

# CONSTRUCTION PHASE PLAN

## CONSTRUCTION PHASE PLAN (CPP) AND SUPPORTING SAFE WORKING PROCEDURES (SWP'S)

**ISSUING OFFICE:** Chester

**Project Name:** Talacre Beach, Point of Ayr

**Project Number:** QN251239

**Project Address and Postcode:** Talacre, Holywell CH8 9RP

**Date:** March 2025

Prepared by Geotechnics Limited in the role of Principal Contractor.

Issue:	Date:	Description	Prepared by	Reviewed by
1.0	31/03/25	Draft CPP	C Southall	

It is essential that you have access to the relevant CoSHH assessments and Safe Working Procedures via one of the following methods:

1	Company laptop with up to date downloaded version of the field work manual.
2	Company laptop with remote access to Templates.
3	Electronic device with access to the field work manual via 
4	Hard copy included within on-site project documentation folder.

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**1. DESCRIPTION OF PROJECT:**

This Construction Phase Plan (CPP) and supporting Safe Working Procedures (SWP’s) has been produced by Geotechnics Ltd (known from herein as the Company), to describe the proposed ground investigation works involving ground investigation works on behalf of ENI UK (known from herein as the Client).

ENI UK is installing a 33kv cable from the Point of Ayr gas plant to the offshore Douglas Platform. As part of the installation a horizontal directional drill is required to be implemented under the dunes at Talacre Beach.

To support the design of the HDD design profile a good geological model is required.

Currently ENI UK has a ground model as shown in *Figure 1*. There is a classification of low confidence under the dunes with the information that is currently available.

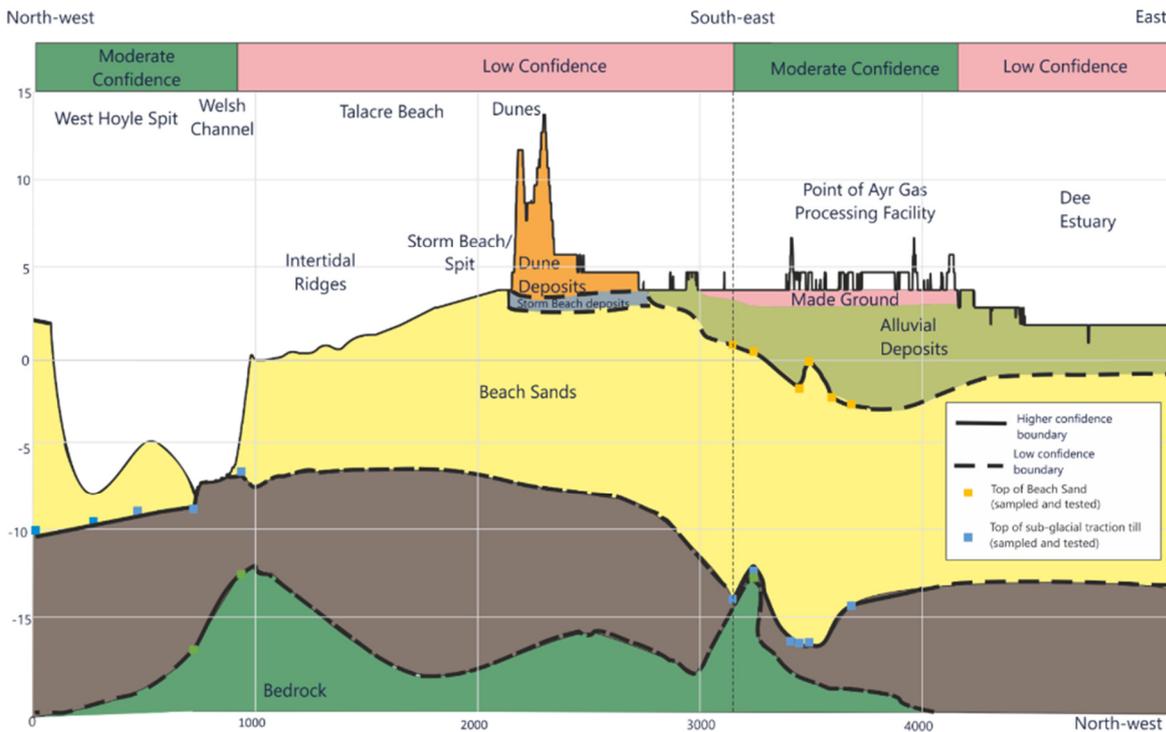


Figure 1: Cross Section Model (Report 1025H0BGRV09420)

**(a) Project Description (Scope of works):**

To accomplish this, the following activities will be carried out which are detailed in the relevant **Safe Working Procedures (SWP’S) or specific method statements** as indicated below:

Activity	SWP Number
Geophysical Survey	SEP RAMS
Inspection Pits	03
Cable Percussion Boring	01

**Scope of Works**

The number of locations below may change slightly as the GI works progress.

Activity	Location Details
Cable Percussion boreholes	3nr to 30mbgl
Geophysiscs on southern side	EM + ERT

**Materials and Consumables**

*Drilling:* Silt control materials, line marker spray, bulk bags, tubs and environmental sampling jars.

*Inspection Pits:* Marker posts (garden canes), line marker spray, bulk bags, tubs and environmental sampling jars.

*Installations:* Bentonite pellets, bentonite powder, cement, pea gravel and post-mix concrete. Vibrating wire piezometers and data logger units. Divers and baro-loggers. Multiparameter instrument. Flush and raised covers and stock proof fencing.

**Plant & Equipment**

- Heras fencing
- Site signage
- Container stores
- Welfare facilities
- Drying room
- Drilling rigs including compressors and ancillary equipment
- Ground protection boards
- Haaglund Rover and Trailer units
- Tracked dumper

**Preparation**

- Safety Briefing and Site Induction to be given to each member of the team by Site Supervisor before they commence work or if conditions/requirements change. Daily briefings shall be given by the Site Supervisor. Weekly tool box talks shall be given by the Site Supervisor on various topics.
- Site supervisor to carry out a visual ‘Dynamic Risk Assessment’ before work commences and as work progresses, if anything changes work shall stop.
- Permits to dig to be completed before intrusive works take place. Copies of this document shall be issued to individual drillers with the remaining copies being filed back in the site office.
- Works are to be confined to the site boundaries at all times. Vehicular and plant movements are to be restricted to agreed access routes.

**Safety**

The main site hazards to be considered are working adjacent to water and in an area affected by tidal water; soft ground conditions; underground and overhead services; slips, trips and falls; and working near/adjacent to members of the general public.

Geotechnics’ Permit to dig shall be completed as detailed above following completion of the following:

- SEP Geophysical to undertake a GPR and Cable Avoidance Tool (CAT) surveys of the proposed exploratory hole location.

Boreholes locations may require adjusting / relocating based upon a review of the buried service surveys. For works near existing sensitive pipelines etc or works that require crossing, works authorisation procedure must be followed – exclusion zone must be set out by asset owner, Geotechnics to survey in points of exclusion zone; all temporary works designs/authorisation to be in place and approved.

- All operatives are to be made aware of potential risks and the risk assessments. Welfare facilities will comprise of combined welfare units (canteen, drying room, toilet) placed at agreed locations. Welfare vans may need to be used for some locations.
- Site managers, supervisors and technicians are all first aid trained.
- First aid kits shall be available within all fleet geotechnics vehicles and in the site welfare unit.
- All gates are to be kept shut at all times.
- All site operatives to adhere to site signage.
- A site speed limit of 10mph shall be in place at all times when off the highways.

The following PPE shall be worn at all times:

- High visibility upper body clothing.
- Safety helmet
- Task specific gloves.
- Safety Boots (Not rigger boots).
- Light eye protection

The wearing of shorts, skirts, sleeveless tops on site is not permitted.

Additional PPE may be worn where required by task-specific risk assessments.

### **Environmental**

Sections of the ground investigation works may be in environmentally sensitive areas. Telacre Beach dunes are classed as a SSSI. The works are not anticipated to impact on any designated sites.

The need for bio-security is not anticipated, but in the instance it is requested by the Client, please see below for the procedure.

The following describes the procedure that shall be followed where a bio-security risk is identified to ensure adequate disinfectant of boots, clothing, vehicles and equipment:

- Follow a strict protocol of CHECK-CLEAN and DRY for all plant, machinery and equipment prior to deployment to site.
- Disinfectant used should be DEFRA approved.
- Wash off all mud, slurry and other organic matter with soapy water before applying disinfectant.
- Hand pump sprayers should be used to apply disinfectant to vehicles and equipment at the beginning and end of each shift.
- Disinfect boots and waterproof clothing (if used) at the beginning and end of each shift.
- A sponge can be effective for applying disinfectant to protective clothing. When using brushes, brush away from the face/eyes.
- The used disinfectant solution should be disposed of according to manufacturer's instructions small quantities of diluted solution may be disposed of in waste water systems or on grassy

land away from any watercourse. If the farm owner objects to disposal on his land then the solution will have to be returned to the water container and disposed of it at a suitable location off site.

- Equipment should then be stored safely in suitable sealed storage boxes or plastic bags.
- Wash hands with soap and water at the end of the disinfection procedure.

COSHH documents will be included in Appendix N.

### **Bio-Security Considerations**

The potential for the investigation to either damage or disturb wildlife and the ecosystem is present. Measures are to be put in place so as not to pollute any watercourses or to disrupt/disturb the surrounding environment. Geotechnics shall leave the site in as clean and undisturbed a state as is so far reasonably practicable.

### **Protocols:**

#### **Site Induction**

All personnel on site will be made aware of the requirements and special environmental circumstances regarding this site as part of the site induction in accordance with Geotechnics Limited ISO14001 procedures and policies before any works are undertaken. Particular mention shall be made (but not limited) to the existing known services and interaction with the general public. ENI shall provide Geotechnics with a statement and contact details to provide to any members of the public who have any queries on the works being undertaken.

#### **Toolbox Talks and Daily Briefings**

The site supervisor from Geotechnics Limited will undertake regular toolbox talks on site that will be attended by all site staff. This may be split into smaller groups to ensure there isn't a 'large' gathering of site staff at one location. Toolbox talks will cover ongoing site measures in place to mitigate existing services. Site staff will be informed of measures in place for given activities and be reminded that no vehicles shall deviate from agreed access routes / trackway that has been put in place at any time.

A morning briefing shall be held daily for all site staff. This will be split into areas to minimise number of staff the extra number of vehicles in one place. Geotechnics site supervisor and site based projects team will lead daily briefings and ensure everyone is fit for work and that there are no safety concerns.

#### **Permits to dig**

Where deemed necessary Ecologists shall carry out a visual assessment of access and exploratory hole locations and prior to starting work agree alternative access, location or protection measures where required. Permits to dig will be required at each location and must note and take account of these ecological requirements and any other specific considerations unique to that location, i.e. proximity to water

#### **Method of Working**

All works will be undertaken as per Geotechnics Safe Working Procedures & Risk Assessments or in line with task specific RAMS with the following additions, where necessary:

1) All plant will have plant nappies placed beneath and spill kits readily available to contain any spillages. In the case of an accident such as the rupture of a hydraulic hose, all works will cease and emergency spill procedures will be initiated immediately.

2) Access to each location, use and placement of working materials and equipment will be arranged and agreed in order to minimize amount of disturbance to the ground. This may include (but not be limited to) the

placement of mats, boards or other temporary materials to reduce the effects of the equipment or travel across the site surface. All work areas shall be fenced off to protect workforce, livestock and members of the public.

3) Rock cuttings will be returned to the surface and held within a holding tank ready for collection and disposal off-site at a suitably licensed waste facility (when using water flush). When using Air/Mist, cuttings will be collected at surface on geotextile and will be disposed of off-site at a suitably licensed waste facility.

Where drilling in close proximity to any watercourses, if excessive discolouration of the water in the river occurs, especially after the casing has been firmly seated into the rock, then work will stop and not restart until everyone is satisfied that the source of the discolouration has been identified and eliminated.

Where silty water runoff is anticipated the working area around each borehole will comprise of Hessian or Woven Polypropylene sand bags. The sand bags shall contain inert material from a non-riverine source. These will act as secondary barrier for fines migration in the unlikely event that the drilling tanks overflow (for water flush). When using Air/Mist, a bund shall be set up around each borehole position with silt fencing around to prevent fine migration. All collected water will be pumped into IBCs and disposed off-site at a suitable waste facility.

5) All plant and equipment fuelling activities or maintenance will be undertaken off-site where practicable. If not, measures will be taken to ensure that materials or wastes associated with such activities are prevented from contaminating the underlying ground. This may include the provision of additional spill kits, spill trays, etc.

Fuel will be stored in a locked approved bunded bowser. Fuel containers of between 5L to 20L may be used to fuel small plant, and these fuel containers will be secured in a site vehicle at all times. No fuel shall be stored in the immediate vicinity of a water course.

Should a leak occur, the plant will immediately be stopped and a spill kit deployed. All Geotechnics staff, trained plant operatives and NVQ qualified drillers have been trained in the deployment of spill kits. Once the leak has been repaired the contaminated spill material will be correctly disposed of in accordance with hazardous waste regulations.

6) In order to ensure that a visual log of the works is kept for future reference, photographs will be taken before during and after each borehole. These should be supplemented by evidence of the presence or potential disturbance of any of the above noted plants and animals.

7) Where possible, the investigation will be undertaken so as to minimise the visual and physical impact where possible.

Surplus borehole arisings shall be bagged and transported to a Geotechnics licensed skip. General waste shall be disposed of in a separate Geotechnics licensed skip. Environmental procedures outlined in the EN301B form (Appendix E) shall be followed at all times.

### **Method & Sequence for Scope of Works**

Geophysical Survey – As per specialist contractor’s safe working procedures (to be signed by all staff and copy retained in Appendix X)

Cable Percussion rig element of works

- Mark out with a GPS or agree borehole positioning with the Client’s representative.

- Exploratory holes to set out following permit to dig procedure including GPR survey and CAT scanning by SEP. The site manager/supervisors shall ensure boreholes are sited a suitable distance away from any underground services found during the survey.
- Arrange and install ground protection measures which may include using non-woven geotextile with silt fencing and bund surrounding to prevent fine migration.
- Access borehole location.
- Erect cable percussion rig.
- Inspection pits to be excavated to a depth of 1.20m (or rock head if encountered). The base of the pit shall be scanned upon completion.
- Cable tool boring of superficial deposits at 150/200mm diameter to specified depth. Reference shall be made to Geotechnics' Safe Working Procedure SWP01 for Cable Percussion Drilling.
- Temporary installation of any casing for Rotary drilling continuation or backfill with bentonite pellets (and groundwater and gas monitoring standpipe if applicable with gravel filter section).
- Clear spoil/tidy borehole location.

### **Temporary Works**

During the planning of a ground investigation any need for temporary works will be assessed. The temporary works required by Geotechnics will almost exclusively be borehole drilling platforms or works to enable access to drilling locations. An initial assessment should include: access restraints, space available, length of use, weight of equipment and materials to use the solution, surrounding surface water features and buried structures. After the initial assessment has been made the below flow diagram will be followed.

The following persons/subcontractors have been nominated as follows:

- Jonathan Gray BEng(Hons), PGDip is nominated as designer and construction supervision for: Temporary earthworks for drilling platforms and access routes, Temporary crossing points.
- John Knowles BSc(Hons), MSc, CGeol, FGS is nominated as design checker for: Temporary earthworks for drilling platforms and access route.
- Davis Trakway; an approved sub-contractor are nominated as designer, design checker, installer and installation supervision for: Temporary roadways over soft and sensitive ground. Temporary bridges/ ditch crossings.

### **Protection of the Works**

All holes shall be left in a safe and secure manner overnight. No inspection pits shall be left open overnight. All fences and gates shall be locked or left in a secure manner out of working hours, and closed as a minimum during working hours.

Security systems will be utilised at the site compound and borehole positions.

### **Commencement Date:**

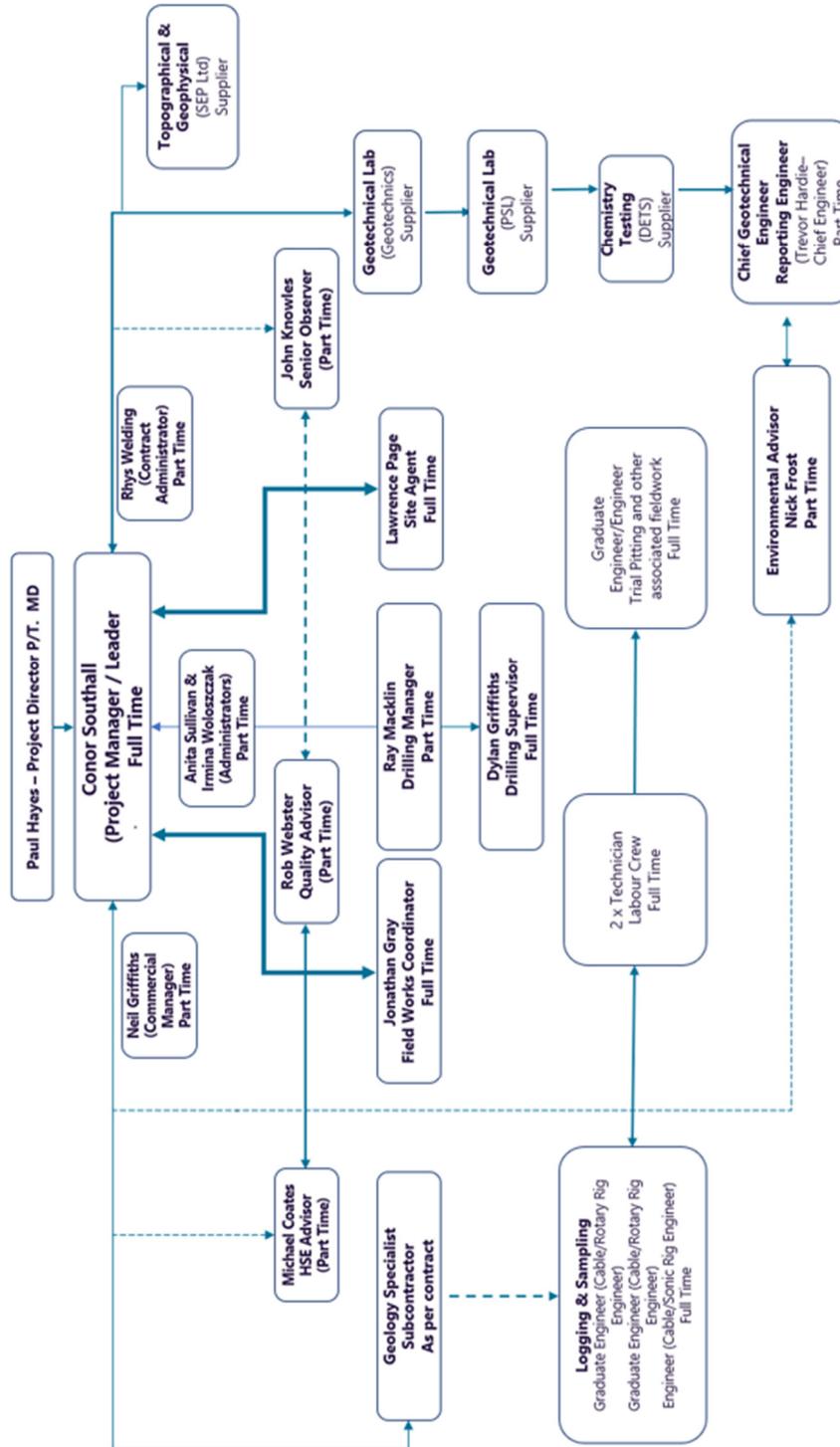
The works are scheduled to commence on ...

The project has been notified to the Health and Safety Executive on ...

by the Client identified in 1(b) overleaf.

A copy of the F10 was provided to Geotechnics on .... The F10 (rev) shall be displayed within the site welfare facilities.

