

lsles of Scilly

St Mary's Welfare Compound

Outline Construction Environmental Management Plan St Mary's Welfare Compound

107780-PEF-XX-500-T.RP-TE-0001

St Mary's Welfare Compound Outline Construction Environmental Management Plan

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St Mary's Welfare Compound Outline Construction Environmental Management Plan

	Acronyms
Abbreviation	Definition
AONB	Area of Outstanding Natural Beauty
AQMA	Air Quality Management Area
BMP	Best Management Practice
BS	British Standard
CEMP	Construction Environmental Management Plan
PO	Power Operator
DNO	District Network Operator
CoP	Code of Practice
CTMP	Construction Traffic Management Plan
Defra	Department for Environment, Food & Rural Affairs
EA	Environment Agency
EIA	Environmental Impact Assessment
H&S	Health and Safety
ha	Hectare
IAQM	Institute of Air Quality Management
INNS	Invasive Non-Native Species
loS	Isles of Scilly
loSC	Isles of Scilly Council
IRZ	Impact Risk Zone
ISO	International Organization for Standardization
NPPF	National Planning Policy Framework
NPPW	National Planning Policy for Waste
PM	Project Manager
SAC	Special are of Conservation
SPZ	Special Protection Zone
SSSI	Site of Special Scientific Interest

1 Introduction

Pell Frischmann was commissioned by Trant Engineering Limited, on behalf of South West Water, to prepare an Outline Construction Environmental Management Plan (Outline CEMP) for the proposed development of a temporary welfare compound on the Island of St. Mary's. The proposed welfare compound is required to support the proposed wastewater capital improvement project for the Isles of Scilly covering St Mary's, St Martins, St Agnes, Bryher and Tresco.

The aim of this Outline CEMP is to provide an overarching and strategic framework for the management of environmental effects and the implementation of measures during the site preparation and construction phase of the proposed temporary welfare compound. The Outline CEMP creates a framework for the measures that will be implemented by the construction contractor(s) to avoid, minimise and mitigate the environmental effects of demolition and construction of the proposed development.

This Outline CEMP is based upon the information available at the design stage of the project. It is intended to be 'live' document that will pass from the design stage to the construction stage of the project. The CEMP will be periodically reviewed and, where required, updated by the applicant and their Principal Contractor to ensure the continued effectiveness of environmental control measures.

1.1 Scope of the CEMP

The scope of this document includes:

- The context and underlying principles of environmental management of the proposed development which will be required to be developed into a Final CEMP;
- > Measures to ensure the compliance with legislation;
- The guidelines to be used during the construction phase, and how these will be mandated and applied; and,
- Mitigation measures that should be implemented prior to, during and following construction.

1.2 Supporting Documents

This document has been prepared using information from various technical reports produced to support the planning application. A comprehensive list of the documents used can be seen in Table 1.

Document	Document Number	Author
Site Location Planning Drawing	107780-PEF-XX-500-D.DR-T-0001	Pell Frischmann
Proposed Site Layout Planning Drawing	107780-PEF-XX-500-D.DR-T-0003	Pell Frischmann
Proposed Elevations Planning Drawing	107780-PEF-XX-500-D.DR-T-0004	Pell Frischmann
Design Stage Site Waste Management Plan	107780-PEF-XX-500-T.RP-GG-0001	Pell Frischmann
Preliminary Ecological Appraisal	107780-PEF-XX-500-T.RP-GE-0002	Pell Frischmann
Noise Assessment	107780-PEF-XX-500-T.RP-EN-0003	Noise Consultants Ltd
Transport Statement	107780-PEF-XX-500-T.RP-H-0001	Pell Frischmann
Habitats Regulations Stage 1 Screening Assessment	107780-PEF-XX-500-T.RP-EN-0001	Pell Frischmann
Sustainability Statement	107780-PEF-XX-500-T.RP-EN-0002	Pell Frischmann

Table 1 Supporting Documents



2 Summary of the Proposed Scheme

2.1 Site Location

The site of the temporary welfare compound (hereafter referred to as the application site) is located on land south of the A3110 Parting Carn Lane (National Grid Reference - SV 91762 10782). The site location is marked in red on the Site Location Planning Drawing 107780-PEF-XX-500-D.DR-T-0001, an extract of which is presented in Figure 1 below.

