various activities. The activities listed will not necessarily occur continuously or simultaneously but in stages with peaks of activity. Noise from standard construction plant is of short duration therefore impact is minimised. Occasionally 24hr. operations may be necessary but discussions will take place with the local Environmental Health Officer before such operations begin. Residents will also be notified.

#### 5.13.3 Potentially sensitive areas

Sensitive areas, or areas within 100m of the ducting line will be monitored and if the level of construction noise increases added screening and preferred working hours will be implemented in accordance with EA requirements.

#### 5.14 LIGHT

The main construction will be during the whole year, it may be envisaged that light pollution will affect this project. Spotlights and direct lights will be positioned so as to avoid glare to both properties and highways.

If installation of trenchless crossings needs to continue into the hours of darkness, site lighting will have to be established for safety reasons. It will be sited to prevent glare and the generators will be shielded to reduce noise.

#### 5.15 AGRICULTURAL DISEASE

Areas of transmissible agricultural disease will be identified prior to the commencement of site preparation. Diseases which typically require special attention include; foot and mouth disease, brucellosis, swine vesicular disease, fowl pest, swine fever, potato cyst eelworm and beet rhizomania.

Enquiries will be made to the area office of SOAFED to establish the absence of any record of carcass burials within the vicinity of the ducting line route. Should any such burial pits be discovered during construction work the Divisional Veterinary manager will be notified immediately.

DEFRA have produced guidelines for the prevention of spread of plant and animal diseases. The publications are:

'Preventing the Spread of Plant and Animal Disease: A Practical Guide'

'Precautions to Prevent the Spread of Animal and Plant Diseases'

#### WASTE MANAGEMENT PROCEDURES

#### LEGISLATION AND REFERENCES

- Environmental Protection Act 1990
- Environment Act 1995
- Control of Substances Hazardous to Health Regulations 1994
- Control of Pollution (Amendment) Act 1989
- Environmental Protection (Duty of Care) Regulations 1991
- The Collection and Disposal of Waste Regulations 1988
- Hazardous Waste Regulations 2005

- The Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991.

The Waste Management Procedures apply to all activities throughout the project. All personnel, USSL and Subcontractors, will be made aware of the requirements in this Plan at the initial site Induction and in subsequent tool box talks.

USSL acknowledges the statutory Duty of Care, which applies, to them under the Environmental Protection Act 1990. This imposes a vicarious liability on USSL, and others in the chain of waste handling, making them ultimately responsible for the storage, transportation and disposal of all waste generated throughout the project.

USSL will ensure that:

- All reasonable steps will be made to minimise and recycle Waste where appropriate.
- All waste is brought off site and is segregated, labelled and stored safely in the Yard until such time that is taken away by a Waste Contractor.
- That all waste is safely deposited at a licensed disposal tip.
- The Licence of the Waste Tip will be held on site.
- That waste Transfer/Consignment Notes are correctly completed for each approved carrier and waste consignment and that these Notes are held on site.
- That any incidents of incompetence or mishandling or illegal disposal are reported.
- The procedures detailed in this Waste Management Plan and the definition of Duty of Care is brought to the notice of all employees and subcontractors.

It is the policy of USSL to deal with wastes and by-products, where possible, in a creative and beneficial manner. The quantities of paper and aluminium cans generated by this project may not be sufficient to make recycling them an economically viable option.

## 6.0 Waste Management

### 6.1 DEFINITION OF WASTE

The legal definition of waste in Britain is contained in the Environmental Protection Act 1990 (and amended in the Environment Act 1995). The Waste Management Licensing Regulations 1994 harmonise British definitions with the EC Framework Directive on Waste. Waste is widely defined and includes excess unwanted materials, effluents; unwanted surplus substances arising from the application of any process and any substance on article which is broken, worn out, contaminated or otherwise damaged. Waste becomes controlled by legislation when it is discarded by the holder. Materials being returned to the company stores or supplier for credit are not to be considered as waste. Materials sold for re-use or re-cycling are still classified as waste and subject to all the statutory controls, including Duty of Care.

The four categories below comprise 'Controlled Waste' which is covered by the legislation. At present Controlled Waste excludes mining, quarrying or agricultural wastes, waste explosives and (in most cases) sewage.

- Household waste - consists of waste from private dwellings and includes canteen/mess facility waste.
- Industrial waste - consists of waste from any factory/construction operation.
- Commercial waste - consists of waste from premises used, wholly or mainly, for the purpose of a trade or business and includes office waste.
- Special waste - consists of waste, which may be dangerous to life or health as fully defined by the Special Waste Regulations 1996.