**1(b) Contract Details, Management Structure and Supervisory Arrangements:**



Duty Holder	Name	Organisation	Address	Other Contact Details
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Client	Nige Waddington	Eni UK	Eni House, 10 Ebury Bridge Road, London, SW1W 8PZ	Telephone:	
				Mobile:	07740 702903
				Email:	<a href="mailto:Nige.Waddington@external.eni.com">Nige.Waddington@external.eni.com</a>
Principal Designer	Ignacio Ruiz Moreno	Eni UK		Telephone:	
				Mobile:	
				Email:	<a href="mailto:Ignacio.Moreno@eni.com">Ignacio.Moreno@eni.com</a>
Technical Co-ordinators	Daniel Hooley / Russel Yates	Eni UK		Telephone:	
				Mobile:	07866 063332 / 07795 511977
				Email:	<a href="mailto:Daniel.Hooley@external.eni.com">Daniel.Hooley@external.eni.com</a> / <a href="mailto:Russell.Yates@external.eni.com">Russell.Yates@external.eni.com</a>
Principal Contractor	Paul Hayes	Geotechnics	Unit 1b, Borders Industrial Estate, River Lane, Saltney, CH4 8RJ	Telephone:	
				Mobile:	07736 296950
				Email:	<a href="mailto:PHayes@geotechnics.co.uk">PHayes@geotechnics.co.uk</a>
Project Manager	Conor Southall	Geotechnics		Telephone:	
				Mobile:	07825 817688
				Email:	<a href="mailto:CSouthall@geotechnics.co.uk">CSouthall@geotechnics.co.uk</a>
Site Supervisor	Jonathan Gray	Geotechnics		Telephone:	
				Mobile:	07810 838371
				Email:	<a href="mailto:JGray@geotechnics.co.uk">JGray@geotechnics.co.uk</a>
GPR / Topo Survey and Geophysical Surveys	James Cotterill	SEP Geophysics	Unit 3D, Selby Place, Skelmersdale, WN8 8EF	Telephone:	
				Mobile:	07590 328769
				Email:	<a href="mailto:james.cotterill@sepgeophysical.com">james.cotterill@sepgeophysical.com</a>
Cable Percussion Contractor	Steve Lowery	SL Drilling	30 Dalbeatie Rise, Whelly, Wigan, WN1 3YP	Telephone:	
				Mobile:	07799 045184
				Email:	<a href="mailto:stelowery@hotmail.co.uk">stelowery@hotmail.co.uk</a>
GPR Contractor	Calvin Scouler	CMS Surveys	308 Longmoor Lane, Liverpool, L9 9BZ	Telephone:	0151 474 3992
				Mobile:	07426 632211
				Email:	<a href="mailto:Calvin.scouler@cmssurveys.co.uk">Calvin.scouler@cmssurveys.co.uk</a>

**(c) The Extent and Location of existing records and plans available:**

The **Client** is to provide the following records and plans in the pre-construction information;

- Access Agreement Plans
- STATs plans
- 

**Drawings of all known buried services will be supplied for the relevant site by Geotechnics and in particular, prior to any excavation works commencing.**

**A GPR survey shall be conducted prior to setting up.**

**(c)(i) Breaking Out / Permit-to-Dig / Drill:**

A Permit to Drill / Dig is to be filled in for each position.

Prior to undertaking any breaking out, each respective location shall be checked for buried services using a GPR and CAT Survey carried out by SEP Geophysical.

The location will then be hand dug to a depth of 1.20metres below ground level to ensure the location is free from shallow buried services.

The bottom of the hand dug pit will be checked with the CAT prior to continuing with any drilling work.

<b>Underground Services</b>	Yes ✓	No ✓
Are Underground Services likely to be present?	✓	
If yes, Consideration must be given to the Company Health, Safety and welfare Manual and relevant SWP's .		

<b>Over-Head Services</b>	Yes ✓	No ✓
Are Over-head Services likely to be present? (Additional reference may be required in respect to Rail / Tramway Operators and their Overhead Powerlines, i.e. Possession / Isolation requirements etc. If applicable, insert information in (c)(i) below.	✓	
If Yes, Consideration should be given to relevant SWP. ( Additional reference may be required in respect to Rail / Tram overhead powerlines, i.e. Possession / Isolation requirements)		

**2. MANAGEMENT OF THE WORK**

<b>(a) Management Structure</b>
The Management Structure for the project shall be in accordance with 1(b) above. It shall be the responsibility of the <b>Site Supervisor</b> to coordinate and manage the day-to-day activities. In the event that the <b>Site Supervisor</b> is unable to deal with or address any particular issue(s) that may arise, liaison in accordance with 1(b) shall be undertaken.

<b>Health and Safety Advice</b>
Any Health and Safety issues that cannot be resolved on site by the <b>Site Supervisor</b> shall be communicated to the <b>SHEQ Director</b> or <b>Regional Manager</b> for action.

<b>(b) Health and Safety Goals</b>
The Health and Safety Goals set by the Client are communicated in the pre-construction information and are: <ul style="list-style-type: none"> <li>• Commitment towards ‘Zero Accident Performance’ from all parties involved</li> <li>• Effective management of environmental issues</li> <li>• Objective is to have the best Health, Safety &amp; Environmental (HS&amp;E) performance</li> <li>• Continuous improvement in HS&amp;E management processes and programmes</li> <li>• Senior Management Visibility</li> </ul>

- Positive promotion of HS&E by supervisors through effective communications and leadership
- Active involvement in HS&E programme by the workforce.

**Monitoring and Review of Health and Safety Performance**

The **Site Supervisor** will be responsible for monitoring the day-to-day site health and safety requirements and shall make a record of any shortfalls in the standards required, within the site diary. To assist the **Site Supervisor**, each respective **Contractor** working on or involved in the project shall be responsible for monitoring their individual health and safety on site.

On completion of the project, the Site Supervisor shall complete the project close out form which will allow for the provision of any comments in relation performance and any shortfalls or recommendations in relation to training and competence.

The **Project Engineer**, a member of the **Company Management** and / or the **SHEQ Director** shall undertake a Site Inspection or Site Audit if requested to do so by the **Site Supervisor**, or if any of the aforementioned deems it necessary.

**(c) ARRANGEMENTS FOR:**

**(i) Regular liaison between parties on site**

The **Site Supervisor** shall ensure that there is regular liaison between all parties involved within the construction work. This will be in the form of a daily communication with all parties working on site under the control of the Company.

Where requested by the **Principal Designer or Client**, regular progress meetings shall be implemented.

Meetings to be organised between Eni UK and Geotechnics for latest updates on the progress of the Ground Investigation, these shall take place twice a week.

Eni UK to set up meetings with landowners / land agents as required throughout the GI through WSP.

**(ii) Consultation with the workforce**

Involving the workforce, including Sub-Contractors in identifying and controlling risks is crucial in the way that the Company considers its protection arrangements. Comments and suggestions put to the Company by any party carrying out work on its behalf will be welcomed and considered.

Prior to the planned works commencing on site, the **Site Supervisor** shall carry out a 'Point of Work Risk Assessment' in order to ensure that all the foreseen hazards are controlled adequately in order to ensure the Health, Safety and Welfare of all personnel working on site.

All workers on site shall be provided with a suitable site-specific induction in order to inform them of the arrangements in place at the work site (see (c)(viii) below), which will include arrangements for serious and imminent danger, and the requirements and methodology for the cooperation and consultation of the workforce.

Clarification with all **Contractors** utilised on site shall be undertaken to ensure that all workers understand their responsibilities.

**COVID 19:** Geotechnics have developed a safe working procedure (SWP20, Covid-19), this is based on the Construction Leadership Council Site Operating Procedures.

**(iii) Exchange of Design Information**

Given the iterative natures of ground investigation works, it is expected that design changes may be required. Design changes to Ground Investigation works include:

1. Significant changes to investigation locations,
2. Significant changes in depth / size of bore hole.

Site correspondence between Geotechnics Ltd **Site Supervisor** and **ENI UK Technical Co-ordinators**, Daniel Hooley and Russell Yates, will be required to accommodate any changes in scope. Major design changes will require the issue of revised design information by the **Client**.

Where major changes are identified or deemed necessary, the **Project Engineer** shall liaise directly with the **Principal Designer**. Likewise, it is expected that the **Principal Designer** shall bring to the attention of the **Project Engineer** any information or changes that the **Project Engineer** should be expected to be notified on.

**(iv) Handling design changes through the project**

It is anticipated that any such changes shall be communicated through the **Technical Co-ordinators** to the **Project Engineer**.

**(v) The Selection and control of Contractors**

All Drilling contractors to be used on site have completed the Company's internal approval process and are listed on the approved register.

All plant operators shall be adequately trained and the training records shall be checked prior to the plant and operator being allowed to commence work on site.

All subcontractors must also be present on the list of approved suppliers for Eni UK – a list of subcontractors was provided to Eni UK at tender stage. Any deviation from this list must be confirmed with Eni UK before the subcontractor can be used. Geotechnics are responsible that this process is adhered to.

**(vi) Exchange of Health and Safety Information between Contractors**

All **Contractors** shall be required to attend an Induction programme prior to commencing work on site and undertake regular liaison with the **Site Supervisor** in accordance with **(c)(i)** above.

A record of the Induction shall be kept on site by the Site Supervisor.

**(vii) Site Security**

The Site Security shall consist of a video and audio enabled security 'dalek'. This shall be installed at the access points / borehole locations, plus any additional locations deemed at risk.

**(viii) Site Induction and Briefing**

The Site Supervisor shall ensure that each member of the team will receive an induction on the salient points of the Project Method Statement, relevant Safe Working Procedures, Company Guidance and Information Sheets, any specific Method Statements, any Environmental considerations and Site Rules prior to undertaking any work on site. A record of the Induction will be held in **Appendix H**.

Site Induction shall be undertaken prior to the start of the Construction work, and as and when required as additional personnel attend or visit site. The Site Supervisor should must also make it clear when working on site, mobile phones are only to be used in identified designated areas, to prevent any distraction to the user or others. Only in times of emergency should a mobile phone be used outside these areas. In addition, any personnel or visitor to site who has a medical condition which could be affected, or have an impact on the work, must inform the Site Supervisor so they are aware should an incident arise.

**All Personnel** who are working on site, including occasional visitors, shall be expected to undertake appropriate induction in accordance with the reasons for their presence on site.

**(ix) On site training & Competency of Personnel on Site.**

The Company approval process requires evidence of training and competence of all personnel working on site under the control of the Company.

The Company and Site Supervisor shall also ensure that other personnel under the control of the Company are trained and competent to undertake the tasks they are assigned.

The Site Supervisor shall check the training records of all personnel as relevant to the activities that are being undertaken.

In addition to the induction training, ongoing site training shall be delivered where any shortfall in knowledge is identified. Tool-box talks are available and shall be delivered as required. In the event that an Accident, Incident or Near-Miss is reported, an evaluation of the training needs shall be undertaken by the **Site Supervisor, Project Engineer**, and /or the **SHEQ Director**.

Appropriate refresher training shall then be delivered.

All personnel working on site under the control of the Company shall be in a possession of a valid and current CSCS or CPCS card in their name.

**(x) Welfare Facilities and First Aid Provision**

Welfare facilities shall comprise of the following: mobile welfare vans near the exploratory hole locations. A static welfare unit consisting of a canteen area and toilet may be located on site

**First Aid:**

The Site Supervisor shall ensure that an appropriate First Aid kit provision is available for use and kept in the van. In the event that additional first aid treatment or facility is required, the Site Supervisor shall ensure that the Emergency Services are called, or the casualty is transported to the nearest Accident and Emergency Unit, details of which are recorded in **Appendix C**.

The first aid trained persons on site shall be advised to all personnel working on site as part of the daily activity briefing. All Geotechnics full time site employees are First Aid at Work trained.

**(xi) Reporting and Investigation of Accidents, Incidents and Near Misses**

All Accident, Incidents and Near Misses shall be reported in accordance with the Company Accident, Incident and Near-Miss Reporting Procedures.

In addition to any requirements of the **Client**, the **Site Supervisor** shall verbally report all Accidents, Incidents and Near-Misses to the **Project Engineer** and **SHEQ Director** in the first instance, followed by a written report.

The **SHEQ Director** shall determine the extent of any investigation to be carried out, and shall ensure that any statutory reports are compiled and submitted in accordance with the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR). Details of any such report, shall be communicated to the **Client**.

Accident and Incident/Near-Miss report forms are held by each **Site Supervisor / Employee** within their individual Health, Safety and Environmental Information and Guidance file.

**(xii) Production and approval of Risk Assessments and CPP**

Relevant Risk Assessments and the CPP shall be reviewed by either: the **Engineer** formulating the CPP, the **Project Engineer, Checking Engineer** or the **SHEQ Director**, and shall be confirmed via a signature on the front cover sheet. The **Site Supervisor** shall monitor the work and subsequent Risk Assessments throughout the project.

**(d) Site Rules & Personal Protective Equipment (PPE) and Clothing requirements.**

The **Site Supervisor** shall ensure that all personnel working on the site comply with the Company's Generic Site Rules and any additional site specific rules. A copy of any Company Generic Site Rules is attached in **Appendix B**.

The **Company** does not condone illegal drug taking or alcohol abuse in any manner. All personnel working on any site under the control of the **Company** shall do so in accordance with the **Company's** Drugs and Alcohol Policy.

The following PPE shall be worn at all times:

- High visibility upper body clothing.
- Safety helmet
- Task specific work gloves.
- Safety boots (Not rigger boots).
- Hearing protection.
- Light eye protection.

**Note:** Hearing protection shall be required to be worn in instances such as when using a hydraulic breaker, operating the window sampling rig or rotary percussion drilling.

**(e) Fire and Emergency Arrangements**

**Fire Safety:**

The arrangements in relation to fire are as follows:

**On Site:**

Means of raising the alarm: Shout "**Fire Fire**"

**Means of fighting a fire:** The Site Supervisor shall ensure that appropriate types and numbers of fire extinguishers are provided in relation to and located near to, the perceived risk. These shall be checked by

the Site Supervisor to ensure that they have a current service and maintenance record, and appear to be operational.

**Only trained and competent personnel shall use a fire extinguisher, and shall only do so if their immediate safety or exit route is not compromised.**

**In the event that the Fire Emergency Services are required, these will be contacted by either the Site Supervisor or Lead Driller.**

**Fire Assembly point:** The fire assembly point shall be agreed on site. They are likely to be the field entrances and / or access point to the work area.

**Site Fire Safety:**

In the event that any equipment or machinery causes a fire, the **Operator** shall deal with the fire accordingly, whether that be by tackling the fire if safe, competent and confident to do so, or by calling the emergency services.

If the fire becomes out of control, the operator shall contact the emergency services via 999. A verbal report shall be made to the **Site Supervisor**, followed by the completion of the Company Incident / Near Miss Report form (see (xi) above)

All vehicles and equipment operating on site under the control of the **Company** shall carry appropriate fire extinguishing agents in order to combat the foreseeable risks that may be posed by the equipment and its operation.

As a minimum, each vehicle shall carry one appropriate fire extinguisher. The **Site Supervisor** shall check the fire extinguisher during the initial induction.

Emergency information and Accident and Emergency Unit Location Plan are documented in **Appendix C** Additional standard Emergency Procedures are documented in the Company's SWP - Standard Emergency Procedures and Information.

**3. ARRANGEMENTS FOR CONTROLLING SIGNIFICANT RISKS:**

**(a) Safety risks, including**

**(i) Delivery and removal of materials and work equipment including access and egress**

Extreme caution will be exercised when gaining access to the work site with respect to third parties. Particular access routes and instructions will be observed. Access to each exploratory hole position will be made via routes agreed with the **Landowner and Client**, on site with consideration to ground conditions and any known restrictions. The arrangements for the delivery and access are to be confirmed by WSP and / or Eni UK to Geotechnics.

**(ii) Dealing with Services – water, electricity, gas, telecommunications or other**

The **Client** and or **Principal Designer** shall provide relevant pre construction information on the services that are present on the work site – *Indicate which services are known to be present and the controls required in order dealing with their presence.*

Services Identified	Yes (✓)	No (✓)
Electricity	✓	
Water	✓	
Gas	✓	
Telecommunications	✓	
Other:		

**Control Measure to be implemented**

Check service plans, GPR Survey, CAT and Singal Generator scan, Inspection Pit, Check

**(iii) Accommodating adjacent land use**

Consideration has / will be given to adjacent land use during the site inspection / commencement of the works and based on the information provided in the Pre-Construction Information by the **Principal Designer**.

In the event that the proposed works are in areas where coal working may have taken place in the past, it will be necessary to approach the Coal Authority to obtain a licence to investigate these areas. Geotechnics are to submit an application to the Coal Authority for the Padeswood to Northop Hall route.

Geotechnics are to follow all agreed access routes or as agreed on site. Instruction will come from WSP, who are acting as the land liaison for the project, and / or Eni UK. – Trackway routes have been provided and must be agreed before these are placed down.

**(iv) Stability of structures, temporary structures and/or existing structures**

The Pre-Construction Information has not identified the presence of the above.

In the event that any of the above are identified as present on site during the works, the risks from such potential works shall be mitigated by moving exploratory hole positions to areas where such works are not required, on the proviso that this is agreed with the **Client**.

In the event that temporary structures, such as scaffold work platforms, are required, additional method statements will be provided.

**(v) Preventing falls**

The Significant risk of falls is deemed applicable during the use of Cable Percussion Drilling Rigs and Machine Excavated trial pits. This is addressed further and specifically in the respective the Company SWP - Cable Percussion Boring and SWP - Trial Pitting - Hand and Machine Excavation

In the event that long grass and other obstacles are encountered on site, the site shall be organised in such a manner that safe and appropriate walk/traffic routes are identified.

In the event that working at height (other than the aforementioned) is required, a specific risk assessment shall be undertaken.

**(vi) Control of Lifting Operations**

Where it is required that any lifting operations are undertaken in accordance with the Lifting Operations and Lifting Equipment Regulations, The Company shall arrange for a Contract Lift to be provided by a suitably qualified and competent contractor.

Hiabs will require a lift plan and an assessment for outriggers if the ground is soft.

A Telescopic handler or forklift truck may be required. This will be operated in accordance with task specific RAMS (to be drafted for the particular task required)

**(vii) Maintenance of Plant and Equipment**

The Drilling Contractors to be used on site have provided evidence that their equipment to be used on site will be inspected, maintained and tested in accordance with PUWER and LOLER.

Prior to allowing the equipment to be used on site, the Site Supervisor shall check that the relevant documents and certification held by the contractor is valid and in date, and that the equipment is furnished with the relevant safety protection devices, that they operate efficiently, and that the equipment appears to be in an appropriate and suitable state of repair for use.

Geotechnics shall keep an up to date register (live document) of all equipment to be used on site, with expiry dates for calibration and / or inspections and tests.

Additional information can be found in the Company Health, Safety and Welfare Manual, and SWP - Safe Use of Mobile Plant and SWP – Provision and Use of work Equipment.

**(viii) Work on excavations and work near where there are poor ground conditions**

Refer to SWP - Trial Pitting - Hand and Machine Excavation, and SWP - Soft Ground Conditions.

**(ix) Work on wells, underground earthworks and tunnels**

Underground workings are common throughout the UK.

**(x) Work on or near water where there is a risk of drowning**

Working on Talacre Beach – tides need to be observed and work planned around these to ensure safe access to the beach for working.

**(xi) Traffic routes (including access to site(s)), and segregation of vehicles and Pedestrians**

Access to the site will be as per the agreed legal access notice plans to be provided by ENI UK.

The transport to the site and around the site will be by the use of LWB transit type vehicles and 4x4s. All vehicles shall be driven / operated in accordance with the site rules at all times.

The Drilling equipment shall be transported by 4x4 vehicles and / or tracked dumpers.

Where applicable, vehicles that are not used on site shall be parked in the area / car park designated by the Client.

An assessment on the requirements for Traffic Management (TM) has indicated that this is not required.

**(xii) Storage of materials and work equipment**

All substances and equipment shall be stored in the site vans or secure storage container (if applicable).

Where any equipment has to be left on site overnight, it shall be secured and Heras fenced off in order to prevent access to unauthorised personnel (so far as is reasonably practicable).

**(xiii) Other site specific significant safety risks**

Following a site visit and desk top study, the following site-specific hazards have been identified, and are documented in **Appendix D**.

1. Potential for working on soft ground in relation to sand / beach environment– care to be taken when accessing soft ground, correct PPE to be worn at all times. Use of Tracked vehicles (Haaglund or similar) to access borehole on the beach.
2. Buried services / existing pipelines – use of GPR and CAT survey and permit to dig procedure.
3. Interface with third parties – work areas to be fenced off and secured.
4. UXO rating of very low for the site.

Additional Generic Risk Assessments have been carried out for 'day-to-day' activities applicable to the **Company's** undertakings. Refer to Generic Risk Assessments

**(b) Health Risks:**

**(i) Asbestos**

The Company has provided appropriate asbestos awareness training to its employees.

Where any Asbestos Containing Material (ACM) is identified within the Pre-Construction Information as being present, it is expected that all of the respective risks related to its presence will be assessed by the **Person in Control of the Premises** in which it is identified. The Asbestos Register will form part of the Pre-Construction Information and will be communicated by the **Principal Designer** or **Client**.

In the event that any suspect ACM is encountered in areas where it is not known, and would not reasonably be expected to be known, the **Company** shall work in accordance with its Asbestos Policy. As the works progress, any suspected ACM will be immediately brought to the attention of the **Principal Designer** or **Client** for resolution.