The site is owned by the Duchy of Cornwall and currently in use as grazing pasture by the tenant farmer. The site has also been used twice previously as a construction compound.

The footprint of the application site occupies an area of 0.39 hectares and is bound to the north, east, and south by hedgerows (traditional stone-faced hedgebanks) and to the west by an area of woodland.

The application site is situated approximately 400m north of runway 14 at the Isles of Scilly Airport, in a relatively rural setting with very few residential properties in the local vicinity. The nearest neighbouring residential properties are located approximately 170m / 200m west / southwest of the site on Parting Carn Lane (the A3110) and Old Town Lane respectively.



Figure 1: Extract from Site Location Planning Drawing 107780-PEF-XX-500-D.DR-T-0001

Site information	Details
Site area	0.39 Ha
National Grid Reference (centre of the site) (NGR)	SV 91762 10782
Nearest (central) postcode	TR21 0NG



2.2 Summary Scheme Description

The layout of the proposed welfare compound is shown on the Proposed Site Layout Planning Drawing 107780-PEF-XX-500-D.DR-T-0003, an extract of which is shown in Figure 2. The compound is roughly separated in to three internal areas with each delineated by seeded topsoil berms. Further details are given in Section 4: General Construction Information. The site layout disaggregated by area is as follows:

- > Access, parking and laydown, including:
 - o Internal site access track running north-south parallel to the western field boundary.
 - 6 x car parking spaces;
 - Laydown area; and,
 - Vehicle turning area.
- > Offices and amenities, including:
 - o Generator;
 - o Offices;
 - Meeting room;
 - Recreation room;
 - o Canteen;
 - Drying room;
 - Material storage area;
 - o Control of Substances Hazardous to Health (COSHH) Storage; and
 - o Toilet / cess pit.

> Habitation, including:

o 10 x cabin-type sleeper units.

The proposed welfare compound has the potential to support an additional 10 cabin-type sleeper units. Refer to Appendix A: Site Layout Drawing for further details.



Figure 2: Extract of Proposed Site Layout - Planning Drawing 107780-Pef-XX-500-D.Dr-T-0003

Pell Frischmann 🏧

2.3 Key Environmental Receptors

The site is underlain by a Secondary A bedrock aquifer which provides the current drinking water supply for the island. The northern part of the proposed access track is located within the Outer Zone of a Groundwater Source Protection Zone, which has been designated to protect the underlying groundwater supplies.

The whole of the Isles of Scilly archipelago, including the island of St Mary's, is located within an Area of Outstanding Natural Beauty (AONB) and a Conservation Area.

There are no ecological designations within the compound location or its immediate vicinity. The closest ecological designation is the Higher Moors and Porth Hellick Pool Site of Special Scientific Interest (SSSI), which is located approximately 280m to the east. The Lower Moors SSSI is located approximately 320m to the west.

The footprint of the proposed scheme itself is located within an area of improved grazing pasture which is of low ecological value. There are no priority habitats within the immediate vicinity of the compound, although there are some present within the wider surroundings which are associated with nearby SSSIs.

The field is bounded by elm hedgerows and, to the west, Scots pine woodland. These are features of importance for the AONB and Conservation Area. The features are also important ecologically, for the following reasons:

- > The features are likely to be of local level value to foraging and commuting bats.
- > The features have potential to provide bat roosting habitat.
- > The features are likely to be of local level value to common species of nesting birds.
- > The features have the potential to support common invertebrate species.

With regard to the historic environment, there are no Scheduled Monuments or Grade Listed Buildings within the immediate vicinity of the site. The potential for encountering buried archaeology is low as the site has been previously disturbed through its former use as a compound on other projects.

There are few sensitive human health receptors within proximity to the compound. Some of the nearest include Parting Carn Farm (approximately 115m to the west) and Salakee Farm (approximately 300m to the south-east).

Appendix B and Appendix C should be referred to for figures highlighting the nearby environmental constraints and habitats.



3 Roles and Responsibilities

3.1 General Arrangements and Responsibilities

This section sets out the key roles and responsibilities relating the implementation of environmental management during the construction of the proposed welfare compound. The applicant for proposed development is South West Water. The Principal Contractor for the proposed development is Trant Engineering Ltd.