### 6.2 DISPOSAL OF WASTE

Waste generated will be disposed of via a registered carrier to:

- Licensed landfill site.
- Licensed incineration plant.
- Recycling facility, which will also be licensed

The Control of Pollution (Amendment) Act 1989 makes it an offence to handle waste unless registered as a carrier. Disposal of special waste is strictly controlled by legislation, Special Waste Regulations 1996, which contain a revised definition of what constitutes Special Waste.

The disposal site will be licensed to receive the type of waste being disposed of. Some sites may have restrictions on the amount of liquid waste they can receive, or may not be suitable for disposing of certain chemicals and oils, or materials contaminated with these substances.

Disposal sites are licensed and their reference numbers must appear on official documents, e.g. drivers' consignment notes, route sheet. Unless a carrier is able to produce official documents quoting the relevant number, he may not be permitted to use the facility. The USSL Operations Manager shall ensure that the appropriate representatives of haulage companies are made fully aware of this requirement.

Any proposed disposal site shall be checked to ensure that a valid licence has been issued by the relevant Environment Agency of the type and quantity of waste to be deposited. Copies of the relevant licences shall be obtained and filed by the Operations Manager.

### 6.3 STORAGE AND TRANSPORTATION

Under the Control of Pollution (Amendment) Act 1989, it is a criminal offence for anyone who is not registered as a carrier to transport controlled waste.

All waste (with the exception of contaminated waste, see section 8.5) produced along the ducting line route will be bagged and stored at the nearest road crossing. A vehicle will collect the bags and transfer them to the Construction Yard.

The waste will be segregated and deposited in the appropriate, clearly labelled skip/drum or enclosed area. These will be marked as follows:

- Special waste- all to be segregated into drums and recycled
- General Waste
- Wood
- Pipe waste (rubber/plastic)

It is anticipated that fairly large quantities of general waste will be produced as a result of this project. The main types of waste will be inclusive of, but not restricted to, the following:

- Right of Way clearance - hedgerows/fencing
- Timber packaging
- Ducting pipe fragments
- Ducting pipe covers and protectors
- Rubbish/Canteen waste
- Paper/Office waste
- Excess subsoil from excavations
- Temporary road materials

The Special Waste produced will include:

- Contaminated land
- Fuel/Lubricant containers
- Contaminated Spill Kits
- Batteries
- Fluorescent tubes

At the site offices and compound the following waste will be segregated:

- Paper waste (for recycling)
- Printer cartridges (strictly speaking Special Waste, for recycling)
- Cans (for recycling)
- Other refuse

Should any special liquid waste be produced on site, advice will be sought how to determine the best means for collection and disposal. This will be contained in purpose built, enclosed, lined ponds, which may themselves require a license.

The Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991, details a system of the registration of carriers and also specified procedures for the seizure and disposal of vehicles used for illegal waste disposal. NACAP will therefore ensure that all

hauliers employed for this purpose are registered and copies of their Certificates of registration will be obtained and filed by the Operations Manager.

Every movement of waste must be accompanied by a consignment note, which incorporates a unique code. The consignment note must travel with the consignment.

#### 6.4 HAZARDOUS WASTE

During a project USSL do not anticipate that the disposal of 'Hazardous Waste' will assume any greater significance than is usual for ducting line projects. However, the following procedures will be taken if necessary.

The handling and disposal of potentially contaminated soils and water will comply with the legislation and with the requirements and advice of EA. The following precautions will be taken:

- Special waste shall not be moved from the site of its production until all necessary waste disposal documentation has been completed and lodged with the appropriate regulator, Environment Agency, for at least three working days.
- In case of doubtful identification, waste materials must be treated as Special Wastes until proven otherwise.
- Samples of uncategorised wastes must be taken for analysis to determine disposal methods.
- Special Waste shall be kept away from any other waste, adequately labelled and covered.
- Any relevant data should be kept with the waste until disposal arrangements have been made and are in progress.
- Transport of hazardous waste will be in a marked vehicle and handled by waste disposal experts. (Contract with an approved company)
- Documentation to take contaminated material off-site will be the responsibility of a specifically designated person.

#### 6.5 RECORDING

A consignment note must accompany every movement of Waste. A copy of this note will be retained, filed and held at the site offices. Copies of all waste documentation will be retained for two years for Waste Transfer Notes and 3 years for Waste Consignment Notes. These will be included in the Environmental Management Information System.