It is not the policy of **Geotechnics** to remove or knowingly work with an ACM other than what may be within samples of ground.

If any ACM is suspected or discovered, work should cease and the area will be isolated whilst the problem is discussed with **Client/Principal Designer**.

**(ii) Dealing with Contaminated Land and additional Environmental Considerations**

The site category is often classified within the Tender / Pre-Construction Information. Consideration has been given to the guidelines for the safe investigation by drilling of landfills and contaminated land, issued by the Site Investigation Steering Group (SISG), the BDA Guidance for Safe Intrusive Activities on Contaminated or Potentially Contaminated Land in conjunction with a Company Internal Assessment based on available information. The site has been classified as a yellow site. The procedures to be implemented to each respective site correspond to an SWP as indicated below:

<b>Type of Site</b>	<b>Guidance &amp; Information Sheet (GIS) Number</b>	<b>(✓ as appropriate)</b>
Green Site	01	
Yellow Site	02	✓
Red Site	03	

This assessment will be continually reviewed at each particular location as work proceeds. If more severe levels of contamination are encountered, work will cease until such times as a revised safe working system is established.

Appropriate PPE will be provided for use by all operatives in accordance with the relevant GIS and Risk Assessment.

**Additional Environmental Considerations:**

The affects of the proposed works on the environment and the controls to mitigate those effects are recorded on the Company document EN301B. A copy of the relevant section of this document is inserted into **Appendix E**.

**(iii) Manual Handling**

Refer to the Company Health, Safety and Welfare Manual and the Manual Handling and Lifting, SWP.

**(iv) Hazardous Substances**

Refer to the Company Health and Safety Manual and the Generic COSHH Assessments. Any Site Specific COSHH Assessments required after consideration is given to **(b)(ii) Dealing with Contaminated Land, and** any specific processes or specific use of unfamiliar substances, are documented in **Appendix G**.

**(v) Reducing noise and vibration**

Refer to the Company Health, Safety and Welfare Manual.

**(vi) Work with Ionising Radiation**

Not Applicable.

**(vii) Exposure to UV radiation (sun)**

Refer to the advice for Working Outdoors Guidance and Information Sheet - Advice for Working Outdoors - UVA/ UVB (Sun Protection)

**(viii) Any other significant health risks**

Leptospirosis (Weil's Disease)

**4. THE HEALTH AND SAFETY FILE:**

**(a) layout and format, (b) arrangements for the collection and gathering of information, and (c) storage of information.**

The above requirements shall be coordinated by the **Principal Designer**.

The **Principal Designer** has identified the format and requirements of the information for the Health and Safety File in the pre-construction information.

Whenever practicable, significant hazards and residual risks should be annotated clearly on the "As-built" drawings with information provided by the Designers, and with information that arises during construction activities. Under Regulation 20(2)(f) of the CDM Regulations, the CDM Co-ordinator has a statutory duty to ensure that a H&S File is delivered to the Client at the end of the construction.

**Appendices**

- Appendix A Existing Plans and records of the site provided by the Principal Designer / Client / Client's Representative
- Appendix B Company Generic Site Rules & Any Site Specific Rules
- Appendix C Emergency Information and Accident and Emergency Unit Location Plan
- Appendix D Other Site Specific Significant Safety Risks
- Appendix E Environmental Considerations – EN301B – Risk Assessment
- Appendix F Specific Processes or Specific unfamiliar substances to be used on site
- Appendix G List of applicable Safe Working Procedures (SWPs).
- Appendix H Site Induction and Briefing Record

**APPENDIX A**  
**EXISTING PLANS AND RECORDS OF THE SITE**

Exploratory Hole Location plans to be finalised and included separately.

Up to date STATs plans for the site are currently being procured and shall be included separately when received (ahead of the intrusive site work).



*Figure 2: Proposed Electric Cable Route (bold red line)*

## APPENDIX B

### COMPANY GENERIC SITE RULES & ANY SITE SPECIFIC RULES

ALL OF OUR SAFETY RULES **MUST** BE OBEYED.

**Failure to do so may result in Disciplinary and Criminal action being taken.**

1. All personnel working on site under the control of the Company must comply with the requirements of the Health and Safety at Work etc Act 1974 at all times, and all other relevant statutory provisions applicable to the work being carried out.
2. These Site Safety Rules are a minimum requirement and must be read in conjunction with any relevant CDM Construction Phase Plan or Project Method Statement. Any divergence between the two should be referred to the Site Supervisor.
3. Keep your mind on your work at all times. No horseplay on the job.
4. Personal Protective Equipment (PPE) and clothing must be worn as prescribed for each job and as necessary as works progress. Do not enter any area that is a designated Mandatory PPE zone without first putting on the appropriate PPE or clothing.
5. Watch where you are walking. Don't run.
6. The use of illegal drugs or alcohol, or being under the influence of the same on site shall be cause for termination of employment. You **must** inform your Supervisor or Manager if you are taking strong prescription drugs that warn against driving or using machinery.
7. Do not distract the attention of fellow workers. Do not engage in any act which would endanger another employee.
8. If you observe or experience any Near-Miss, Incident or Accident, report it immediately to the Site Supervisor. The Site Supervisor should ensure that a relevant record is made of the occurrence and submitted to the SHEQ Manager at the first available opportunity.
9. Sanitation and welfare facilities have been or will be provided for your use. Defacing or damaging those facilities is forbidden.
10. A good job is a clean job, and a clean job is the start of a safe job.
11. Keep your work area free of debris and rubbish and ensure that the area is left in a clean and safe state on completion.
12. Know where the fire fighting equipment is located and the arrangements to take in the event of an emergency including the location of the designated assembly point(s).
13. Do not use fire extinguishers unless you are trained to do so.
14. Know where the first aid provision is kept, who the first-aid trained personnel are, and how they can be contacted.
15. Lift correctly – with legs, not your back. Use mechanical aids where possible. If the load is too heavy or awkward, GET HELP!
16. Do not ride on machinery or equipment unless proper seating is provided.
17. Do not use power tools and equipment unless properly instructed and trained in the safe work methods.
18. All power tools shall be 110 volt supply unless a specific dispensation to use 240 volt equipment has been granted by the Client.

19. In the event that 240 volt equipment is used on site, this will also require the use of a suitable circuit breaker / residual current device between the equipment and source of supply.
20. Never oil, lubricate, or refuel equipment or machinery whilst it is running or in motion.
21. Before servicing, repairing, or adjusting any powered tool or piece of equipment, disconnect or isolate it from the source of power.
22. Be sure that all guards are in place. Do not remove, displace, damage, or destroy any safety device or safeguard furnished or provided for use on the job, or interfere with the use thereof.
23. Never enter any excavation regardless of depth with the exception of CBR, Plate load or similar testing. Only in these instances will controlled access be allowed. Even under these circumstances, specific requirements will be required, for example, maximum depth of 500mm and the excavation side walls assessed prior to entry for their stability. In the event that the side walls are considered unstable, the excavation shall either be widened or have adequate supports installed.
24. Never use or permit use by another, any defective tools or equipment. The defective tools or equipment should be taken out of use and reported to the responsible person in control of the stores at each respective office. The responsible person shall ensure that the defective tools or equipment are either repaired or replaced accordingly.
25. Any ground penetration will require a **"Company Permit to Dig/Drill"** and works should not proceed unless the person undertaking the works is in receipt of a copy of said permit.

**"NO PERMIT = NO DIG OR DRILL"**

26. Adhere to site traffic rules including speed limits at all times.
27. Adhere to all on site safety signs and instructions at all times.
28. Never use a compressor to clean down equipment, clothing or personnel.

**APPENDIX C**

**EMERGENCY INFORMATION AND ACCIDENT & EMERGENCY UNIT LOCATION PLAN**

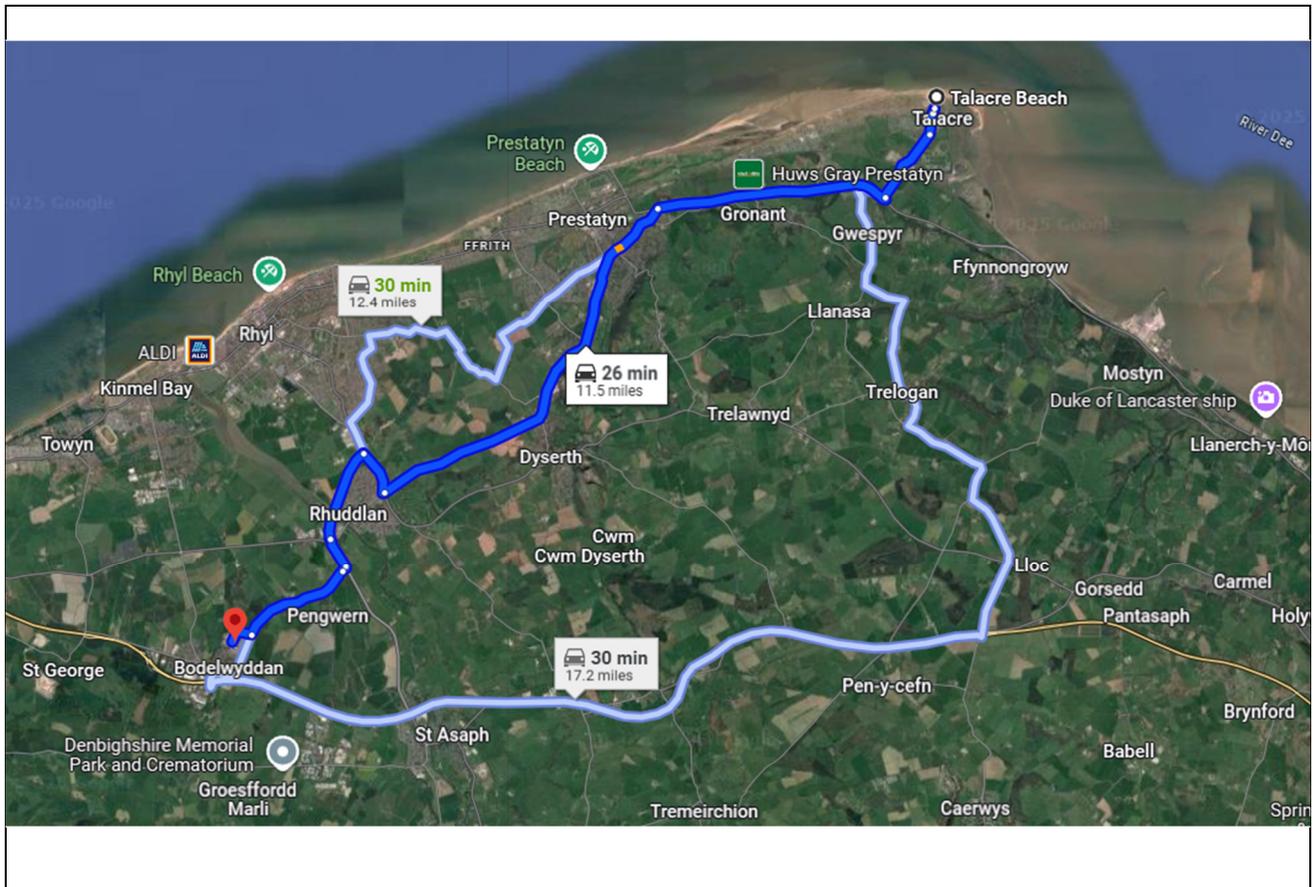
**I.1 Emergency Telephone Numbers**

Police	}
Ambulance	} 999
Fire Brigade	}

**I.2 Accident and Emergency Unit (A&E)**

The nearest A&E department is situated at: Glan Clwyd Hospital, Rhuddlan Road, Bodelwyddan, Rhyl, LL18 5UJ

**A location Plan and Directions to the A&E inserted below.**



**I.3 Utility Services Emergency Contact Numbers: (correct as of January 2024)**

**Please ensure that you have ascertained the correct Emergency Numbers for the locality in which the work is to be carried out. In the event that the Emergency number is not listed, please advise the SHEQ Director.**

Company	Emergency Number	Company	Emergency Number
Environment Agency (incident hot line)	0800 807 060	<b>DIAL 105 to connect to the local electricity supplier emergency number</b>	
Virgin Media (dial before you dig)	0345 454 1111	Electricity North West	0800 195 4141
British Telecom (dial before you dig)	0800 917 3993	Western Power Distribution - East Midlands	0800 0568 090
		UK Power Networks	0800 783 8838
Yorkshire Water Services Ltd	0800 573 553	UK Power Networks - London	0800 028 0247
Severn Trent Water plc	0800 783 4444	Scottish Power Energy Networks	0845 272 7999
United Utilities Water Ltd	0345 672 3723	Western Power Distribution - West Midlands	0800 328 1111
Southern Water	0330 303 0368	Northern Powergrid	0800 668 877
South West Water Ltd	0344 346 1010	SP Energy Network – Central & Southern Scotland	0800 092 9290
Scottish Water	0800 0778 778	SSE (North of Central Belt of Scotland)	0800 300 999
Northumbrian Water	0800 393 084	SP Energy Network – Cheshire, Merseyside & North Wales	0800 001 5400
Anglian Water Services Ltd	0800 771 881	South Wales – Western Power	0800 052 0400
Thames Water Utilities Ltd	0800 316 9800	South West – Western Power	0800 365 900
		Yorkshire Electricity - YEDL	0800 375 675
		National Grid UK (GAS)	0800 111 999

## **APPENDIX D**

### **OTHER SITE SPECIFIC SIGNIFICANT SAFETY RISKS**

## APPENDIX E

### ENVIRONMENTAL CONSIDERATIONS - Site Specific Environmental Risk Assessment

#### Geotechnics Ltd Environmental Policy Statement

Geotechnics Limited provides a wide range of Geotechnical and Geoenvironmental services to the Construction Industry, landowners, developers, and to any stakeholders concerned with ground quality. It has offices in Coventry, Chester, Exeter and Yorkshire.

The Company is committed to the protection and enhancement of the environment. Its aim is to achieve this through the development, delivery and continual improvement of high quality professional and client-focussed services which consider the environmental impacts of its decision-making in all aspects of its activities. Procedures embrace both ISO 14001 Quality Management and Health and Safety considerations together with environmental issues. Geotechnics Limited will:

- Operate and maintain an Environmental Management System to meet the requirements of ISO 14001.
- Continually improve its environmental performance and, by identifying and targeting any significant adverse Environmental Aspects of its activities, seek to reduce their impacts on the environment and prevent pollution.
- Identify the significant Environmental Aspects of the Company's activities including the use of resources and materials, non-renewable energy, potential noise and dust emissions, hydrocarbon emissions, waste production, and the potential to cause discharges of untreated water to land and controlled waters.
- Be committed to the protection of the environment by compliance with all environmental legislation, regulations and other requirements in carrying out its activities and in providing advice to enable clients to do likewise.
- Provide a strong framework for setting and reviewing environmental objectives, ensuring that targets are met and ensuring that its environmental programme is consistent with EMS commitments through regular auditing and reviews.
- Communicate this Policy to staff, clients, suppliers, and sub-contractors using its Website, the Intranet and internal memoranda and newsletters.

This Policy is a public statement and will be made freely available on request to any interested parties.

#### Basic Environmental Site Rules

To prevent damage and pollution to the environment and ecology, always please observe the following rules:

- Do not allow the spread of contaminated soil or arisings onto 'clean' areas of the site.
- Ensure that the site is kept clean and tidy and that wastes are disposed of appropriately and immediately.
- Be considerate to other site users and local residents – keep nuisance to a minimum.
- Respect wildlife and wildlife habitat.
- Minimise waste and be energy efficient.
- If in doubt, call your office or talk to a member of the Environmental Team. There is also an expanding range of Environmental Data Sheets which you may find useful.

**Environmental Notes**

To ensure our commitment to avoid damage and pollution to the environment please observe the following rules:

- At all times please try to ensure that no potentially contaminative material enters adjacent ground or waters
- Please ensure the site is kept tidy and that wastes are disposed of appropriately and immediately
- Please consider the potential for local nuisance and be considerate at all times
- Always wear appropriate protective equipment and ensure it is in good working condition
- Please report any unusual finds immediately to the engineer
- When in doubt, please ask

**Site Specific Environmental Risk Assessment**

**Note: See Guidance Note ENV007 as an aid to completion**

**BDA Site Classification (Circle)**      **Green**      **Yellow**      **Red**

Ensure any special precautions for YELLOW and RED sites are STRICTLY observed and communicated to all site personnel.

1) Is there potential for contaminated soil on site? If so, describe any special methodologies that are required (e.g. ground/water protection, containment, disposal, clean drilling etc.)

*If any contaminated soil is encountered on site, clean drilling techniques shall be used. This involves the casing off of any contaminated material, creating a seal, preventing the material from migrating or contaminating strata below.*

2) Is there potential for contamination of Controlled Surface Waters? If the site contains or is in close proximity to water bodies such as rivers, streams, canals, lakes, estuaries, coastal waters etc. then special measures may be required to prevent contamination and should be described here.

*Borehole on Talacre Beach, risk for migration into the sea. Bunds and tanks shall be set up at appropriate locations to retain and capture any fines / spoil to prevent migration into water courses.*

3) Is there potential for contamination of Controlled Ground Waters (aquifers). If the site is over or adjacent to an aquifer then special measures may be required to prevent contamination and should be described here.

*Not applicable to Cable Percussion works.*

4) Are there any ecological considerations on site (e.g. sensitive wildlife/habitat, invasive plants etc)? If so, identify the habitat or species present on site any special methodologies to mitigate the effects of the investigation on them or vice versa.

*Dunes at Talacre Beach are a SSSI – no works to be carried out in this area.*

5) Has Geotechnics Ltd been advised that special precautions will be necessary to mitigate nuisance caused by its operations (e.g. noise, dust, smoke, odour, visual etc)? If so, describe any special mitigation measures.

*None advised.*

6) Waste. Describe how waste soils, other solids and liquids are to be stored, transported and disposed of.

*Geotechnics are a licensed waste carrier and have further licensed skip at our offices in Saltney.*

7) Have you been advised that the site has archaeologically significant structures or deposits? If so, describe any methodologies in place to protect them.

*SSSI location.*

8) Other things to consider (e.g. special considerations or instructions outlined by the client or regulatory authority, fuel storage, spill procedure, fire, resource use etc.)

*All fuel shall be stored within bunded fuel bowsers. Smaller amounts of fuel (less than 20l) may be stored within secure containers on site within the vehicles. Any refuelling must be done over a drip tray with spill kits readily available nearby. Plant nappies / drip trays must be placed under the engine bay of any operational plant when stationary at the exploratory hole locations.*

## **APPENDIX F**

### **SPECIFIC PROCESSES OR SPECIFIC UNFAMILIAR SUBSTANCES TO BE USED ON SITE**

## **APPENDIX G**

### **LIST OF APPLICABLE SAFE WORKING PROCEDURES (SWPs).**

- HS SWP01 Cable Percussion Boring
- HS SWP06 Safe Use of Mobile Plant
- HS SWP07 Safe Work Near of Adjacent to Over-Head Power-lines or Services
- HS SWP08 Underground Services
- HS SWP09 Use of Cable Avoidance Tools and Signal Generator
- HS SWP11 General Site Safety
- HS SWP12 Housekeeping
- HS SWP13 Standard Reporting Procedure and Notification
- HS SWP14 Soft Ground Conditions
- HS SWP15 Manual Handling and Lifting
- HS SWP16 Provision and Use of Work Equipment Regulations – PUWER
- HS SWP17 Work on or Near Water where there is a Risk of Drowning
- HS SWP21 Monitoring





# Point Of Work Risk Assessment

<b>Project number</b>		<b>Project name</b>	
<b>Geotechnics supervisor</b>		<b>Date</b>	
<b>Completed by</b>		<b>Signed</b>	

<b>Part 1. Think</b>	<b>Before you start</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
	Do you have the right documentation for the job ?			
	Do you have the right PPE for the job ?			
	Are all power tools, lights and leads PAT tested ?			
	Has all plant been PUWER inspected ?			
	Has lifting equipment been LOLER inspected ?			
	Are sub- contractors being used on site ?			
	If yes to above name of sub-contractors.			
	Are all sub-contractors to be used on the Geocentric approved list.			
	Do they have LOLER certificates and PUWER maintenance records for all drilling rigs to be used on site ? (obtain copy)			
	Are all cable percussion rigs proposed for use on site fitted with an ancillary winch ?			
	If you answered no to the above is a suitable harness fitted with a personal rescue device available on site.			
	Do all sub-contractors due to attend site hold a relevant CSCS card ? (obtain copy)			
	Do all Lead Drillers proposed for use on site have relevant NVQ training ? (obtain copy)			
	If you have answered 'no' to any of the above, take the required action or report to your supervisor. If in doubt always ask!			
Details of any actions taken as a result to a 'no' answer to any of the above:				

# Point Of Work Risk Assessment

<b>Part 2. Assess</b>	<b>Unforeseen hazards that require further considerations (if the hazard is present tick the box)</b>				
	<i>Falls from height</i>		<i>Entry into a confined space</i>		Poor lighting
	Falling or flying objects		Dust		Temperature (high/low)
	Chemicals or harmful substances		Fumes		Adverse weather
	Heat, fire or explosion		Noise		Uncertified equipment
	<i>Asphyxiation or drowning</i>		Vibration		Risk to you from your work
	Risk to plant		Electricity		Risk to others from your work
	Contact with stationary object		Unstable slopes		Stored energy or insecure load
	Object overturning or collapse		Asbestos/ACM's		Traffic or moving vehicles
	Slips, trips or falls on the same level		Manual handling		Livestock
	Discarded syringes		Invasive plants		Other (state)
	<b>If required, you must have a rescue plan in place (hazards highlighted blue will require a rescue plan). Provide brief details.</b> <i>(You must always be able to provide a way of safe escape in the event of something going wrong)</i>				
If no control measure are in place for the hazards identified above, then appropriate control measures need to be included in Part 3 before work commences.					