The Principal Contractor will be in charge of employing and delegating tasks to appropriate and suitable personnel, meaning those with the correct training and experience for the role. This may involve using subcontractors, and working with environmental specialists, where specialist knowledge and techniques are required.

Table 2 below outlines the anticipated key roles and responsibilities (including environmental responsibilities) attributed to the team involved in the construction and post-construction of the proposed development.

Role	Responsibilities	
The applicants Project	— ,	In charge of overseeing the whole project.
Manager	Irant	Ensure that environmental matters are being managed appropriately alongside the Principal Contractor.
		 Further developing this Outline CEMP into the Final CEMP;
		 Defining environmental roles and responsibilities for their personnel;
		Ensuring that personnel are aware of environmental risks / concerns;
Dringing Constructor	Treat	 Planning a programme for inspections / monitoring / auditing;
Principal Contractor	Irant	Developing emergency procedures / protocols for environmental incidents. This may include establishing suitable evacuation routes on construction sites and creating plans; and,
		Confirming reporting procedure for environmental non-compliance or environmental incidents.
		The Principal Contractor's PM will be in charge of the planning and the delivery of the construction phase. Specific responsibilities include:
		 Overseeing the project progress;
		 Creating project schedules and setting milestones in order to meet project deadlines;
Principal Contractor's		 Dealing with costing and budgeting;
Construction Project Manager	Trant	Being responsible for the overall environmental performance of the proposed development – this can include speaking with relevant statutory environmental bodies on environmental matters; and
		Working with the Site Manager and Environmental Manager to check on project progress, including checking that the relevant managers are ensuring the works comply with legislation and planned environmental commitments / mitigation.
		Ensuring relevant legislation is adhered to;.
Dringing L Contractoria		 Supervising construction workers, especially in terms of health and safety;
Construction Site	Trant	 Monitoring project progress;
Manager		Conducts quality and safety inspections, and checks; and
		Ensuring compliance with environmental legislation, mitigation commitments and best practice guidance).

Table 2: Roles and Responsibilities

Role	Owner	Responsibilities
		 Ensuring that environmental mitigation measures are being implemented as set out, which can include inspection of works and monitoring activities;
Principal Contractor's Environmental Manager	Trant	Ensuring that the works are in compliance with environmental legislation, and also ensuring compliance with environmental conditions associated with planning / licensing permissions;
		Regular monitoring and auditing. This can include ensuring records are being kept correctly (e.g., for reporting of environmental incidents, waste matters), inspecting the site, and overseeing works; and,
		 Reacting to site complaints.
Environmental Specialists	Pell Frischmann	Provide specialist knowledge and advise to the Principal Contractor about management plans or environmental concerns.
		Minimise environmental impacts.
Construction Personnel	Trant	Ensure that the construction works they carry out comply with environmental legislation, best practice guidance, and committed mitigation measures.
		 Reporting hazards;
Ctoff and Visitors	All	Dealing with incidents appropriately, such as halting work, ensuring measures to control pollution, reporting to the appropriate personnel, and doing this in a timely fashion;
Stall and visitors		Keeping the working environment clean and tidy to avoid accidents and polluting the surrounding environment; and
		Adhering to measures written in the CEMP, as well as relevant legislation and best practice guidance.

3.2 Complaints Procedure

Complaints about environmental nuisance or incidences where action levels are exceeded are to be reported to the Principal Contractor and immediately investigated. The Principal Contractor will set up and maintain a Complaints Register.

Complaints received regarding environmentally related issues are to be recorded into the Complaints Register within 24 hours. The complainant will be notified as to what action is being taken to address the complaint.

3.3 Training, Awareness, Competence and Communication

3.3.1 Communication

Lines of communication should be open between the Principal Contractor and stakeholders. The Principal Contractor should also make sure that construction personnel are kept up to date with news and updates to legislation, particularly of which relates to health and safety (H&S) or environmental matters.

Internal communication is likely to include reporting incidents to the correct personnel, and communicating environmental commitments, policy and concerns to the construction team. For external communications, it is likely that the Principal Contractor will have a designated role for dealing with such communication during the construction period.