<b>Part 3. Go</b>	<b>Additional safety assessment required</b>			Yes	No		
	<b>Hazard</b>	<b>Control measures or precautions</b>			<b>Remaining risk</b>		
					H	M	L

**Go to work safely today and go home safely tonight**

<b>Part 4. Review</b>	<b>End of job review</b>					
	Are there any lessons for next time ?		Yes		No	
	Has the work created any new hazards ?		Yes		No	
	If you have answered 'Yes' to either of these questions, make a brief note below and document on the Geocentric close out record					



# Engineer's Aide-Memoire for Site Induction

<b>Project Name</b>		<b>Project Number</b>	
<b>Project Address and Postcode</b>			
<b>Site Supervisor</b>		<b>Client</b>	

<b>Description of project</b>	Reason for ground investigation
<b>Programme</b>	Proposed programme of ground investigation
<b>Scope</b>	Scope of site works including any specific sampling and installation requirements
<b>Roles and responsibilities</b>	Include details of CDM duty holders particularly on Main Contractor sites
<b>Permit to Dig</b>	Include details of known underground and overhead services
<b>Communication/Coordination</b>	Include arrangements for daily activity briefings and weekly meetings
<b>Security policy</b>	Details of site security and signing in & out requirements
<b>Competence cards</b>	Include requirements for CSCS, CPCSC cards and relevant NVQ requirements. Details of CSCS cards to be recorded on the induction and briefing record.
<b>Welfare facilities</b>	Include details of on site welfare facilities.
<b>First Aid</b>	Include details of First Aider and location of First Aid kits.
<b>Accident, Incident and Near Miss Reporting</b>	Detail requirements and procedures for reporting of on site incidents.
<b>Site Rules</b>	Include company policy on drugs & alcohol, use of mobile phones on site, smoking policy.
<b>Personal Protective Equipment</b>	Include details of mandatory PPE requirements and task specific PPE requirements
<b>Fire and Emergency arrangements</b>	Include details on how to raise the alarm, fire assembly point and on site means of fighting a fire (include the requirement for only trained operatives to use fire extinguishers)
<b>Deliveries</b>	Include details of access arrangements for deliveries of materials and equipment
<b>Working at Height</b>	Detail Geotechnics policy and requirements for working at height during the use of cable percussion drilling rigs and machine excavated trial pits
<b>Maintenance of plant and equipment</b>	Detail the requirements for all drilling rigs brought to site to have up to date LOLER and PUWER certification. Confirmation that this has been checked to be recorded on the POWRA.
<b>Site traffic management</b>	Speed limit, traffic routes, parking, designated footpaths etc
<b>Storage of materials and equipment</b>	Include on site arrangements for storage of materials and equipment both within the site compound and at the work location.
<b>Asbestos</b>	Provide details on companies procedures in the event that any suspected ACM's are encountered on site.
<b>Environmental Considerations</b>	Include the BDA category for the site and any specific procedures to be implemented. Cover requirements for invasive plants/protected species/protection of surface and groundwater bodies as appropriate
<b>CoSHH</b>	Provide details on any hazardous substances to be used on site and the requirements of the relevant CoSHH assessments.
<b>Waste facility/transfer</b>	Detail waste disposal arrangements on site
<b>Nearest A&amp;E</b>	Quickest and safest route. Display map and directions
<b>Slips, trips and falls</b>	Keep to designated paths and roads, keep off unmade ground
<b>Hypodermic needles/sharps</b>	Do not touch, if observed identify to client or office for safe removal to be arranged
<b>Weils disease</b>	Individuals are responsible for following standard good hygiene practices (hand washing before eating, wearing gloves as per site rules, covering exposed areas of broken skin with water proof plasters etc)
<b>Other site specific safety risks</b>	Provide details of any additional significant risks and hazards identified in the CPP/method statement/risk assessment

**Inductee's Declaration - All inductees are to sign the Site Induction and Briefing Record in the CPP/Method Statement**



# POL001 Health & Safety Policy Statement

Geotechnics Limited (from herein known as "The Company") is committed to continuous improvement of its Health, Safety and Welfare Management System, and is committed to Policies and Procedures which are designed to ensure the health, safety and welfare, of all its employees, contractors, visitors and others likely to be affected by its undertakings, so far as is reasonably practicable.

The Company expects employees, contractors, visitors or other employers who work at any premise or on any site under the control of the Company, to share and adopt this commitment.

To achieve its commitment, the Company will provide appropriate information, instruction, training and supervision at all levels to ensure that employees are aware of the hazards at their workplace, together with the appropriate measures to be taken to protect against these hazards and prevent in so far as reasonably practicable work-related injury or ill health.

Additionally, the Company in so far as is reasonably practicable, shall ensure it is:

- Operating and maintaining a Health & Safety Management System to the requirements of ISO 45001:2018,
- Managing and maintaining safe work environments, and in which risks to health are eliminated,
- Providing adequate and appropriate facilities and arrangements for welfare at work,
- Providing, managing, and maintaining plant and equipment so that it is safe, and that risks to health and safety are eliminated,
- Ensuring that the use, handling, storage and transport of items and substances are done safely and that risks to health are eliminated,
- Implementing systems of work that are safe and where risks to health and safety are eliminated,
- Consulting with, and involving employees in matters that may affect their health, safety and welfare,
- Ensuring that all contractors employed by the Company possess the necessary skills, knowledge, experience, and training and that the contractor carries out risk assessments for all the work they control, ensuring any plant and equipment provided or used by them is serviced, maintained, and tested in accordance with the relevant statutory obligations.

The Company will ensure adequate resources are provided to carry out regular assessments, inspections, auditing, and reviews to implement the Company Policy of continuous improvement.

The Company will set and review objectives against which its performance is monitored and reported.

Every employee is required to assist with the prevention of accidents and incidents and maintenance of a safe and healthy working environment. To achieve this everyone should take care of their health, safety and welfare, and that of any person who could be affected by their acts or omissions.

Delegated responsibilities, procedures and arrangements developed to implement this Policy and to comply with current legislation and other requirements are detailed in the Company's Health, Safety and Welfare Procedures Manual and supporting Safe Working Procedures.

These procedures apply to all employees of the Company and all contractors working on its sites or under its control or employ.

Every employee is required to assist with the prevention of accidents and incidents and maintenance of a safe and healthy working environment.



**Paul Hayes**

Managing Director

**Revision:** 3.0

**Issue date:** 01<sup>st</sup> Oct 2023

**Review date:** 30<sup>th</sup> Sept 2024

**Changes since last issue:**

- Rebrand

# Site Supervisors Checklist

<p><b>Safe Systems of Work</b></p> <ul style="list-style-type: none"> <li>• Is the CPP available on site?</li> <li>• Are the site specific risk assessments available on site?</li> <li>• Can you access the CoSHH assessments and MSDS?</li> <li>• Can you access the Safe Working Procedures?</li> <li>• G2 Health and Safety tab for the project completed?</li> </ul>	<p><b>Induction</b></p> <ul style="list-style-type: none"> <li>• Has everyone on site received a site induction?</li> <li>• Has everyone on site got a CSCS card and recorded the number on the induction record?</li> </ul>	<p><b>Documentation</b></p> <ul style="list-style-type: none"> <li>• Have you completed a POWRA?</li> <li>• Ensure you complete a Daily Activity Briefing</li> <li>• Is a Permit to Dig in place for all work locations?</li> <li>• Are daily checks being completed for all plant on site and have you been issued with a copy?</li> </ul>
<p><b>Welfare</b></p> <ul style="list-style-type: none"> <li>• Have adequate facilities been provided (1 toilet per 7 people)?</li> <li>• Are first aid kits available on site and are the contents in date?</li> <li>• Are fire extinguishers available and in date?</li> </ul>	<p><b>Signage</b></p> <ul style="list-style-type: none"> <li>• Ensure general site safety signs are in place at the site entrance or work locations.</li> <li>• Ensure the Health &amp; Safety Law poster is on display in the welfare cabin/van.</li> <li>• Don't forget GO SAFE posters are available.</li> </ul>	<p><b>PPE</b></p> <ul style="list-style-type: none"> <li>• Is everyone wearing the required mandatory PPE? <ul style="list-style-type: none"> <li>○ Hard Hat</li> <li>○ Hi Viz</li> <li>○ Safety glasses</li> <li>○ Safety footwear</li> <li>○ Gloves</li> </ul> </li> <li>• Are ear defenders being worn as required i.e. SPT testing?</li> </ul>
<p><b>Buried Services</b></p> <ul style="list-style-type: none"> <li>• Does the pre work service status provide a method?</li> <li>• Has a permit to dig been completed for all work locations?</li> <li>• Has a CAT and Genny scan been completed for all work locations?</li> <li>• Is a hand dug pit to 1.2m being completed for all boreholes?</li> </ul>	<p><b>Cable Percussion rigs</b></p> <ul style="list-style-type: none"> <li>• Has the CP rig got in date LOLER certification?</li> <li>• Is there evidence the drill rig has been maintained in accordance with PUWER?</li> <li>• Is a Wire rope retaining bar (Dodd bar) fitted?</li> <li>• Are spill kits and plant nappies in place?</li> <li>• Have Daily checks been completed?</li> </ul>	<p><b>Rotary rigs</b></p> <ul style="list-style-type: none"> <li>• Has the rotary rig got in date LOLER certification?</li> <li>• Is there evidence the drill rig has been maintained in accordance with PUWER?</li> <li>• Are spill kits and plant nappies in place?</li> <li>• Have Daily checks been completed?</li> </ul>
<p><b>Windowless sampling rigs</b></p> <ul style="list-style-type: none"> <li>• Is there evidence the drill rig has been maintained in accordance with PUWER?</li> <li>• Are spill kits and plant nappies in place?</li> <li>• Have Daily checks been completed?</li> </ul>	<p><b>Trial Pits</b></p> <ul style="list-style-type: none"> <li>• Is there evidence the excavator has been maintained in accordance with PUWER?</li> <li>• Has the excavator operator got the correct competencies?</li> <li>• Ensure personnel only approach the trial pit from the narrow end.</li> <li>• <b>NO ENTRY</b> allowed to trial pits.</li> <li>• <b>NEVER</b> leave an open trial pit unsupervised.</li> </ul>	<p><b>Waste</b></p> <ul style="list-style-type: none"> <li>• Have suitable arrangements been made for removal of on site waste?</li> <li>• If skips are available on site is everyone aware of what can be placed in the skip?</li> <li>• If waste is being transferred to the office ensure you complete an internal Waste Transfer Note?</li> </ul>

## HEALTH & SAFETY - Risk Assessment - Cable Percussive Boring

Project Talacre Beach, Point of Ayr

Project No. QN251239

Date 31 March 2025

Client ENI UK

Compiled by

C J Southall

Risk (R) = Likelihood x Severity			Likelihood (L)	Severity (S)				
				Negligible=1	Minor=2	Absence=3	Major=4	Fatal=5
1 to 6	Low	Ensure control measures are maintained.	Remote=1	1	2	3	4	5
8 to 10	Medium	Unacceptable risk - implement control measures	Unlikely=2	2	4	6	8	10
12 to 25	High	Unacceptable risk - Specialist knowledge required to implement control measures	Possible=3	3	6	9	12	15
<b>NOTE:</b> The following PPE is mandatory and shall be worn at all times: High Visibility Waist-Coat or Jacket, Safety Helmet, Safety Glasses, Gloves and Safety Boots or Safety Wellingtons			Probable=4	4	8	12	16	20
			Certain=5	5	10	15	20	25

Activity	Hazard	Persons who might be harmed	Initial Risk			Control Measures	Residual Risk		
			L	S	R		L	S	R
Drilling through contaminated land	Exposure risk to hazardous substances	Employees Sub Contractors General Public	3	3	9	<ul style="list-style-type: none"> <li>Reference should be made to Geotechnics Limited Guidance Information Sheets 01, 02 or 03 depending on the BDA (British Drilling Association) site categorisation.</li> <li>In the event that the site is classified as 'Red', a specific Risk Assessment and procedures shall be required prior to commencing any work on site.</li> <li>Further advice and guidance should be sought from the Environmental Manager, SHEQ Director or other suitably qualified personnel.</li> </ul>	2	3	6
Breaking ground	Buried Services	Employees Sub Contractors	3	5	15	<ul style="list-style-type: none"> <li>A check for buried services must be made prior to commencing hole.</li> <li>Reference must be made to SWP's 01-Cable Percussion Boring, SWP 03-Trial Pitting - Hand and Machine Excavation, SWP 08-Underground Services and SWP 09-Use of Cable Avoidance Tool and Signal Generator.</li> <li>SEP Geophysical shall clear a 5x5m area using GPR techniques prior to setting up.</li> <li>A Permit to dig / drill shall be issued prior to breaking ground and excavating to a minimum depth of 1.2 metres.</li> </ul>	1	5	5

Activity	Hazard	Persons who might be harmed	Initial Risk			Control Measures	Residual Risk		
			L	S	R		L	S	R
Set up and operation of cable percussion drill rigs	Stability of drill rig during operation	Sub Contractors	3	5	15	<ul style="list-style-type: none"> <li>• Ensure that only operators with the necessary skills, knowledge, training and experience operate cable percussion drill rigs.</li> <li>• Geotechnics must obtain all driller qualifications and rig certification before work can commence. This shall all be documented in the live asset register and made available to Eni UK</li> <li>• Ensure that the stay bars are connected and secured with bolts or retaining pins at all times once the rig has been erected.</li> <li>• Ensure that the footprint of the rig is in firm, three point contact with the ground surface before commencing operation.</li> <li>• Throughout the drilling operations periodically check the stability of the rig, if required stop work and adjust to level.</li> </ul>	1	5	5
Transporting on site and Setting up / bringing down the rig.	Entrapment with overturning cable percussion drill rig due to uneven ground, slopes, collapse during transportation, erection and striking down.	Sub Contractors	3	5	15	<ul style="list-style-type: none"> <li>• Determine the route prior to travelling to the borehole location(s), select the most appropriate routes to avoid obvious soft spots and minimise avoidable damage.</li> <li>• Locations are being chosen to avoid benching out, this is damage Eni UK want to avoid.</li> <li>• Consideration should also be given to the additional weight that may be generated by the drilling operation i.e.. the pull down forces used to extract casing and the overall stability of the rig whilst moving.</li> <li>• When reversing, utilise the second man to act as a banks-man. (banks-man to wear upper-body Hi-Vis clothing). Additional timbers maybe required to enable the levelling of the rig. Care should be taken whilst travelling the route maintaining vigilance for trip / slip hazards and other moving vehicles or machinery.</li> <li>• The rig should be set up and operated in accordance with SWP 01 – Cable Percussion Boring. Additional timbers maybe required to enable the levelling of the rig. All drilling equipment should be compliant with current LOLER and PUWER legislation and be accompanied by in date certificates.</li> <li>• Equipment must be inspected before commencement of works to check for any defects or potential failure. Any equipment found to be unserviceable must be reported, destroyed/withdrawn and replaced if required.</li> </ul>	1	5	5

Activity	Hazard	Persons who might be harmed	Initial Risk			Control Measures	Residual Risk		
			L	S	R		L	S	R
Operation of cable percussion drill rigs	Contact or entrapment with moving parts	Sub Contractors	3	4	12	<ul style="list-style-type: none"> <li>• Maintain safe distance from the tool whilst in operation.</li> <li>• Ensure people not involved in the drilling operations remain outside of the danger zone. If required erect Heras fencing to form secure work area around the drill rig.</li> <li>• The winch guard must be in place whilst the rig is in operation.</li> <li>• In the event of an emergency during operation the controls must be released, the brake applied and the engine stopped. Activate the emergency stop or switch off ignition.</li> <li>• Soft ground may lead to shifting of the rods/casing. Fully assess hazards prior to taking remedial action.</li> <li>• Do not allow hands to enter danger areas.</li> <li>• Ensure that the key is removed at all times when the drill rig is left unattended.</li> <li>• Do not work beneath suspended overhead tools. Always lower tools to ground level before conducting other operations below the crown wheel.</li> </ul>	1	4	4
Operation of cable percussion drill rigs	Noise	Employees Sub Contractors General Public	4	3	12	<ul style="list-style-type: none"> <li>• Cable percussion drilling equipment can exceed the upper action level of 85 dB which requires hearing protection to be worn as mandatory.</li> <li>• In order to minimise noise exposure, adequate hearing protection shall be readily available and worn as required.</li> <li>• The lead driller should monitor the noise levels from the rig and shall wear, and instruct the second man to wear, hearing protection as required.</li> <li>• Ear protection <b>MUST</b> be worn at all times during SPT testing works.</li> <li>• Area of cordon to be set up around the work area to prevent access by unauthorised people.</li> </ul>	2	3	6
Operation of cable percussion drill rigs	Vibration	Sub Contractors	4	3	12	<ul style="list-style-type: none"> <li>• It is not envisaged that any vibration generated by the drilling operation will exceed the permitted exposure level.</li> </ul>	2	3	6
Operation of cable percussion drill rigs	Exhaust Fumes	Employees Sub Contractors	4	3	12	<ul style="list-style-type: none"> <li>• Consideration should be given to the direction of the prevailing wind during the set up of the rig.</li> <li>• Where possible, the rig should be set up so as to allow the fumes being emitted from the exhaust to blow downwind from the driller. In the event that wind direction changes, or it is not possible to position the rig appropriately, the driller should try to take steps to minimise the fumes from being emitted into the breathing zone of the drilling crew.</li> <li>• Regular maintenance should minimise the degree of the fumes being emitted.</li> </ul>	2	3	6

Activity	Hazard	Persons who might be harmed	Initial Risk			Control Measures	Residual Risk		
			L	S	R		L	S	R
Operation of cable percussion drill rigs	Fire	Employees Sub Contractors	2	5	10	<ul style="list-style-type: none"> <li>• Keep combustible materials clear from sources of heat (engine &amp; exhaust) and utilise drip trays as required.</li> <li>• Foam, Dry Powder or Co2 fire extinguishers to be available on site. Fire extinguishers to be serviced and maintained in good working order.</li> <li>• The drill site to be kept clear of combustible materials that could assist fire in spreading.</li> <li>• Smoking is prohibited at the work site.</li> </ul>	1	5	5
Operation of cable percussion drill rigs	Flying particles / dust	Employees Sub Contractors General Public	3	3	9	<ul style="list-style-type: none"> <li>• In the event that excessive dust is generated, this should be dampened down with water.</li> <li>• Safety goggles and dust masks should be readily available and worn as required.</li> <li>• Readily available clean water or eyewash should be provided.</li> <li>• Any dust or debris should be kept to a minimum where practicable. The lead driller to continually monitor for any changes.</li> </ul>	1	3	3
Housekeeping	Slips, trips and falls	Employees Sub Contractors	4	3	12	<ul style="list-style-type: none"> <li>• The run out route should be monitored if location is on soft ground as conditions will deteriorate with repeated trafficking of the same route.</li> <li>• Borehole location to be kept clear of debris.</li> <li>• Borehole location to be laid out in an orderly manner to minimise contact with ancillary equipment and consumables.</li> <li>• Work should be carried out in accordance to SWP - 12 Housekeeping. Rod trestles to be placed to allow for passage around the work site, trestles to be levelled such that rods do not roll and apply uneven load to one side.</li> <li>• The lead driller and second man to continually monitor for any changes to underfoot conditions. Where conditions deteriorate additional measures such as bog matting or ground protection boards may be required.</li> </ul>	2	3	6
Accessing cable percussion rig components at the summit of the cable percussion drill rig	Working at Height	Sub Contractors	3	5	15	<ul style="list-style-type: none"> <li>• Prior to any drilling works being carried out, the drilling equipment and drilling crew are to be checked to have suitable arrangements to prevent the need to work at height, as per AGS guidance.</li> <li>• The rig should be fitted with an ancillary winch which allows the machine to be lowered without the need for persons to climb the mast.</li> <li>• If for any reason the mast needs to be lowered or raised using the electric winch, the driller must check the condition of the drum, steel wire rope and rope guide to mitigate any chance of snagging or any issues with defects.</li> <li>• The Site Supervisor is to ensure all necessary checks of equipment have been made.</li> </ul>	1	5	5

Activity	Hazard	Persons who might be harmed	Initial Risk			Control Measures	Residual Risk		
			L	S	R		L	S	R
Removal of detached or stuck tooling in the bore hole	Impact with tooling	Sub Contractors	3	4	12	<ul style="list-style-type: none"> <li>Reference should be made to SWP 01A – Cable Percussion - Retrieval of detached or stuck tooling.</li> <li>The retrieval of tooling should only be carried out in accordance with SWP 01A unless an alternate method is discussed and agreed with the Regional Office Manager or Health and Safety Manager.</li> </ul>	1	4	4
Moving of drilling ancillary equipment	Manual Handling	Sub Contractors	4	3	12	<ul style="list-style-type: none"> <li>All Manual handling activities should be carried out safely and with reference to SWP 15 – Manual Handling and Lifting.</li> <li>The drill site to be well organised with ancillary equipment set up in an orderly manner.</li> <li>Drilling and SPT rods should be laid down and not left stood upright.</li> <li>The hammer and anvil is usually stood up and leant against the rig frame. (The potential risk of the hammer falling is outweighed by the more likely manual handling injury when picking up or laying down.)</li> <li>Hands kept clear of all ‘nipping or trapping’ points on tooling when moving it. Care and attention should be continually restated so as to continue to work safely and cautiously.</li> <li>In the event that additional help is required, this should be sought as opposed to taking risks.</li> <li>Where possible, mechanical handling aids / assistance should be used at all times when undertaking manual handling activities.</li> </ul>	2	3	6
Maintenance of cable percussion drill rigs	Failure of cable percussion rig components	Sub Contractors	3	4	12	<ul style="list-style-type: none"> <li>All plant and machinery must be in serviceable condition and checked to be so before commencing works.</li> <li>All equipment must be accompanied by relevant LOLER and PUWER certification on site, which must reference any serial numbers and identifying numbers.</li> <li>Daily checks must be carried out on all equipment and recorded, and the equipment must be monitored throughout the shift. If any faults are identified on site which cannot be rectified immediately, the machinery must not be used until equipment is repaired or replaced.</li> <li>The Site Supervisor is to ensure equipment has relevant LOLER and PUWER certification prior to work commencing on site and ensure that daily check lists are completed prior to each shift. Checks lists are to be maintained for the duration of the project.</li> </ul>	1	4	4

# HEALTH & SAFETY - Risk Assessment - Digging Inspection Pits

Project Talacre Beach, Point of Ayr  
 Client ENI UK

Project No. QN251239  
 Date 31 March 2025  
 Compiled by C J Southall

Risk (R) = Likelihood x Severity			Likelihood (L)	Severity (S)				
				Negligible=1	Minor=2	Absence=3	Major=4	Fatal=5
1 to 6	Low	Ensure control measures are maintained.	Remote=1	1	2	3	4	5
8 to 10	Medium	Unacceptable risk - implement control measures	Unlikely=2	2	4	6	8	10
12 to 25	High	Unacceptable risk - Specialist knowledge required to implement control measures	Possible=3	3	6	9	12	15
<b>NOTE:</b> The following PPE is mandatory and shall be worn at all times: High Visibility Waist-Coat or Jacket, Safety Helmet, Safety Glasses, Gloves and Safety Boots or Safety Wellingtons			Probable=4	4	8	12	16	20
			Certain=5	5	10	15	20	25

Activity	Hazard	Persons who might be harmed	Initial Risk			Control Measures	Residual Risk		
			L	S	R		L	S	R
Positioning of location.	Buried services / structures.	Employees Sub Contractors General Public	3	5	15	<ul style="list-style-type: none"> <li>Prior to any trial pit being commenced, reference should be made to SWP 03-Trial Pitting - Hand and Machine Excavation, SWP 08-Underground Services and SWP 09-Use of Cable Avoidance Tool and Signal Generator.</li> <li>Insulated hand tools to be used to excavate to a maximum depth of 1.2m.</li> <li>If any services or structures are encountered, these should be recorded along with their depth and orientation and the location backfilled. The borehole position will then be re-sited.</li> <li>SEP Geophysical shall clear a 5x5m area using GPR techniques prior to setting up.</li> <li>A Permit to dig shall be issued prior to breaking ground and excavating to a minimum depth of 1.2 metres.</li> <li>Hand dug pit shall be CAT scanned approximately every 300mm in depth.</li> <li>The bottom of each hand dug pit shall be CAT scanned prior to any drilling work commencing.</li> <li>Tide timetables to be checked before any work is carried out on Talacre Beach. All rules to be followed in line with the coastguard / beach lifeguards.</li> <li>Tracked vehicles only to be used on the beach</li> </ul>	1	5	5
Access to location.	Slips / Trips & Fall.	Employees Sub Contractors	3	3	9	<ul style="list-style-type: none"> <li>Care should be taken when accessing work site observing any potential uneven surfaces.</li> <li>The work site should be kept clean and tidy as far as possible at all times.</li> <li>Agreed access routes should be used - TBC by WSP and Eni UK prior to mobilisation.</li> <li>All personnel working on site should maintain vigilance and report any concerns that they cannot readily rectify.</li> </ul>	2	3	6

Activity	Hazard	Persons who might be harmed	Initial Risk			Control Measures	Residual Risk		
			L	S	R		L	S	R
Hand digging	Contact with sharps, contaminated soils or water	Employees Sub Contractors	3	3	9	<ul style="list-style-type: none"> <li>• Appropriate gloves should be worn if contact with soils or water is likely.</li> <li>• Personnel undertaking the activity should be observant for any potential sharps, i.e. broken glass or discarded hypodermic needles. If hypodermic needles are encountered then all works on site shall be stopped until they have been dealt with accordingly. Staff are not to remove items.</li> <li>• Good hygiene practices should be observed ensuring that hands are washed prior to eating or smoking.</li> <li>• You must be sure you have had the full course of Tetanus vaccinations, if you are unsure contact your GP.</li> <li>• Reference should be made to SWP 11- General Site Safety, SWP 12 -Housekeeping</li> </ul>	2	3	6
Hand digging	Open excavation	Employees Sub Contractors General Public	3	3	9	<ul style="list-style-type: none"> <li>• A hand dug excavation pit should not be left open and unattended without appropriate barriers &amp; signage or cover in place so as to prevent persons from falling into it. If the aforementioned control measures are not practical, the pit should be backfilled.</li> <li>• Where any hand pits are to be dug ahead of the arrival of a CPT rig or Sonic rig, the pit shall be backfilled on completion and the location surveyed in.</li> </ul>	1	3	3
Excavation	Contaminated Land	Employees Sub Contractors	4	2	8	<ul style="list-style-type: none"> <li>• Appropriate PPE to be worn whilst handling contaminated soils.</li> <li>• Contaminated arisings to be placed on suitable membrane / containment to prevent spread of contamination.</li> <li>• In the event that the site is classified as 'Red', a specific Risk Assessment and procedures shall be required prior to commencing any work on site. Further advice and guidance should be sought from the Environmental Champion, Health and Safety Manager or other suitably qualified personnel.</li> </ul>	3	2	6

# HEALTH & SAFETY - Risk Assessment - Manual Handling

Project Talacre Beach, Point of Ayr  
 Client ENI UK

Project No. QN251239  
 Date 31 March 2025  
 Compiled by C J Southall

Risk (R) = Likelihood x Severity			Likelihood (L)	Severity (S)				
				Negligible=1	Minor=2	Absence=3	Major=4	Fatal=5
1 to 6	Low	Ensure control measures are maintained.	Remote=1	1	2	3	4	5
8 to 10	Medium	Unacceptable risk - implement control measures	Unlikely=2	2	4	6	8	10
12 to 25	High	Unacceptable risk - Specialist knowledge required to implement control measures	Possible=3	3	6	9	12	15
<b>NOTE:</b> The following PPE is mandatory and shall be worn at all times: High Visibility Waist-Coat or Jacket, Safety Helmet, Safety Glasses, Gloves and Safety Boots or Safety Wellingtons			Probable=4	4	8	12	16	20
			Certain=5	5	10	15	20	25

Activity	Hazard	Persons who might be harmed	Initial Risk			Control Measures	Residual Risk		
			L	S	R		L	S	R
Handling casing and drilling equipment	Heavy loads	Employees Sub Contractors	3	4	12	<ul style="list-style-type: none"> <li>All persons involved in manual lifting of loads will be 'Manual Handling Awareness' trained.</li> <li>Manual movements of casing and drilling equipment around the work location shall be undertaken by a minimum of a two person team.</li> <li>All manual lifting of loads will be carried out following the kinetic lifting method:                             <ul style="list-style-type: none"> <li>Keep the load close to the waist</li> <li>Adopt a stable position</li> <li>Ensure a good hold on the load</li> <li>Moderate flexion of the back, hips and knees at the start of the lift</li> <li>Don't flex the back any further while lifting</li> <li>Avoid twisting the back or leaning sideways</li> </ul> </li> </ul>	2	3	6
Handling casing and drilling equipment	Slips, trips and falls	Employees Sub Contractors	3	4	12	<ul style="list-style-type: none"> <li>Plastic ground protection boards to be in place around work locations where soft and loose ground conditions are present.</li> <li>Maintain good levels of housekeeping around the work location. Site Supervisor to monitor this on a daily basis.</li> </ul>	1	4	4

Activity	Hazard	Persons who might be harmed	Initial Risk			Control Measures	Residual Risk		
			L	S	R		L	S	R
Handling plastic ground protection boards	Heavy, bulky loads	Employees Sub Contractors	3	4	12	<ul style="list-style-type: none"> <li>No manual movements of plastic ground protection boards to be undertaken during high winds.</li> <li>All persons involved in manual lifting of loads will be 'Manual Handling Awareness' trained.</li> <li>Manual movements of plastic ground protection boards around the work location shall be undertaken by a minimum of a two person team.</li> <li>All manual lifting of loads will be carried out following the kinetic lifting method:               <ul style="list-style-type: none"> <li>Keep the load close to the waist</li> <li>Adopt a stable position</li> <li>Ensure a good hold on the load</li> <li>Moderate flexion of the back, hips and knees at the start of the lift</li> <li>Don't flex the back any further while lifting</li> <li>Avoid twisting the back or leaning sideways</li> </ul> </li> </ul>	2	3	6
Handling plastic ground protection boards	Slips, trips and falls	Employees Sub Contractors	3	4	12	<ul style="list-style-type: none"> <li>Plastic ground protection boards to be in place around work locations. Plastic ground protection boards to be positioned working from the previously positioned board NOT standing directly on the ground which could cause a slip or trip hazard.</li> <li>Maintain good levels of housekeeping around the work location. Site Supervisor to monitor this on a daily basis.</li> </ul>	1	4	4
Handling rotary core boxes	Heavy loads	Employees Sub Contractors	3	4	12	<ul style="list-style-type: none"> <li>All persons involved in manual lifting of loads will be 'Manual Handling Awareness' trained.</li> <li>Manual movements of empty rotary core boxes around the work location can be undertaken by one person.</li> <li>Manual movements of full or partially full rotary core boxes shall be undertaken by a two person team.</li> <li>All manual lifting of loads will be carried out following the kinetic lifting method:               <ul style="list-style-type: none"> <li>Keep the load close to the waist</li> <li>Adopt a stable position</li> <li>Ensure a good hold on the load</li> <li>Moderate flexion of the back, hips and knees at the start of the lift</li> <li>Don't flex the back any further while lifting</li> <li>Avoid twisting the back or leaning sideways</li> </ul> </li> </ul>	2	3	6

Activity	Hazard	Persons who might be harmed	Initial Risk			Control Measures	Residual Risk		
			L	S	R		L	S	R
Handling rotary core boxes	Slips, trips and falls	Employees Sub Contractors	3	4	12	<ul style="list-style-type: none"> <li>Plastic ground protection boards to be in place around work locations where soft and loose ground conditions are present.</li> <li>Maintain good levels of housekeeping around the work location. Site Supervisor to monitor this on a daily basis.</li> </ul>	1	4	4
Handling 25kg bagged materials (Bentonite, Gravel, Sand & Cement)	Heavy loads	Sub Contractors	3	4	12	<ul style="list-style-type: none"> <li>All persons involved in manual lifting of loads will be 'Manual Handling Awareness' trained.</li> <li>Manual movements of individual bags around the work location can be undertaken by one person.</li> <li>Manual movements of multiple quantities of bags shall be undertaken by a minimum of a two person team.</li> <li>All manual lifting of loads will be carried out following the kinetic lifting method: <ul style="list-style-type: none"> <li>Keep the load close to the waist</li> <li>Adopt a stable position</li> <li>Ensure a good hold on the load</li> <li>Moderate flexion of the back, hips and knees at the start of the lift</li> <li>Don't flex the back any further while lifting</li> <li>Avoid twisting the back or leaning sideways</li> </ul> </li> </ul>	2	3	6
Handling 25kg bagged materials (Bentonite, Gravel, Sand & Cement)	Slips, trips and falls	Employees Sub Contractors	3	4	12	<ul style="list-style-type: none"> <li>Plastic ground protection boards to be in place around work locations where soft and loose ground conditions are present.</li> <li>Maintain good levels of housekeeping around the work location. Site Supervisor to monitor this on a daily basis.</li> </ul>	1	4	4

# NW Pipelines – Point of Ayr Method Statement



Document Administration		
SEP Geophysical Ref:	G-23_428-SEP GEO-MS-07(00)	
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Date:	28/03/25	
Prepared: <b>Tomas Llewellyn</b> Geophysicist	Checked: <b>James Cotterill</b> Principal Geophysicist	Approved: <b>James Cotterill</b> Principal Geophysicist
<i>T.A.S. Llewellyn</i>	<i>James Cotterill</i>	<i>James Cotterill</i>

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## 1. Introduction

This document presents the SEP Geophysical Ltd method statement for conducting the geophysical survey comprising of the following:

- Seismic Refraction
- Electrical Resistivity Tomography (ERT)
- Electromagnetic Mapping (EM)

This is to be read in conjunction with the accompanying risk assessment. Document reference 'G-23\_428-SEP GEO-RA-07(00)

### 1.1. Site Details

The site is located near the point of Ayr, between the Haven Presthaven resort and the town of Talacre.

### 1.2. Scope of Work

**Map 1** outlines the survey area. Geophysical surveys will be deployed across the area to ascertain the change from sand to clay.



Map 1 - Survey area outlined in red.

## 2. Methodology

### 2.1. Arrival at site

On arrival to site SEP Geophysical will report to the Client's representative, for induction if necessary and to confirm any relevant instructions. SEP Geophysical personnel to obtain all relevant permits to Work and site safety documents prior to any work commencing. The necessary documents / licences / test certificates will be made available on arrival on site for inspection by the site manager and or safety officer; all of these may be copied for your reference.

### 2.2. Access arrangements

Access to the survey area will be determined by the access pack to be provided by the client who are organising access with landowners. The access pack will detail how the land should be accessed and where it is appropriate to park vehicles.

### 2.3. Equipment Details

**Table 1** presents the equipment proposed for the scope of work.

Survey Type	Type of Equipment	Equipment Items
Topographical	GPS/TPS	Spectra GPS
Seismic Refraction	Seismic	ABEM Terraloc 48 spiked 14Hz Geophones 48 spiked 4.5Hz Geophones 2 No. 24 Channel cables with 5m takeout interval;
Electrical Resistivity Tomography	ERT	ABEM LS-2
Electromagnetic Mapping	EM	Geophex GEM-2
Generic Survey Equipment	Misc.	Water-based spray paint, 2(no.) 100m survey tapes, toolbox, chalk, and ranging poles.

**Table 1 – Summary of Equipment.**

### 2.4. Reconnaissance

A site reconnaissance will be undertaken to familiarize the surveyor with the site extents and the specific hazards associated with the area. The surveyor will then carry out a risk assessment / daily work brief for the said works. Before work commences all personnel are to be briefed, on the contents of the daily work brief, and will then be asked to sign an acknowledgement form. Attention must be paid to manual handling techniques when transporting materials / equipment from vehicles, also ensure the route is clear and free from obstructions. All equipment is to be visually inspected prior to work commencement and if found to be defective shall be put out of service.

### 2.5. Seismic Refraction

The survey will be conducted as per the specification agreed with the client.

A minimum of 2 geophysical engineers are required to perform the survey.

If the start and end coordinates are known, these staked out with GPS, and a survey tape is run from the start to the end. If no coordinates are available, then the survey line will be positioned using nearby surface features. Geophones are laid out every 2 m for the length of the profile. A CAT scan is

undertaken along the length of the profile to detect any buried cables or metallic services. If a signal is located then the geophones are positioned away from this feature. The console is placed in the centre of the array and cables are positioned along the profile. The cables are then reeled out with each take-out placed at a geophone position.

Geophones are pushed into the ground by hand to a depth of no more than 100mm and then connected into the take-outs. An initial noise check is completed to ensure all geophones are connected well with the ground surface. If a geophone returns a poor connection, it is checked and if necessary, reseated until it returns a good signal. **Photo 1** shows a seismic refraction set up.

Once the noise check is complete, the survey parameters are programmed (or checked if preloaded). The trigger cable with either a geophone or hammer switch is connected to the seismograph to trigger the seismograph to record when the hammer strikes the hammer plate. A test shot is recorded at the first testing location which is 20 metres off the end of one end of the geophone spread. The sensitivity of the trigger is adjusted until the seismograph triggers at the right time and the first arrivals are returning sensible readings. Once all parameters are correct shots are recorded and repeated with the data being stacked to increase the signal to noise ratio until clear first breaks are observed along the spread. The survey team progress onto the next shot location in increments of 5 metres and repeats the process until they reach 20 metres off the other end of the spread.

During this time, each geophone is topographically mapped using the GPS. The works then move onto the next profile and repeated until all profiles are completed.



Photo 2 - ABEM Terraloc Equipment setup.

## 2.6. Electrical Resistivity Tomography

The survey will be conducted as per the specification agreed with the client.

A minimum of 2 geophysical engineers are required to perform the survey.

If the start and end coordinates are known, these staked out with GPS/TPS, and a survey tape is run from the start to the end. If no coordinates are available, then the survey line will be positioned using nearby surface features. Electrodes are laid out every 1 m for the length of the profile. A CAT scan is undertaken along the length of the profile to detect any buried cables or metallic services. If a signal is located then the electrodes are positioned away from this feature. The console is placed in the centre of the array and cables are positioned along the profile. The cables are then reeled out with each take-out placed at an electrode position.

Electrodes are pushed into the ground by hand to a depth of no more than 100mm and then connected into the take-outs. An initial resistance check is completed to ensure all electrodes are contacted well with the ground surface. If an electrode returns a poor connection, it is checked and if necessary, salt water is poured on.

Once the contact resistance check is complete, the survey parameters are programmed (or checked if preloaded). The correct sequence is loaded and run. The acquisition cycle can take 1 - 2 hours. During this time, each electrode is topographically mapped using the GPS/TPS. The works then move onto the next profile and repeated until all profiles are completed.



Photo 2 - ABEM LS-2 ERT Equipment setup.

## 2.7. Electromagnetic Mapping Survey

The survey will be conducted as per the specification agreed with the client.

A minimum of 1 geophysical engineer is required to perform the survey.

Using spray paint and a survey tape, points will be marked every 1 m along a baseline to dictate the starting position of the system. Multiple baselines will be required to ensure full coverage of the survey area. The surveyor has the right to adjust the profile spacing as necessary dependent on ground conditions, surface obstructions and quality assurance.

The EM system will be removed from the site vehicle and visually inspected to check for defects or issues, particularly noting the electronic console and cable connections. The shoulder strap will be attached and placed over the surveyors head along with a backpack which houses the dGPS. A RS232 cable will be connected to the electronic console and GPS. Finally the logger will be attached to the boom. All electronic devices such as mobile phones will be removed from the surveyor(s) pockets.