Good relations with people living and working in the vicinity of site operations are of paramount importance. The Principal Contractor will inform surrounding neighbours via a letter of the construction programme.

Further details of key stakeholders and their respective communication requirements will be included in the Final CEMP.

3.3.2 Training requirements

The Principal Contractor will development the training procedure at subsequent stages. The Principal Contractor will be responsible for ensuring that staff are appropriately qualified, as well as trained and inducted for the site and construction activities that they will be working on.

The Final CEMP will contain the full details of the process for induction, training and briefing procedures for the construction staff. This should be carried out prior to the start of the construction phase.

Prior to works commencing, site personnel should be made aware of the Principal Contractor's environmental policy, as well as relevant environmental legislation, Final CEMP and associated environmental management plan / method statement requirements. Refer to Appendix D: Training Requirements.

3.3.3 Site Induction

Staff working or visiting the site will be required to attend the Principal Contractor's site-specific induction prior to commencing works on site, this will include a list of environmental rules which should be communicated to staff.

Health and Safety (H&S) and emergency protocols will be communicated to personnel to keep everyone safe including:

- Company Organisation chart
- Project Description
- Site Organisation
- H&S Policies
- Drugs and Alcohol
- Right to Work
- Rules (inc Smoking and Phone)
- Incident reporting procedure
- Health Surveillance / Wellbeing
- Plant Operations
- > RAMS
- Behavioural Safety
- Hazard Reporting
- Permits Requirements
- > COSHH
- Emergency Procedures
- Fire, Emergency, Traffic Management Plans
- Welfare / Compound
- High Risk Activities/Concerns (working at height, excavations, underground/overhead services, lifting operations)
- Tools & Equipment (Usage & Storage)
- Manual Handling
- Housekeeping / Hygiene
- Environmental issues
- Waste Management
- Spill procedures
- Questionnaire



3.3.4 Toolbox Talks

Toolbox talks may be required to provide personnel with environmental knowledge specific to a construction activity. The information provided may relate to a corresponding environmental management plan developed by the Principal Contractor (as discussed in Appendix E: Health & Safety Toolbox Talks; and Appendix F: Environmental Tool Box Talks).

The Principal Contractor may want to set a target for the number of toolbox talks delivered on a monthly or yearly basis to ensure that up to date environmental knowledge is regularly transferred. Requests for a specific toolbox talk from staff can be made to the Principal Contractor's Environmental Manager.

Some environmental information is seasonal specific, for instance bird nesting season. Toolbox talks should deliver environmental information at suitable times of the construction programme, where feasible.

Toolbox talks should be documented, including the person giving the talk as well as site attendees.

3.4 Procedure for Management, Emergency and Incident Reporting

There is a legal requirement to protect project personnel and the general public from significant adverse effects during the construction works.

The safety of the general public, site workers and visitors to the site will be the principal guiding factor to the operations carried out on-site. A series of Safety, Health and Environmental Procedures will be implemented on-site.

The Site Manager will carry out a recorded weekly inspection; and this will be reinforced by a monthly audit by senior site management.

It will be the responsibility of the Principal Contractor to have procedures in place to deal with incidents involving environmental issues relating to site works.

Incidents shall be recorded and reported to Project Manager as soon as practicable and at least within 24 hours of the incident occurring, and if appropriate, reported to the Environment Agency (EA). A follow-up report shall also be produced providing details of relevant information. Refer to Appendix G: Incident Management & Investigation Procedure.



4 General Construction Information

4.1 Construction Programme

A phased mobilisation approach is planned from January 2024 to March 2024.

To enable efficient on-island construction activities, material deliveries will need to be substantially completed prior to construction commencement to reduce the impact of inclement weather. Materials can be delivered during good weather and then stored securely and be easily accessible on the island.

The temporary welfare compound will be in use for up to 4 years, to support the Capital Delivery Programme which is expected to complete in 2027.

Upon completion of the project, it is expected that the compound will be decommissioned. It is expected that the structures and materials brought to site will be dismantled and or recovered and removed, in line with the requirements of the Design Stage Site Waste Management Plan, presented in planning document 107780-PEF-XX-500-T.RP-GG-0001. It is expected that the site will then be reinstated to its former use as grazing pasture.