A suitable place must be located to “null” the instrument. This should be a electronically and magnetically “quiet” location, and away from any surface metallic features and overhead powerlines. By nulling the instrument, the values recorded are relative changes across the site.

The EM survey will be undertaken by traversing the area of interest by a series of closely spaced, bidirectional, and parallel profiles. It recommended to have an exclusion zone of at least 2m when surveying near conductive surface objects such as cars and metal fences etc, to ensure the quality of the electromagnetic data is not comprised. The acquisition process will not perturb the status of the objects.



Photo 2 – Geophex GEM-2 Instrument

## 2.8. Completion

Once the task is completed the work area shall be tidied up and all survey equipment removed. Any areas that were required to be cordoned off for us to work shall be reopened and handed over, and any permits signed back to site management before leaving site.

### 3. Project Management and Staffing

SEP Geophysical Ltd will employ appropriately qualified and experienced staff to conduct the works, process and report the data to the required standard and timescales.

Name	Job Title	Responsibilities	Project Role
Tom Smith	Director	Operations Manager, Project Overview, QC and approval of final report / dataset.	Supervisor
James Cotterill	Principal Geophysicist	Operations Manager, Project Overview, QC and approval of final report / dataset.	Supervisor/Project Manager/ Site Lead
Chris Ernest	Principal Geophysicist	QC and approval of final report / dataset, Day to day technical management of project including Health & Safety Responsibility for data processing assistance.	Project Manager
Jonathan Marsh	Senior Geophysicist	Day to day technical management of project including Health & Safety Responsibility for data collection and processing assistance.	Project Manager/ Site Lead
Tom Llewellyn	Geophysicist	Responsibility for data collection and processing assistance.	Site Lead/Site Team
Sam Page	Geophysicist	Responsibility for data collection and processing assistance.	Site Lead/Site Team
Henry Morten	Geophysicist	Responsibility for data collection and processing assistance.	Site Lead/Site Team

Table 2 – Summary of personnel.

### 4. Data Processing and Reporting

#### 4.1. Field Checking / Processing

All data will be collected digitally. Online data quality will be monitored by the staff to ensure that the survey specification is being met at all times. Should data quality fall outside of these limits, the surveyor will halt the survey until such times as the data falls back within acceptable limits. The intention to cease survey operations due to unacceptable data quality will be discussed and agreed with the Client Site Representative.

Raw data collected during the survey will be 'backed up' to removable media upon completion of each day's survey.

#### 4.2. Processing / Reporting Software Packages

The data will be processed using a variety of software packages. All drawings will be provided in AutoCAD format at a suitable scale to be agreed. A report of survey will be issued to support the survey data, which will outline the survey methodology and techniques employed over the site together with a comprehension of the results. Observations of the field team will be included as well as daily operations reports and any recommendations we may have.

#### 4.3. Reporting Deliverables

The following deliverables will be provided in accordance with the project scope of works.

- CAD Image of found anomalies.

- Detailed written report describing all aspects of the fieldwork, data processing and interpretation.

## 5. Health, Safety, Environment and Quality

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SEP Geophysical Ltd has a Safety Management System which meets the requirements of the Management of Health and Safety Regulations 1999. The safety management system is incorporated into the Integrated Management System (IMS) which is accredited to ISO 9001:2015. The company is also accredited to ISO 14001:2015.

SEP Geophysical Ltd has a registered Safety Practitioner and all of our sites/contracts are operated under procedures contained in the Safety Management System. All staff are given a basic induction on safety with specific safety inductions on all of our sites. Where appropriate we carry out works in accordance with the CDM Regulations. We operate an 'open door' principle where employees can approach their immediate supervisor (or his/her supervisor or the Safety Manager or Advisor) to provide advice or co-ordinate views and make suggestions or provide advice on any specific work task.

All staff employed are experienced with working in the environments likely to be encountered on the site and are fully familiar with or will be trained in the use of the plant and equipment we intend to use. All SEP Geophysical Ltd Staff are trained in emergency first aid at work. Regular safety checks and spot visits on site are carried out by senior staff and management to monitor the effectiveness of the control measures put into place to mitigate any risk identified.

All contracts are delivered using the Project Plan. Project Plans are project specific and are the interface between an individual project and the IMS. The Project Plan contains contractual documentation including client requirements, resource details, timescales, contract review information and client communications.

Where projects are based around site activities the SEP Geophysical Ltd corporate requirement for a Site Safety and Environmental Plan is incorporated into the Project Plan. Safety & Environmental measures are determined through a risk assessment approach.

Each plan is developed with and through the project. The plan serves not only as a management tool, but may also fulfil legal and other requirements (e.g. Health & Safety under the Construction (Design & Management Regulations 2007)). Site based Project Plans may state objectives and targets that relate to the individual project. Environmental aspects and mitigation measures are defined in the Project Plans.

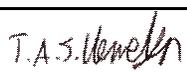
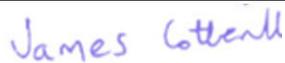
The plan, developed upon project award, includes all method statements (this document) and risk and hazard assessments deemed necessary by the operations. Risk assessments will be further developed following 'tool box talks' on site which are completed prior to site operation tasks.

The project leader will complete daily 'Toolbox Meetings' and the list of topics shall include as a minimum Daily Tasks (current, past 24 hours and next 24 hours) and any safety issues / hazards identified. The details of the meeting will be recorded on the Daily Progress Report.

SEP Geophysical Ltd manages its business operations in the UK through the implementation of an Integrated Management System (IMS). This IMS addresses the core management issues of health & safety, quality, environment, human resources and finance.

# Safety, Health & Environment (SHE) Plan

<b>Introduction</b>	This HSE Plan has been prepared and based on the information supplied by our Client along with a desktop Risk Assessment and the Method Statements of the tasks understood to be required to safely complete the scope of works undertaken by SEP Geophysical Ltd.
<b>Statement of Safety Principles</b>	The Health, Safety and Welfare of employees is of prime importance to the Company and is essential to the efficient operation of its undertaking, as are the health and safety of anyone else affected directly by the Company's operations.
	The Company will comply with all its legal duties in pursuance of providing safe and healthy working conditions for all employees and will take positive action to ensure that clients, other contractors and the general public are not adversely affected by the company's activities. The responsibility for safety at work rests upon all sectors and levels of management, and the Company will ensure that the Company Health and Safety policy is pursued throughout the organisation.
	The Company will co-operate with all those with an interest in Health and Safety, other employees, clients, sub-contractors, and the enforcing authorities. The overall responsibility for the health, safety and welfare of the Company and its personnel is vested in the Company's Directors.
	The Company will give full backing to the Health and Safety policy and to the Company's Safety Representative, whose function it shall be to monitor and operate the policy, and will support all those who endeavour to carry it out. The Company will provide sufficient financial support for the full implementation of the Health and Safety policy. The Company Health and Safety policy is reviewed at least annually in the company's management review which is part of the company's quality management system. It may also be reviewed and updated on an ad hoc basis, where considered necessary by the Directors. All employees shall be made aware of changes to the policy and amended policies shall be issued to all holders of controlled copies.
	The Company expects employees to conform to the Company Health and Safety policy and to comply with the relevant sections of the Health and Safety at Work Act and to exercise all reasonable care for their own health and safety and that of others who may be affected by their acts or omissions.

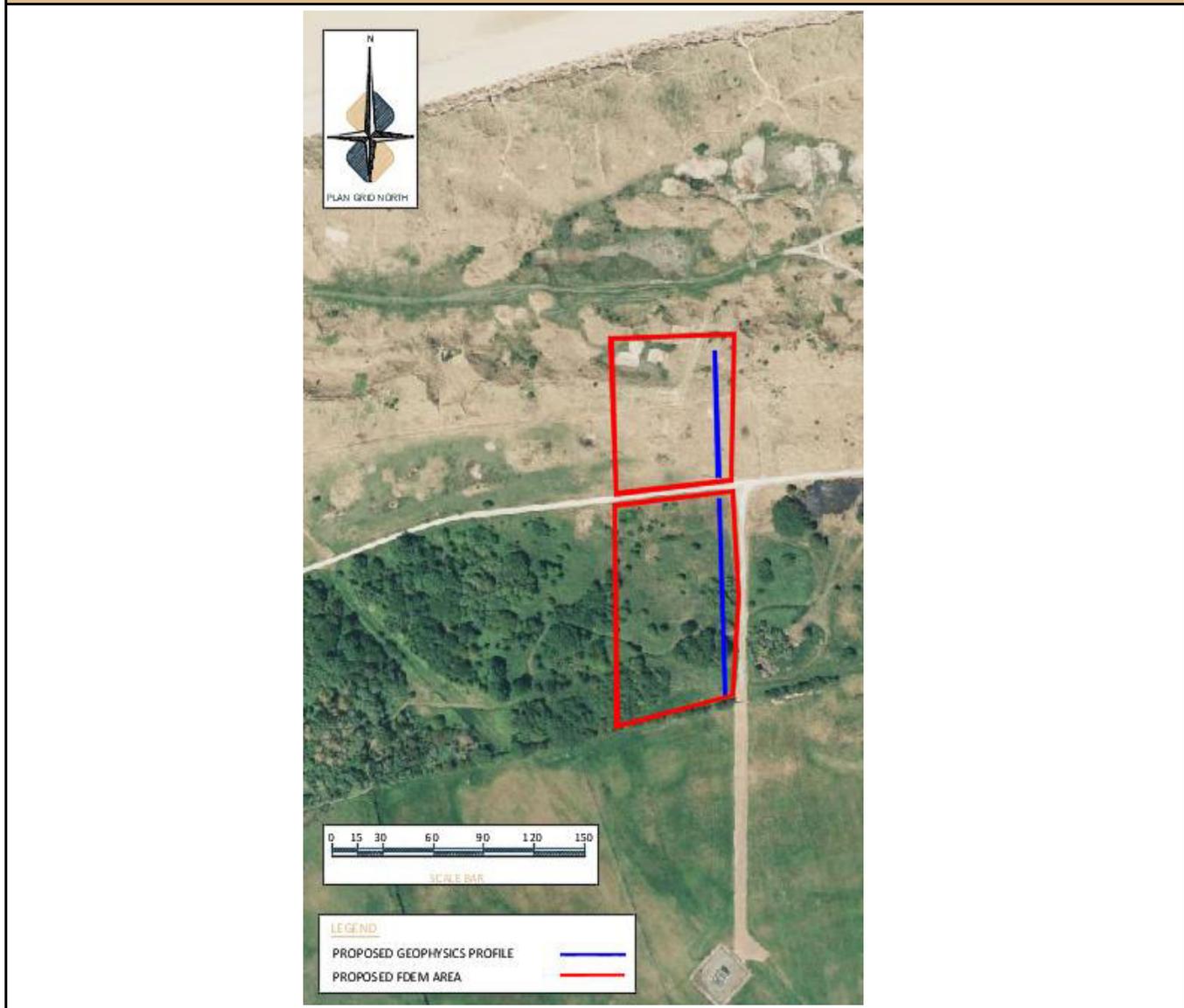
<b>Document Number</b>	G-23_428-SEP GEO-RA-7(00)		
<b>Author</b>	Tom Llewellyn	<b>Signed</b>	
<b>Date</b>	28/03/2025		
<b>Reviewer</b>	James Cotterill	<b>Signed</b>	
<b>Date</b>	28/03/2025		

Revision Summary		
Version	Nature of Change	Revision Date

### Project Details:

<b>Project Number</b>	G-23_428			
<b>Project Name</b>	Northwest Pipelines - Point of Ayr			
<b>Project Contacts</b>	<b>Name</b>	<b>Position</b>	<b>Role</b>	<b>Mob</b>
	Tom Smith	Project Director	Management of the contract/project including H&S, programme management, quality control and labour requirements.	07971 162132
	James Cotterill	Project Supervisor		07399 129035
	Chris Ernest	Project Manager		07301 265078
<b>Client Contacts</b>	Conor Southall	Senior Engineer	Client Contact	07825 817688
	TBC	TBC	Site Contact	TBC

### Site Boundary/ Survey Area



**Site Details:**

<b>Site Address</b>	Gamfa Wen, Talacre, Holywell	<b>Start Date</b>	TBC
		<b>Finish Date</b>	TBC
		<b>No. of Days</b>	3
		<b>Working Hours</b>	08:00-17:00
<b>Postcode</b>	CH8 9RT	<b>Restrictions</b>	Dependent on land owner
<b>W3W</b>	///teaching.crucially.smoker		
<b>Site Personnel</b>	<b>Name</b>	<b>Role</b>	<b>Mob</b>
	Tom Smith	Geophysicist	07971 162132
	Jonathan Marsh	Geophysicist	07539 352033
	Tom Llewellyn	Geophysicist	07476 686123
	Henry Morten	Geophysicist	07802 418187
	Sam Page	Geophysicist	07936 002071
<b>Site Induction Requirements</b>	In accordance with CDM regulations all personnel are to receive a site-specific induction/briefing upon attending site, particular attention must be paid to emergency procedures detailed.		
<b>Welfare Facilities</b>	Due to the transient nature of the works, SEP Geophysical Ltd operatives are to use facilities provided by the client and are to be made aware of arrangements. Local facilities are to be used should there be no onsite		
<b>Security arrangements</b>	All vehicles should remain locked, and all site equipment must not be left unattended.		
<b>Access Arrangements</b>	An access plan is to be provided for each land parcel with details on access routes for vehicles and parking, which must be adhered to at all times. Any changes to the access route must be agreed with the project manager. Proposed access from Gamfa Wen car park		
<b>Access to Site</b>			
TBC			

**Travelling by Van:**

Maximum miles in one day	50	Number of Planned Breaks for the journey (1 every 2 hours or every 120 miles)	N/A
Vehicle Make and Model attending site	Ford Transit custom/ Citroen Berlingo/ Ford Ranger	Is accommodation required for completion of all site works? (Day does not exceed 14 hours)	No
SEP Geophysical Breakdown information	RAC Breakdown: 0330 159 0740		
Driving Hazards	Control Measures		
Collison or loss of control of vehicle due to other road users.	<p>To drive in a safe and considerate manner, obeying all applicable road safety legislation and showing respect for all other road users (other vehicles, cyclists, horses, pedestrians, etc).</p> <p>Adhere to local speed limits, been particularly mindful within roadworks.</p> <p>To be responsible for the safety of themselves, for any passengers and for the security of all loads carried in / on or towed by their vehicle and for ensuring that the vehicle is safe to use (including hired vehicles).</p> <p>Plan the journey realistically so staff do not have to rush if caught in traffic/ road works etc- Be vigilant of erratic driving from other road users.</p> <p>All drivers will NOT be driving under the influence of alcohol and/or drugs. If the driver is using prescribed medication this will be discussed and assessed prior to any journeys</p>		
Collison or loss of control of vehicle due to distraction	<p>Mobile phones will not be used while driving and placed in the glove box to avoid temptation.</p> <p>Drivers will minimise/avoid adjusting the sat nav/radio while in transit. If this is required, the driver will pull over at the next safe opportunity.</p> <p>Passengers within the vehicle will ensure not to distract the driver.</p>		
Collison or loss of control of vehicle due to adverse weather conditions	<p>Drivers to assess driving conditions prior to commencing journey. If deemed unsafe, then the driver is to wait until more suitable conditions.</p> <p>Adjust driving style/speed to the conditions.</p> <p>If driving during adverse weather seasons, drivers are to pack extra provisions and an overnight bag.</p> <p>Ensure daily vehicle check has been undertaken.</p> <p>Driver to ensure they have all the relevant breakdown information available.</p>		
Collison or loss of control of vehicle due to poorly maintained vehicle	<p>Driver to ensure vehicle is appropriately fuelled prior to commencing journey.</p> <p>Driver to ensure the daily vehicle check is completed. Ensuring that a torch (with full batteries), first aid kit, blanket and warning triangle is packed within vehicle pack. If issues are noticed senior management/client representative must be contacted to be updated. If safe to do so vehicle to be taken to nearest garage for repair/maintenance or relevant breakdown company contacted.</p>		
Collison or loss of control of vehicle due to driver fatigue	<p>Plan the journey realistically so staff do not have to rush if caught in traffic/ road works or end up driving for long periods.</p> <p>Plan to, and take regular breaks. As per the SEP Geophysical driving procedure, 1 break every 2 hours or 120 miles is mandatory.</p> <p>Driver to call in to senior management upon arrival to site and when completed. If driver or senior management have any concerns regarding their suitability to drive, then they must book into the nearest accommodation.</p>		
Collison with object or pedestrian when parking or reversing	<p>To drive/park in a safe and considerate manner, obeying all applicable road safety legislation and showing respect for all other road users (other vehicles, cyclists, horses, pedestrians, etc).</p> <p>All SEP Geophysical vehicles are fitted with reversing sensors and/or cameras.</p> <p>All SEP Geophysical personnel are to park in a considerate manner.</p> <p>Use a banksman as/when required.</p>		
Becoming stranded when accessing site	<p>SEP Geophysical staff will not take cars etc off-road to prevent stranding. Where the site requires access an appropriate 4x4 may be used, if staff have had suitable training.</p> <p>Driver to ensure the daily vehicle check is completed. Ensuring that a torch (with full batteries), first aid kit, blanket and warning triangle is packed within vehicle pack.</p>		
Violent behaviour from other road users	<p>To drive in a safe and considerate manner, obeying all applicable road safety legislation and showing respect for all other road users (other vehicles, cyclists, horses, pedestrians, etc) to avoid potential for violent reaction.</p> <p>Do not engage or provoke.</p> <p>Carry identification and insurance details.</p>		

**Risk Matrix:**

Risk Assessment:		For the process of assessing risk and the necessary control measures to be implemented SEP Geophysical use the standard 5 x 5 risk matrix where a numerical score is assigned to the chance of an event occurring and the severity of impact. Risk (R) is defined as the consequence / severity (S) of an event multiplied by the frequency / likelihood (L) of its occurrence: so $R = (S \times L)$ .										
Risk Matrix		Severity					Likelihood (L)		Severity (S)		Risk Rating	
		1	2	3	4	5						
Likelihood	1	1	2	3	4	5	1= Remote	1= Insignificant injury/ environmental impact / impact on quality of work		1-5	Low	
	2	2	4	6	8	10	2= Unlikely	2= Minor injury/ environmental impact/ impact on quality of work		6-14	Medium	
	3	3	6	9	12	15	3= Possible	3= Moderate injury/ localised environmental impact/ impact on quality of work		15-25	High	
	4	4	8	12	16	20	4= Likely	4= Major injury/ environmental impact/ impact on quality of work				
	5	5	10	15	20	25	5= Certain	5= Severe Fatality/large environmental impact/ impact on quality of work				

**Site Specific Hazards:**

Relevant Site hazards	Pre -control measures			Control Measures	Post -control measures		
	L	S	R		L	S	R
Soft Ground	3	5	15	Be aware of soft terrain. Be aware of any ground level hazards, as soft ground may increase the chance of slipping/tripping. Stick to walkways. Be aware this may compromise any manual labour/heavy lifting, get a buddy if uncertain.	1	5	5
Slips, Trips and Falls at ground level. Risk of incapacitating injury (e.g. sprained or fractured ankle) or knocked unconscious (head injury).	3	5	15	All operatives to wear safety boots with ankle support Undertake a walkover prior to commencing site walkover to assess areas of uneven ground/obstructed areas. Ensure to factor in weather/surface conditions while undertaking walkover to assess their impact e.g. wet and/or icy conditions. Ensure suitable lighting is available for the duration of works. Be mindful of surroundings when walking with equipment.	1	5	5
Working adjacent to roads/areas of vehicle movement. Risk of collision/injury from public traffic or site plant.	3	5	15	Ensure all work areas are cordoned off with barriers/cones. Use additional personnel to act as an observer for vehicle movement during survey. Park site vehicles carefully and in designated area and take care exiting vehicle. Use authorised walking routes, pavements, and soft verges to access site where possible. Cross roads on bridges, underpasses, zebra crossings etc. where possible. Walk facing traffic and use the outside of bends if required to access site.	1	5	5
Injury from abrasion.	4	2	8	Keep torso, arms and legs covered with appropriate clothing. Keep hands covered by suitable gloves (EN 338 abrasive work rating 4).	1	2	2
Manual Handling	3	4	12	Avoid manual handling operations where possible. Use a buddy system if there are any visibility concerns. Use a buddy system if there are any weight concerns. Assess the load prior to lifting.	1	4	4
Sun Burn	3	4	12	Avoid working in full sun where practicable. Always wear a suitable hard hat and [site safe] sunglasses. Wear sun block if you are prone to burning and regularly reapply. If over exposed to sun, get out of the sun and cool the skin with cold water where possible. If burns are more severe seek professional help.	1	4	4
Diseases such as leptospirosis and Weil's disease. Risk of illness.	2	5	10	Ensure good hygiene standards maintained at all times. Wash hands prior to eating or smoking. Ensure any existing cuts or scratches are covered prior to commencing works. All staff should attend a medical consultation if illness starts after working near water.	1	5	5
Accessing and egressing vehicles.	2	4	8	Drivers and passengers are to use correct hand and footholds when entering or leaving the cab or loading spaces. Keep vehicles tidy to reduce the likelihood of trips occurring	1	2	2
Violence from members of the public.	2	5	10	Do not engage in any verbal attack, keep calm, try to ignore and continue to be polite and courteous. If a violent incident is to occur, call for assistance, on a site where security is present they should be your first call, followed by a call to the police should the incident require this. If there is no security staff on site the first call should be to the police. Irrespective of the above, operatives may take reasonable steps to defend themselves.	1	5	5

**Site Details:**

<b>Scope of works:</b>		Geophysical surveys near the Point of Ayr to find the interface between the sand and clay.	
<b>Equipment/Material Storage &amp; Transportation</b>		Equipment and Materials will generally be stored either in the SEP Geophysical Ltd vehicle for the use of SEP Geophysical Ltd only. Materials will be carried to and from the workplace. Attention will be paid to the manual handling techniques deemed applicable to this application. No Materials will be left on site, all surplus materials will be brought back to SEP Geophysical Ltd for correct disposal.	
Equipment Required for Planned Activities		Health & Safety Classification & Precaution	
Technique	Equipment	Risks	Control Measures
Electrical Resistivity Tomography (ERT)	ABEM LS-2 Terrameter	Trips, slips and falls Repetitive movement/posture Manual Handling Moving Vehicle Electrocution	All operatives to wear safety boots with ankle support. Ensure suitable lighting is available for the duration of works. Keep area clear and maintain good housekeeping. Ensure good cable management. Be mindful of surroundings when walking with equipment. Ensure appropriate manual handling techniques. Take regular breaks while surveying Electrodes to be moved and stored within storage container when not in use. Do not touch electrodes when surveying.
Electromagnetic (EM) Mapping	Geophex GEM-2	Trips, slips and falls Repetitive movement/posture Manual Handling Moving Vehicle	All operatives to wear safety boots with ankle support. Ensure suitable lighting is available for the duration of works. Keep area clear and maintain good housekeeping. Ensure good cable management. Be mindful of surroundings when walking with equipment. Ensure appropriate manual handling techniques. Take regular breaks while surveying
Seismic Refraction Survey	ABEM Terralock Pro 2	Trips, slips and falls Repetitive movement/posture Manual Handling Moving Vehicle Noise	All operatives to wear safety boots with ankle support. Ensure suitable lighting is available for the duration of works. Keep area clear and maintain good housekeeping. Ensure good cable management. Be mindful of surroundings when walking with equipment. Ensure appropriate manual handling techniques. Take regular breaks while surveying Operatives near and using the source should where ear protection.

**Emergency Response:** *IN CASE OF EMERGENCY call 999 or 112 and request emergency assistance.*

Nearest Hospital Address	Wrexham Maelor Hospital - Emergency Department Croesnewydd Road	Site First Aider	Tom Llewellyn
	Postcode	LL13 7TD	Location of First Aid Kit In site vehicle
	W3W	<a href="http://odds.cubes.libraries">///odds.cubes.libraries</a>	
Client/Project Specific Emergency Response Details	To be confirmed in site specific induction.		
Emergency Numbers	Police/Fire/Ambulance	999	
	National Grid Gas	0800 111 999	
	National Electric Emergency	0800 404 090	
	Environment Agency Pollution Hotline	0800 807 060	
Incident Reporting Procedure	In the event of a reportable incident / near miss on site, the Site Manager should be informed, and in turn, report this to SEP Geophysical Ltd and comply with the incident / near miss procedure.		
Site Hazards & Emergency Procedures	<b>Fire</b>	All personnel to make themselves aware of evacuation procedure as well as the locations of firefighting equipment, alarm points and the fire muster points.	
	<b>First Aid</b>	All SEP Geophysical company vans are equipped with first aid kits. All personnel are to follow site procedures following any incidents.	
	<b>Other Trades</b>	SEP Geophysical Ltd personnel must ensure that they coordinate with other trades prior to commencing work and take due notice of each other's exclusion zones.	
In the Event of an Accident or Emergency:	<b>Route to Hospital</b>		
1) Ensure the immediate area is safe before approaching the casualty/incident.			
2) Contact appropriate emergency response team.			
3) Contact the site supervisor and/or client representative.			
4) Remain at the incident location until released by supervisor or emergency services.			
5) Ensure all accidents and near misses are written up and reported to the relevant manager.			

### Competencies:

<b>Training Requirements</b>	All personnel shall be suitably trained and qualified to carry out said works and hold a minimum of a current CSCS Card.		
<b>Site Specific Competencies</b>			
<b>Name</b>	<b>Competency</b>	<b>Number</b>	<b>Expiry Date</b>
Tom Llewellyn	First Aid at Work	7819268	26/02/2027
Henry Morten	First Aid at Work	FAIB26899	03/02/2028
Sam Page	First Aid at Work	N/A	03/02/2028
Jonathan Marsh	CSCS	14071533	01/10/2027
Tom Smith	CSCS	5026833	01/01/2028
Tom Llewellyn	CSCS	6580486	01/11/2024
Sam Page	CSCS	14707931	01/11/2029
Henry Morten	CSCS	14641448	01/09/2029
<b>Personal Protective Equipment (PPE)</b>			
<b>Type of PPE &amp; Grade</b>	<b>Yes</b>	<b>No</b>	<b>As Appropriate</b>
Safety Helmet conforming to EN 397:2012 + A1 2012	<b>X</b>		
Eye Protection conforming to EN 166: 2002		<b>X</b>	
Hearing Protection conforming to EN 352-8: 2008			<b>X</b>
Hi-vis jackets/vests and trousers, conforming to EN ISO 20471: 2013	<b>X</b>		
Gloves conforming to EN 420:2003 + A1 2009	<b>X</b>		
Safety Boots with ankle protections, protective soles, and toecaps, conforming to EN ISO 20345: 2004	<b>X</b>		
Flame Retardant Overalls			<b>X</b>
Respiratory Mask			<b>X</b>
Face Covering			<b>X</b>
Lift Jacket			<b>X</b>
Any Other PPE Appropriate to the task:			

### Distribution and Onsite Communication

Information held in this SHE Plan has been communicated to the following site personnel by the Site Work Leader. All personnel must sign below to say that they have understood the above (where applicable) and fully accept it. Where the Site Work Leader has also written the document prior to attending site they must sign to show that they have reviewed the document on site.

Name	Signature	Company	Date

### Toolbox Talks:

Meeting Type	Members present (Initials only)	Date

### Management of Change:

At the time of site works the SEP Geophysical operative should review any changes in site conditions which may affect the scope of work.

Person Undertaking Review		Date	
Element of works which requires changing	Impact on survey works	Communications with site representative/senior management	

# NW Pipelines – Point of Ayr Method Statement



Document Administration		
SEP Geophysical Ref:	G-23_428-SEP GEO-MS-07(00)	
Revision:	00	
Date:	28/03/25	
Prepared: <b>Tomas Llewellyn</b> Geophysicist	Checked: <b>James Cotterill</b> Principal Geophysicist	Approved: <b>James Cotterill</b> Principal Geophysicist
<i>T.A.S. Llewellyn</i>	<i>James Cotterill</i>	<i>James Cotterill</i>

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## 1. Introduction

This document presents the SEP Geophysical Ltd method statement for conducting the geophysical survey comprising of the following:

- Seismic Refraction
- Electrical Resistivity Tomography (ERT)
- Electromagnetic Mapping (EM)

This is to be read in conjunction with the accompanying risk assessment. Document reference 'G-23\_428-SEP GEO-RA-07(00)

### 1.1. Site Details

The site is located near the point of Ayr, between the Haven Presthaven resort and the town of Talacre.

### 1.2. Scope of Work

**Map 1** outlines the survey area. Geophysical surveys will be deployed across the area to ascertain the change from sand to clay.



Map 1 - Survey area outlined in red.

## 2. Methodology

### 2.1. Arrival at site

On arrival to site SEP Geophysical will report to the Client's representative, for induction if necessary and to confirm any relevant instructions. SEP Geophysical personnel to obtain all relevant permits to Work and site safety documents prior to any work commencing. The necessary documents / licences / test certificates will be made available on arrival on site for inspection by the site manager and or safety officer; all of these may be copied for your reference.

### 2.2. Access arrangements

Access to the survey area will be determined by the access pack to be provided by the client who are organising access with landowners. The access pack will detail how the land should be accessed and where it is appropriate to park vehicles.

### 2.3. Equipment Details

**Table 1** presents the equipment proposed for the scope of work.

Survey Type	Type of Equipment	Equipment Items
Topographical	GPS/TPS	Spectra GPS
Seismic Refraction	Seismic	ABEM Terraloc 48 spiked 14Hz Geophones 48 spiked 4.5Hz Geophones 2 No. 24 Channel cables with 5m takeout interval;
Electrical Resistivity Tomography	ERT	ABEM LS-2
Electromagnetic Mapping	EM	Geophex GEM-2
Generic Survey Equipment	Misc.	Water-based spray paint, 2(no.) 100m survey tapes, toolbox, chalk, and ranging poles.

**Table 1 – Summary of Equipment.**

### 2.4. Reconnaissance

A site reconnaissance will be undertaken to familiarize the surveyor with the site extents and the specific hazards associated with the area. The surveyor will then carry out a risk assessment / daily work brief for the said works. Before work commences all personnel are to be briefed, on the contents of the daily work brief, and will then be asked to sign an acknowledgement form. Attention must be paid to manual handling techniques when transporting materials / equipment from vehicles, also ensure the route is clear and free from obstructions. All equipment is to be visually inspected prior to work commencement and if found to be defective shall be put out of service.

### 2.5. Seismic Refraction

The survey will be conducted as per the specification agreed with the client.

A minimum of 2 geophysical engineers are required to perform the survey.

If the start and end coordinates are known, these staked out with GPS, and a survey tape is run from the start to the end. If no coordinates are available, then the survey line will be positioned using nearby surface features. Geophones are laid out every 2 m for the length of the profile. A CAT scan is

undertaken along the length of the profile to detect any buried cables or metallic services. If a signal is located then the geophones are positioned away from this feature. The console is placed in the centre of the array and cables are positioned along the profile. The cables are then reeled out with each take-out placed at a geophone position.

Geophones are pushed into the ground by hand to a depth of no more than 100mm and then connected into the take-outs. An initial noise check is completed to ensure all geophones are connected well with the ground surface. If a geophone returns a poor connection, it is checked and if necessary, reseated until it returns a good signal. **Photo 1** shows a seismic refraction set up.

Once the noise check is complete, the survey parameters are programmed (or checked if preloaded). The trigger cable with either a geophone or hammer switch is connected to the seismograph to trigger the seismograph to record when the hammer strikes the hammer plate. A test shot is recorded at the first testing location which is 20 metres off the end of one end of the geophone spread. The sensitivity of the trigger is adjusted until the seismograph triggers at the right time and the first arrivals are returning sensible readings. Once all parameters are correct shots are recorded and repeated with the data being stacked to increase the signal to noise ratio until clear first breaks are observed along the spread. The survey team progress onto the next shot location in increments of 5 metres and repeats the process until they reach 20 metres off the other end of the spread.

During this time, each geophone is topographically mapped using the GPS. The works then move onto the next profile and repeated until all profiles are completed.



Photo 2 - ABEM Terraloc Equipment setup.

## 2.6. Electrical Resistivity Tomography

The survey will be conducted as per the specification agreed with the client.

A minimum of 2 geophysical engineers are required to perform the survey.

If the start and end coordinates are known, these staked out with GPS/TPS, and a survey tape is run from the start to the end. If no coordinates are available, then the survey line will be positioned using nearby surface features. Electrodes are laid out every 1 m for the length of the profile. A CAT scan is undertaken along the length of the profile to detect any buried cables or metallic services. If a signal is located then the electrodes are positioned away from this feature. The console is placed in the centre of the array and cables are positioned along the profile. The cables are then reeled out with each take-out placed at an electrode position.

Electrodes are pushed into the ground by hand to a depth of no more than 100mm and then connected into the take-outs. An initial resistance check is completed to ensure all electrodes are contacted well with the ground surface. If an electrode returns a poor connection, it is checked and if necessary, salt water is poured on.

Once the contact resistance check is complete, the survey parameters are programmed (or checked if preloaded). The correct sequence is loaded and run. The acquisition cycle can take 1 - 2 hours. During this time, each electrode is topographically mapped using the GPS/TPS. The works then move onto the next profile and repeated until all profiles are completed.



Photo 2 - ABEM LS-2 ERT Equipment setup.

## 2.7. Electromagnetic Mapping Survey

The survey will be conducted as per the specification agreed with the client.

A minimum of 1 geophysical engineer is required to perform the survey.

Using spray paint and a survey tape, points will be marked every 1 m along a baseline to dictate the starting position of the system. Multiple baselines will be required to ensure full coverage of the survey area. The surveyor has the right to adjust the profile spacing as necessary dependent on ground conditions, surface obstructions and quality assurance.

The EM system will be removed from the site vehicle and visually inspected to check for defects or issues, particularly noting the electronic console and cable connections. The shoulder strap will be attached and placed over the surveyors head along with a backpack which houses the dGPS. A RS232 cable will be connected to the electronic console and GPS. Finally the logger will be attached to the boom. All electronic devices such as mobile phones will be removed from the surveyor(s) pockets.

A suitable place must be located to “null” the instrument. This should be a electronically and magnetically “quiet” location, and away from any surface metallic features and overhead powerlines. By nulling the instrument, the values recorded are relative changes across the site.

The EM survey will be undertaken by traversing the area of interest by a series of closely spaced, bidirectional, and parallel profiles. It recommended to have an exclusion zone of at least 2m when surveying near conductive surface objects such as cars and metal fences etc, to ensure the quality of the electromagnetic data is not comprised. The acquisition process will not perturb the status of the objects.



Photo 2 – Geophex GEM-2 Instrument

## 2.8. Completion

Once the task is completed the work area shall be tidied up and all survey equipment removed. Any areas that were required to be cordoned off for us to work shall be reopened and handed over, and any permits signed back to site management before leaving site.

### 3. Project Management and Staffing

SEP Geophysical Ltd will employ appropriately qualified and experienced staff to conduct the works, process and report the data to the required standard and timescales.

Name	Job Title	Responsibilities	Project Role
Tom Smith	Director	Operations Manager, Project Overview, QC and approval of final report / dataset.	Supervisor
James Cotterill	Principal Geophysicist	Operations Manager, Project Overview, QC and approval of final report / dataset.	Supervisor/Project Manager/ Site Lead
Chris Ernest	Principal Geophysicist	QC and approval of final report / dataset, Day to day technical management of project including Health & Safety Responsibility for data processing assistance.	Project Manager
Jonathan Marsh	Senior Geophysicist	Day to day technical management of project including Health & Safety Responsibility for data collection and processing assistance.	Project Manager/ Site Lead
Tom Llewellyn	Geophysicist	Responsibility for data collection and processing assistance.	Site Lead/Site Team
Sam Page	Geophysicist	Responsibility for data collection and processing assistance.	Site Lead/Site Team
Henry Morten	Geophysicist	Responsibility for data collection and processing assistance.	Site Lead/Site Team

Table 2 – Summary of personnel.

### 4. Data Processing and Reporting

#### 4.1. Field Checking / Processing

All data will be collected digitally. Online data quality will be monitored by the staff to ensure that the survey specification is being met at all times. Should data quality fall outside of these limits, the surveyor will halt the survey until such times as the data falls back within acceptable limits. The intention to cease survey operations due to unacceptable data quality will be discussed and agreed with the Client Site Representative.

Raw data collected during the survey will be 'backed up' to removable media upon completion of each day's survey.

#### 4.2. Processing / Reporting Software Packages

The data will be processed using a variety of software packages. All drawings will be provided in AutoCAD format at a suitable scale to be agreed. A report of survey will be issued to support the survey data, which will outline the survey methodology and techniques employed over the site together with a comprehension of the results. Observations of the field team will be included as well as daily operations reports and any recommendations we may have.

#### 4.3. Reporting Deliverables

The following deliverables will be provided in accordance with the project scope of works.

- CAD Image of found anomalies.

- Detailed written report describing all aspects of the fieldwork, data processing and interpretation.

## 5. Health, Safety, Environment and Quality

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SEP Geophysical Ltd has a Safety Management System which meets the requirements of the Management of Health and Safety Regulations 1999. The safety management system is incorporated into the Integrated Management System (IMS) which is accredited to ISO 9001:2015. The company is also accredited to ISO 14001:2015.

SEP Geophysical Ltd has a registered Safety Practitioner and all of our sites/contracts are operated under procedures contained in the Safety Management System. All staff are given a basic induction on safety with specific safety inductions on all of our sites. Where appropriate we carry out works in accordance with the CDM Regulations. We operate an 'open door' principle where employees can approach their immediate supervisor (or his/her supervisor or the Safety Manager or Advisor) to provide advice or co-ordinate views and make suggestions or provide advice on any specific work task.

All staff employed are experienced with working in the environments likely to be encountered on the site and are fully familiar with or will be trained in the use of the plant and equipment we intend to use. All SEP Geophysical Ltd Staff are trained in emergency first aid at work. Regular safety checks and spot visits on site are carried out by senior staff and management to monitor the effectiveness of the control measures put into place to mitigate any risk identified.

All contracts are delivered using the Project Plan. Project Plans are project specific and are the interface between an individual project and the IMS. The Project Plan contains contractual documentation including client requirements, resource details, timescales, contract review information and client communications.

Where projects are based around site activities the SEP Geophysical Ltd corporate requirement for a Site Safety and Environmental Plan is incorporated into the Project Plan. Safety & Environmental measures are determined through a risk assessment approach.

Each plan is developed with and through the project. The plan serves not only as a management tool, but may also fulfil legal and other requirements (e.g. Health & Safety under the Construction (Design & Management Regulations 2007). Site based Project Plans may state objectives and targets that relate to the individual project. Environmental aspects and mitigation measures are defined in the Project Plans.

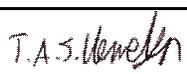
The plan, developed upon project award, includes all method statements (this document) and risk and hazard assessments deemed necessary by the operations. Risk assessments will be further developed following 'tool box talks' on site which are completed prior to site operation tasks.

The project leader will complete daily 'Toolbox Meetings' and the list of topics shall include as a minimum Daily Tasks (current, past 24 hours and next 24 hours) and any safety issues / hazards identified. The details of the meeting will be recorded on the Daily Progress Report.

SEP Geophysical Ltd manages its business operations in the UK through the implementation of an Integrated Management System (IMS). This IMS addresses the core management issues of health & safety, quality, environment, human resources and finance.

# Safety, Health & Environment (SHE) Plan

<b>Introduction</b>	This HSE Plan has been prepared and based on the information supplied by our Client along with a desktop Risk Assessment and the Method Statements of the tasks understood to be required to safely complete the scope of works undertaken by SEP Geophysical Ltd.
<b>Statement of Safety Principles</b>	The Health, Safety and Welfare of employees is of prime importance to the Company and is essential to the efficient operation of its undertaking, as are the health and safety of anyone else affected directly by the Company's operations.
	The Company will comply with all its legal duties in pursuance of providing safe and healthy working conditions for all employees and will take positive action to ensure that clients, other contractors and the general public are not adversely affected by the company's activities. The responsibility for safety at work rests upon all sectors and levels of management, and the Company will ensure that the Company Health and Safety policy is pursued throughout the organisation.
	The Company will co-operate with all those with an interest in Health and Safety, other employees, clients, sub-contractors, and the enforcing authorities. The overall responsibility for the health, safety and welfare of the Company and its personnel is vested in the Company's Directors.
	The Company will give full backing to the Health and Safety policy and to the Company's Safety Representative, whose function it shall be to monitor and operate the policy, and will support all those who endeavour to carry it out. The Company will provide sufficient financial support for the full implementation of the Health and Safety policy. The Company Health and Safety policy is reviewed at least annually in the company's management review which is part of the company's quality management system. It may also be reviewed and updated on an ad hoc basis, where considered necessary by the Directors. All employees shall be made aware of changes to the policy and amended policies shall be issued to all holders of controlled copies.
	The Company expects employees to conform to the Company Health and Safety policy and to comply with the relevant sections of the Health and Safety at Work Act and to exercise all reasonable care for their own health and safety and that of others who may be affected by their acts or omissions.