4.2 Working Hours

During the construction phase of the scheme it is proposed that operating hours will be between 08:00–18:00 Monday to Sunday.

As staff will be staying in off-site accommodation on St Mary's Island during construction of the compound, it is proposed that they will be transferred to / from site via mini bus. During the compound construction period, it is anticipated that a maximum of two minibuses are expected to enter / leave the compound daily.

It is proposed that staff will arrive at the site by 07:30 with construction activities beginning at 08:00 - thus avoiding travel during the typical AM peak period. With daily construction work to conclude at 18:00 it is anticipated that site workers will be transferred from the site to their accommodation between 18:00–18:30 thus also falling outside the typical PM peak period.

Embedded Mitigation:

- The proposed working hours avoid unsociable hours Monday-Friday, thereby minimising disturbance to sensitive receptors including residents within the local vicinity.
- > Consideration will be given to undertaking low-impact activities on Saturday and Sunday.
- > Avoidance of travel at AM and PM peak periods minimises disturbance to other road users.

4.3 Movement of People and Materials

Construction materials and equipment is expected to be brought to the island of St. Mary's via (i) a ship to the harbour; and (ii) a landing craft to Porthloo Slipway.

The Transportation of plant, prefabricated cabins, aggregates and construction materials to St Mary's will be via ships originating from Penzance Harbour. Two landing locations have been identified – the St Mary's Isles of Scilly Terminal and Porthloo Slip. Approximately 35 crossings will be made from mainland to the island. There will be two / three crossings per week made by two boats for nine weeks.

Further details are presented within the Transport Statement (report ref. 107780-PEF-XX-500-T.RP-H-0001).



Based on the information provided by TEL, the following vehicles will be used to transport materials and staff to / from the compound during its construction:

- > 9.5m Flatbed delivery vehicle to site from St Mary's Harbour and Porthloo Slip; and,
- > Minibus to site initially from Porthloo Slip and subsequently between site and St Mary's town centre.

It is anticipated that the following vehicles/plant will be required for the construction of the proposed welfare compound.

- 13t excavator (to be driven to site from Porthloo Slip with an escort vehicle);
- > 9t tipper truck (driven to site from Porthloo Slip with an escort vehicle).

Embedded Mitigation:

- > The use of a minibus promotes vehicle travel, minimising vehicle movements and vehicle emissions.
- > Additional controls are also listed in Appendix E: Health & Safety Toolbox Talks.

4.4 Perimeter Fencing

Boarded post and rail fencing will be installed. This fencing will be 2.4m in height and will be installed around the perimeter of the site including the access track. This will serve to visually screen the construction site and provide site security (as show in Appendix A: Site Layout Drawing).

Embedded mitigation:

- At a height of 2.4m, the site fencing will likely reduce the visual disturbance caused by planned construction activities.
- Although the site is not designed as an environmental barrier, at a height of 2.4m the fencing is likely to offer some benefit in relation to noise and/or dust that might be generated from onsite construction activities.
- The proposed boarded post and rail fencing perimeter fencing is to be installed along the edge of the root protection zone (RPZ), as shown on the Proposed Site Layout Planning Drawing 107780-PEF-XX-500-D.DR-T-0003. This will separate the welfare compound from the RPZ, offering protection to the trees within the Scott's pine woodland at the western field boundary.

4.5 Site Access

Access to the welfare compound will be via Parting Carn Lane (the A3110) through the existing field access in the north-west corner of the application site. The layout of the existing access into the site is to remain largely unchanged from its current composition.

The access track will running north-south parallel to the western field boundary and will measure approximately 150m in length and 4m in width (including a segregated pedestrian walkway). The track will provide access to vehicle parking, laydown area, and for cess pit emptying. A 'hammerhead' style turning head will be constructed adjacent to the cess pit for turning purposes within the site. The internal access road is to include a vehicle passing place approximately 30m east of the junction with the Parting Carn Lane (A3110) and also includes a turning area for delivery vehicles within the entrance to the car park.

The internal access track and carpark / laydown area will be finished with a compacted Type 1 sub-base (unbound) surface. Topsoil will be stripped from the footprint of the access track and carpark/laydown area and a geotextile membrane will be installed, with the Type 1 sub-base to be laid on top.

Embedded mitigation:

- To minimise waste and maximise resource efficiency, topsoil stripped from the access track will be reused to create the seeded topsoil berms that delineate the boundaries of three main sections within the site (i) the carpark / laydown area; (ii) the offices and amenities; and (iii) the accommodation / habitation area.
- The decision to largely retain the access arrangement in its current form removes the intrusive requirement to widen the access, which would include the removal of gateposts and the end section of the stone-faced hedgebank, as well as vegetation management / potential tree loss.
- The entrance the site runs parallel to the elm hedgerow at the northern site boundary and the pine woodland at the western site boundary. The root protection zones (RPZ) for these habitats are marked as a dashed red line on the Proposed Site Layout Planning Drawing 107780-PEF-XX-500-D.DR-T-0003. The existing field access, that the welfare compound will use, is located within this (RPZ). The installation of an access track within these areas therefore cannot be avoided. The following measures will be undertaken to minimise impacts:
 - This upper section of the RPZ is already subject to regular disturbance from vehicles accessing the site. This is due to the site's current use as grazing pasture for livestock. Nevertheless, to minimise impacts upon roots during the site's use as a welfare compound, a "no dig solution" is proposed for the upper section of the access track located within the RPZ.
 - It is proposed that a geotextile membrane will be laid over the existing site access track. This will be overlain with a geogrid filled with type 1 sub-base.

4.6 Car Park / Laydown Area

The northern portion of the welfare compound is occupied by a carpark / laydown area will a footprint 550m². This area will provide parking for up to 6 vehicles and will also serve as a laydown area for the temporary storage of equipment or materials where required.

As with the access track, topsoil will be stripped from the footprint of the carpark and laydown area. The area will then be finished with a compacted Type 1 sub-base (unbound) surface.

Embedded mitigation:

As stated for the access track, to minimise waste and maximise resource efficiency, topsoil stripped from the car park / laydown area will be reused to create the seeded topsoil berms that delineate the boundaries of three main sections within the site.

4.7 Power Supply

A new power supply application will be raised with national grid (NG) /district network operator (DNO) for a mains connection (individually metered) for the compound. It is likely that the installation will include a pole mounted transformer with the LV supply cable to the site either run overhead or buried to the site compound which will be confirmed by NG/ the DNO. This would be a temporary supply and removed when the compound is demobilised and reinstated.

It is noted that power supply applications can take several months, therefore the use of an on-site generator it proposed whilst connection is awaited. The generator and associated fuel storage tanks will be located within the grassed central portion of the site, adjacent to the site storage cabins.

It is proposed that a 'super silent' generator is used, which has a standard noise range of 60 dBA to 70 dBA @ approx. 5mtrs.

Embedded mitigation

> Power cabling is expected to be installed above ground to avoid the need for addition excavation.

4.8 Potable Water Supply

As an existing potable water supply traverses the northern boundary of the site. An individually metered supply will be installed for the compound. This will either be buried or attached above ground to the fencing running down the access track.

Embedded mitigation

To minimise excavation, it is expected that the potable water supply for the site will be installed above ground to using medium density polyethylene (MDPE) attached to the site fencing running down the access track.

4.9 Wastewater

A cesspit is proposed to manage wastewater in the absence of a nearby sewer connection. Flows into the cesspit are to be located down gradient of the welfare units. The cesspit will be fitted with a high-level alarm to prevent overflows and regularly emptied and transported to the cess reception facility at Old Town for disposal.

Embedded mitigation

- Disposal of wastewater at the cess reception facility at Old Town avoids the potential for impacts to underlying aquifer from the discharge of wastewater.
- > Disposal will be undertaken by a suitable competent local contractor.
- Consideration will be given to installing a permanent wastewater mains connection. This will be discussed with South West Water and Isles of Scilly Council as required.

4.10 Surface Water Drainage

No formal Sustainable Urban Drainage System (SUDS) has been proposed as part of the welfare compound design. It is intended that surface water will be allowed to infiltrate into the ground.

4.11 Site Lighting / Illumination

During the construction phase it is envisaged that task light will be required especially during winter working and dark hours. Permanent lighting will be essential to ensure the health and safety of the workforce. The proposed location of the accommodation cabins and storage areas is in a slight hollow and there are surrounding trees and hedges which provide a visual screen to the site from the surrounding area.