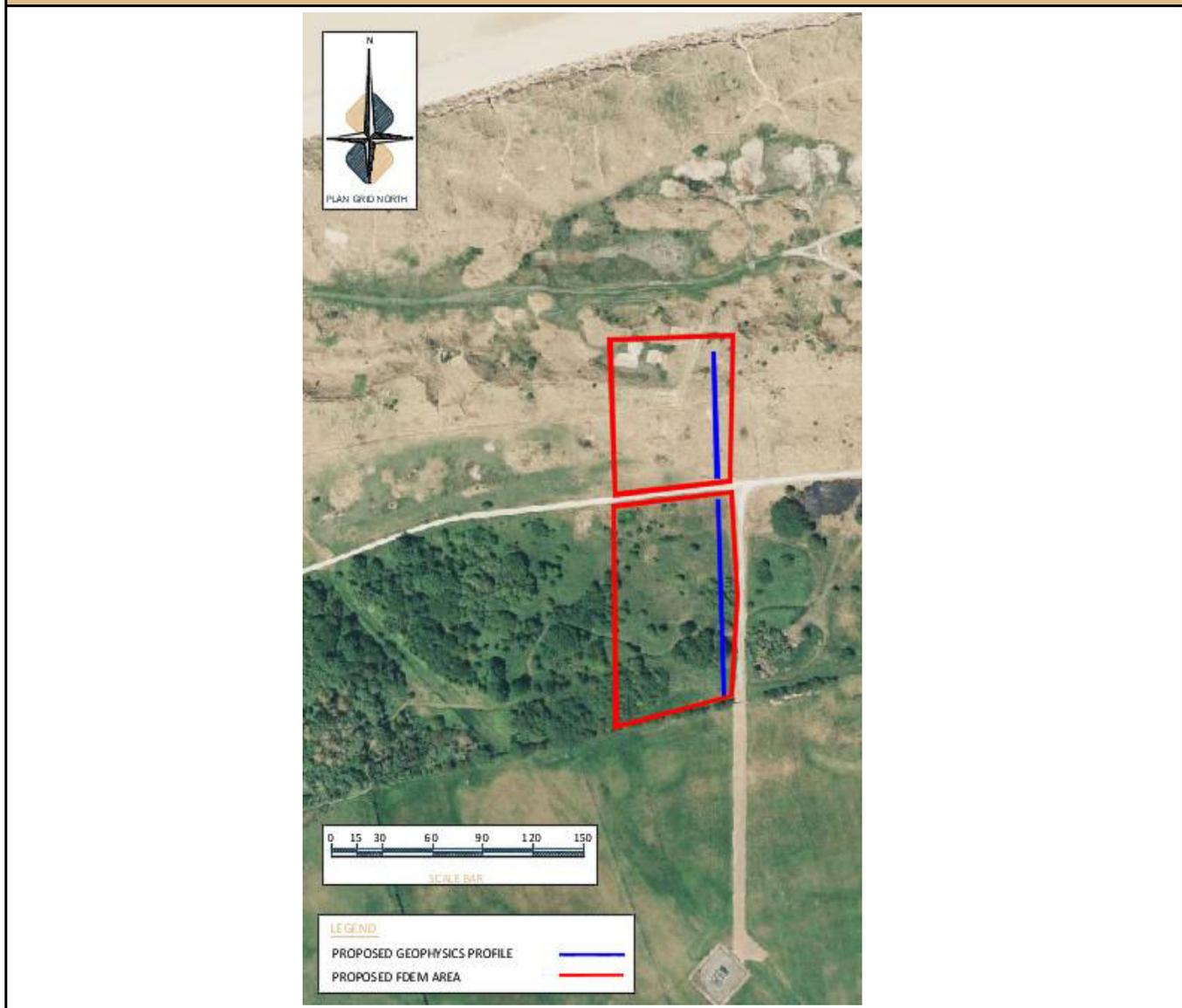
<b>Document Number</b>	G-23_428-SEP GEO-RA-7(00)		
<b>Author</b>	Tom Llewellyn	<b>Signed</b>	
<b>Date</b>	28/03/2025		
<b>Reviewer</b>	James Cotterill	<b>Signed</b>	
<b>Date</b>	28/03/2025		

Revision Summary		
Version	Nature of Change	Revision Date

### Project Details:

<b>Project Number</b>	G-23_428			
<b>Project Name</b>	Northwest Pipelines - Point of Ayr			
<b>Project Contacts</b>	<b>Name</b>	<b>Position</b>	<b>Role</b>	<b>Mob</b>
	Tom Smith	Project Director	Management of the contract/project including H&S, programme management, quality control and labour requirements.	07971 162132
	James Cotterill	Project Supervisor		07399 129035
	Chris Ernest	Project Manager		07301 265078
<b>Client Contacts</b>	Conor Southall	Senior Engineer	Client Contact	07825 817688
	TBC	TBC	Site Contact	TBC

### Site Boundary/ Survey Area



**Site Details:**

<b>Site Address</b>	Gamfa Wen, Talacre, Holywell	<b>Start Date</b>	TBC	
		<b>Finish Date</b>	TBC	
		<b>No. of Days</b>	3	
		<b>Working Hours</b>	08:00-17:00	
<b>Postcode</b>	CH8 9RT	<b>Restrictions</b>	Dependent on land owner	
<b>W3W</b>	///teaching.crucially.smoker			
<b>Site Personnel</b>	<b>Name</b>	<b>Role</b>	<b>Mob</b>	
	Tom Smith	Geophysicist	07971 162132	
	Jonathan Marsh	Geophysicist	07539 352033	
	Tom Llewellyn	Geophysicist	07476 686123	
	Henry Morten	Geophysicist	07802 418187	
	Sam Page	Geophysicist	07936 002071	
<b>Site Induction Requirements</b>	In accordance with CDM regulations all personnel are to receive a site-specific induction/briefing upon attending site, particular attention must be paid to emergency procedures detailed.			
<b>Welfare Facilities</b>	Due to the transient nature of the works, SEP Geophysical Ltd operatives are to use facilities provided by the client and are to be made aware of arrangements. Local facilities are to be used should there be no onsite			
<b>Security arrangements</b>	All vehicles should remain locked, and all site equipment must not be left unattended.			
<b>Access Arrangements</b>	An access plan is to be provided for each land parcel with details on access routes for vehicles and parking, which must be adhered to at all times. Any changes to the access route must be agreed with the project manager. Proposed access from Gamfa Wen car park			
<b>Access to Site</b>				
TBC				

**Travelling by Van:**

Maximum miles in one day	50	Number of Planned Breaks for the journey (1 every 2 hours or every 120 miles)	N/A
Vehicle Make and Model attending site	Ford Transit custom/ Citroen Berlingo/ Ford Ranger	Is accommodation required for completion of all site works? (Day does not exceed 14 hours)	No
SEP Geophysical Breakdown information	RAC Breakdown: 0330 159 0740		
Driving Hazards	Control Measures		
Collison or loss of control of vehicle due to other road users.	<p>To drive in a safe and considerate manner, obeying all applicable road safety legislation and showing respect for all other road users (other vehicles, cyclists, horses, pedestrians, etc).</p> <p>Adhere to local speed limits, been particularly mindful within roadworks.</p> <p>To be responsible for the safety of themselves, for any passengers and for the security of all loads carried in / on or towed by their vehicle and for ensuring that the vehicle is safe to use (including hired vehicles).</p> <p>Plan the journey realistically so staff do not have to rush if caught in traffic/ road works etc- Be vigilant of erratic driving from other road users.</p> <p>All drivers will NOT be driving under the influence of alcohol and/or drugs. If the driver is using prescribed medication this will be discussed and assessed prior to any journeys</p>		
Collison or loss of control of vehicle due to distraction	<p>Mobile phones will not be used while driving and placed in the glove box to avoid temptation.</p> <p>Drivers will minimise/avoid adjusting the sat nav/radio while in transit. If this is required, the driver will pull over at the next safe opportunity.</p> <p>Passengers within the vehicle will ensure not to distract the driver.</p>		
Collison or loss of control of vehicle due to adverse weather conditions	<p>Drivers to assess driving conditions prior to commencing journey. If deemed unsafe, then the driver is to wait until more suitable conditions.</p> <p>Adjust driving style/speed to the conditions.</p> <p>If driving during adverse weather seasons, drivers are to pack extra provisions and an overnight bag.</p> <p>Ensure daily vehicle check has been undertaken.</p> <p>Driver to ensure they have all the relevant breakdown information available.</p>		
Collison or loss of control of vehicle due to poorly maintained vehicle	<p>Driver to ensure vehicle is appropriately fuelled prior to commencing journey.</p> <p>Driver to ensure the daily vehicle check is completed. Ensuring that a torch (with full batteries), first aid kit, blanket and warning triangle is packed within vehicle pack. If issues are noticed senior management/client representative must be contacted to be updated. If safe to do so vehicle to be taken to nearest garage for repair/maintenance or relevant breakdown company contacted.</p>		
Collison or loss of control of vehicle due to driver fatigue	<p>Plan the journey realistically so staff do not have to rush if caught in traffic/ road works or end up driving for long periods.</p> <p>Plan to, and take regular breaks. As per the SEP Geophysical driving procedure, 1 break every 2 hours or 120 miles is mandatory.</p> <p>Driver to call in to senior management upon arrival to site and when completed. If driver or senior management have any concerns regarding their suitability to drive, then they must book into the nearest accommodation.</p>		
Collison with object or pedestrian when parking or reversing	<p>To drive/park in a safe and considerate manner, obeying all applicable road safety legislation and showing respect for all other road users (other vehicles, cyclists, horses, pedestrians, etc).</p> <p>All SEP Geophysical vehicles are fitted with reversing sensors and/or cameras.</p> <p>All SEP Geophysical personnel are to park in a considerate manner.</p> <p>Use a banksman as/when required.</p>		
Becoming stranded when accessing site	<p>SEP Geophysical staff will not take cars etc off-road to prevent stranding. Where the site requires access an appropriate 4x4 may be used, if staff have had suitable training.</p> <p>Driver to ensure the daily vehicle check is completed. Ensuring that a torch (with full batteries), first aid kit, blanket and warning triangle is packed within vehicle pack.</p>		
Violent behaviour from other road users	<p>To drive in a safe and considerate manner, obeying all applicable road safety legislation and showing respect for all other road users (other vehicles, cyclists, horses, pedestrians, etc) to avoid potential for violent reaction.</p> <p>Do not engage or provoke.</p> <p>Carry identification and insurance details.</p>		

**Risk Matrix:**

Risk Assessment:		For the process of assessing risk and the necessary control measures to be implemented SEP Geophysical use the standard 5 x 5 risk matrix where a numerical score is assigned to the chance of an event occurring and the severity of impact. Risk (R) is defined as the consequence / severity (S) of an event multiplied by the frequency / likelihood (L) of its occurrence: so $R = (S \times L)$ .										
Risk Matrix		Severity					Likelihood (L)		Severity (S)		Risk Rating	
		1	2	3	4	5						
Likelihood	1	1	2	3	4	5	1= Remote	1= Insignificant injury/ environmental impact / impact on quality of work		1-5	Low	
	2	2	4	6	8	10	2= Unlikely	2= Minor injury/ environmental impact/ impact on quality of work		6-14	Medium	
	3	3	6	9	12	15	3= Possible	3= Moderate injury/ localised environmental impact/ impact on quality of work		15-25	High	
	4	4	8	12	16	20	4= Likely	4= Major injury/ environmental impact/ impact on quality of work				
	5	5	10	15	20	25	5= Certain	5= Severe Fatality/large environmental impact/ impact on quality of work				

**Site Specific Hazards:**

Relevant Site hazards	Pre -control measures			Control Measures	Post -control measures		
	L	S	R		L	S	R
Soft Ground	3	5	15	Be aware of soft terrain. Be aware of any ground level hazards, as soft ground may increase the chance of slipping/tripping. Stick to walkways. Be aware this may compromise any manual labour/heavy lifting, get a buddy if uncertain.	1	5	5
Slips, Trips and Falls at ground level. Risk of incapacitating injury (e.g. sprained or fractured ankle) or knocked unconscious (head injury).	3	5	15	All operatives to wear safety boots with ankle support Undertake a walkover prior to commencing site walkover to assess areas of uneven ground/obstructed areas. Ensure to factor in weather/surface conditions while undertaking walkover to assess their impact e.g. wet and/or icy conditions. Ensure suitable lighting is available for the duration of works. Be mindful of surroundings when walking with equipment.	1	5	5
Working adjacent to roads/areas of vehicle movement. Risk of collision/injury from public traffic or site plant.	3	5	15	Ensure all work areas are cordoned off with barriers/cones. Use additional personnel to act as an observer for vehicle movement during survey. Park site vehicles carefully and in designated area and take care exiting vehicle. Use authorised walking routes, pavements, and soft verges to access site where possible. Cross roads on bridges, underpasses, zebra crossings etc. where possible. Walk facing traffic and use the outside of bends if required to access site.	1	5	5
Injury from abrasion.	4	2	8	Keep torso, arms and legs covered with appropriate clothing. Keep hands covered by suitable gloves (EN 338 abrasive work rating 4).	1	2	2
Manual Handling	3	4	12	Avoid manual handling operations where possible. Use a buddy system if there are any visibility concerns. Use a buddy system if there are any weight concerns. Assess the load prior to lifting.	1	4	4
Sun Burn	3	4	12	Avoid working in full sun where practicable. Always wear a suitable hard hat and [site safe] sunglasses. Wear sun block if you are prone to burning and regularly reapply. If over exposed to sun, get out of the sun and cool the skin with cold water where possible. If burns are more severe seek professional help.	1	4	4
Diseases such as leptospirosis and Weil's disease. Risk of illness.	2	5	10	Ensure good hygiene standards maintained at all times. Wash hands prior to eating or smoking. Ensure any existing cuts or scratches are covered prior to commencing works. All staff should attend a medical consultation if illness starts after working near water.	1	5	5
Accessing and egressing vehicles.	2	4	8	Drivers and passengers are to use correct hand and footholds when entering or leaving the cab or loading spaces. Keep vehicles tidy to reduce the likelihood of trips occurring	1	2	2
Violence from members of the public.	2	5	10	Do not engage in any verbal attack, keep calm, try to ignore and continue to be polite and courteous. If a violent incident is to occur, call for assistance, on a site where security is present they should be your first call, followed by a call to the police should the incident require this. If there is no security staff on site the first call should be to the police. Irrespective of the above, operatives may take reasonable steps to defend themselves.	1	5	5

**Site Details:**

<b>Scope of works:</b>		Geophysical surveys near the Point of Ayr to find the interface between the sand and clay.	
<b>Equipment/Material Storage &amp; Transportation</b>		Equipment and Materials will generally be stored either in the SEP Geophysical Ltd vehicle for the use of SEP Geophysical Ltd only. Materials will be carried to and from the workplace. Attention will be paid to the manual handling techniques deemed applicable to this application. No Materials will be left on site, all surplus materials will be brought back to SEP Geophysical Ltd for correct disposal.	
Equipment Required for Planned Activities		Health & Safety Classification & Precaution	
Technique	Equipment	Risks	Control Measures
Electrical Resistivity Tomography (ERT)	ABEM LS-2 Terrameter	Trips, slips and falls Repetitive movement/posture Manual Handling Moving Vehicle Electrocution	All operatives to wear safety boots with ankle support. Ensure suitable lighting is available for the duration of works. Keep area clear and maintain good housekeeping. Ensure good cable management. Be mindful of surroundings when walking with equipment. Ensure appropriate manual handling techniques. Take regular breaks while surveying Electrodes to be moved and stored within storage container when not in use. Do not touch electrodes when surveying.
Electromagnetic (EM) Mapping	Geophex GEM-2	Trips, slips and falls Repetitive movement/posture Manual Handling Moving Vehicle	All operatives to wear safety boots with ankle support. Ensure suitable lighting is available for the duration of works. Keep area clear and maintain good housekeeping. Ensure good cable management. Be mindful of surroundings when walking with equipment. Ensure appropriate manual handling techniques. Take regular breaks while surveying
Seismic Refraction Survey	ABEM Terralock Pro 2	Trips, slips and falls Repetitive movement/posture Manual Handling Moving Vehicle Noise	All operatives to wear safety boots with ankle support. Ensure suitable lighting is available for the duration of works. Keep area clear and maintain good housekeeping. Ensure good cable management. Be mindful of surroundings when walking with equipment. Ensure appropriate manual handling techniques. Take regular breaks while surveying Operatives near and using the source should where ear protection.

**Emergency Response:** IN CASE OF EMERGENCY call 999 or 112 and request emergency assistance.

Nearest Hospital Address	Wrexham Maelor Hospital - Emergency Department Croesnewydd Road	Site First Aider	Tom Llewellyn
	Postcode	LL13 7TD	Location of First Aid Kit In site vehicle
	W3W	<a href="http://odds.cubes.libraries">///odds.cubes.libraries</a>	
Client/Project Specific Emergency Response Details	To be confirmed in site specific induction.		
Emergency Numbers	Police/Fire/Ambulance	999	
	National Grid Gas	0800 111 999	
	National Electric Emergency	0800 404 090	
	Environment Agency Pollution Hotline	0800 807 060	
Incident Reporting Procedure	In the event of a reportable incident / near miss on site, the Site Manager should be informed, and in turn, report this to SEP Geophysical Ltd and comply with the incident / near miss procedure.		
Site Hazards & Emergency Procedures	<b>Fire</b>	All personnel to make themselves aware of evacuation procedure as well as the locations of firefighting equipment, alarm points and the fire muster points.	
	<b>First Aid</b>	All SEP Geophysical company vans are equipped with first aid kits. All personnel are to follow site procedures following any incidents.	
	<b>Other Trades</b>	SEP Geophysical Ltd personnel must ensure that they coordinate with other trades prior to commencing work and take due notice of each other's exclusion zones.	
In the Event of an Accident or Emergency:	<b>Route to Hospital</b>		
1) Ensure the immediate area is safe before approaching the casualty/incident.			
2) Contact appropriate emergency response team.			
3) Contact the site supervisor and/or client representative.			
4) Remain at the incident location until released by supervisor or emergency services.			
5) Ensure all accidents and near misses are written up and reported to the relevant manager.			

### Competencies:

<b>Training Requirements</b>	All personnel shall be suitably trained and qualified to carry out said works and hold a minimum of a current CSCS Card.		
<b>Site Specific Competencies</b>			
<b>Name</b>	<b>Competency</b>	<b>Number</b>	<b>Expiry Date</b>
Tom Llewellyn	First Aid at Work	7819268	26/02/2027
Henry Morten	First Aid at Work	FAIB26899	03/02/2028
Sam Page	First Aid at Work	N/A	03/02/2028
Jonathan Marsh	CSCS	14071533	01/10/2027
Tom Smith	CSCS	5026833	01/01/2028
Tom Llewellyn	CSCS	6580486	01/11/2024
Sam Page	CSCS	14707931	01/11/2029
Henry Morten	CSCS	14641448	01/09/2029
<b>Personal Protective Equipment (PPE)</b>			
<b>Type of PPE &amp; Grade</b>	<b>Yes</b>	<b>No</b>	<b>As Appropriate</b>
Safety Helmet conforming to EN 397:2012 + A1 2012	<b>X</b>		
Eye Protection conforming to EN 166: 2002		<b>X</b>	
Hearing Protection conforming to EN 352-8: 2008			<b>X</b>
Hi-vis jackets/vests and trousers, conforming to EN ISO 20471: 2013	<b>X</b>		
Gloves conforming to EN 420:2003 + A1 2009	<b>X</b>		
Safety Boots with ankle protections, protective soles, and toecaps, conforming to EN ISO 20345: 2004	<b>X</b>		
Flame Retardant Overalls			<b>X</b>
Respiratory Mask			<b>X</b>
Face Covering			<b>X</b>
Lift Jacket			<b>X</b>
Any Other PPE Appropriate to the task:			

### *Distribution and Onsite Communication*

Information held in this SHE Plan has been communicated to the following site personnel by the Site Work Leader. All personnel must sign below to say that they have understood the above (where applicable) and fully accept it. Where the Site Work Leader has also written the document prior to attending site they must sign to show that they have reviewed the document on site.

<i>Name</i>	<i>Signature</i>	<i>Company</i>	<i>Date</i>

### *Toolbox Talks:*

<i>Meeting Type</i>	<i>Members present (Initials only)</i>	<i>Date</i>

### *Management of Change:*

At the time of site works the SEP Geophysical operative should review any changes in site conditions which may affect the scope of work.

<i>Person Undertaking Review</i>	<i>Date</i>	
<i>Element of works which requires changing</i>	<i>Impact on survey works</i>	<i>Communications with site representative/senior management</i>