Site lighting sets will be podium lights installed with prismatic lenses which ensure a significant degree of directionality, as shown in Figure 3.

Low level access lighting will also be used to reduce the number of lighting sets required as shown in Appendix A: Site Layout Drawing.

Embedded mitigation

- > The use of podium lights installed with prismatic lenses will limit light spill from the site, minimising nuisance impacts to residents and local wildlife.
- > Podium lights will only be used at dusk and dawn where there is insufficient natural light.



Figure 3: Diagram showing the degree of directionality from podium lights with prismatic lenses

5 Environmental Management Requirements

The following section details the environmental management requirement that will be implemented during the construction of the welfare compound. These are in addition to those measures already embedded within the scheme design, as detailed within Section 4 of this document.

Where required, the Principal Contractor may decide to produce specific environmental management plans, , to provide more specialised advice and measures to protect the environment.

5.1 Key Environmental Legislation

The construction of the proposed welfare compound will be carried out in line with the requirements of relevant environmental legislation. It is expected that the Principal Contractor will keep a register of environmental legislation, as well as relevant policies and strategies that need to be followed or adhered to during the construction phase.

It is also expected that the register is updated regularly by the Principal Contractor to ensure that no legislation, policies or strategies are omitted, especially new legislation that is enacted during the construction phase. The Principal Contractor should also ensure that staff are aware of changes made to the register. This may include providing updated training in response to potential new legislation requirements or posting changes concerning H&S and the environment in appropriate places in construction compounds / working areas.

5.2 Control of Dust and Emissions

Key legislation and guidance relating to preventing air pollution during construction includes the Control of Pollution Act (Ref. 1), the Clean Air Act (Ref. 2), BS 6031:2009 Code of practice for earthworks (Ref. 3), the Institute of Air Quality Management Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites (Ref. 4), and the Health and Safety Executive's Vehicles at Work guidance (Ref. 5).

The site is not located within an Air Quality Management Area (AQMA). There are limited air quality receptors surrounding the proposed development, with the closest residential receptors approximately 200m southwest of the site.

Sources of air pollution during construction include:

- > Dust generating construction activities including the movement of aggregates;
- Construction plant;
- Vehicles;
- Stationary, hydrocarbon fuelled construction equipment such as generators or pumps;
- > Solvents used for construction.

The main impacts from dust and emissions are expected to occur during construction of the site compound. During use of the compound for welfare and accommodation there will be limited dust and emission receptors.

Prior to construction activities will be evaluated for potential environmental impacts and appropriate control measures employed as recorded within site risk assessments and method statements.

Control measures shall be documented and evaluated regularly to verify effectiveness. Plant and vehicles are to be in date with their appropriate testing regime. Best practice control measures may include, but are not limited to:

The wheels and chassis of vehicles shall be cleansed by hand at the point of loading in order to avoid the spread of mud, debris and dust onto the public highway;



- > Ensuring that vehicles leaving the site carrying debris or waste are properly covered and not overloaded;
- Cleaning the carriageway near the site entrance as required;
- Where disk cutters are being used they should have a dust bag, have water suppression, or the working area should be wet prior to the use of the machinery; and;
- > Spraying water to suppress dust e.g., damping down excavation sites at the construction phase;
- > If feasible, excavations and earthworks activities should be avoided during very dry or windy weather;
- Applying sheeting / a covering over soil / aggregates stockpiles;
- Materials that have the potential to produce dust should be removed from site when no longer needed;
- Where applicable, dust-generating activities should occur alongside dust suppression techniques, such as cutters fitted with water hosing;
- Staff and visitors should also be made aware of the hazards surrounding dust production, and how to assist with effective management of dust;
- When stationary, vehicle engines will be switched off;
- > Low-emission plant and equipment will be utilised, where available; and
- Plant will be regularly inspected to ensure that the exhaust emissions comply with the appropriate limits and that it is working efficiently.

5.3 Control of Construction Noise

Key legislation and guidance relating to preventing noise pollution during construction includes the Control of Pollution Act (Ref. 6), The Control of Noise at Work Regulations (Ref. 7) and BS 5228-1:2009 (+A1:2014) Code of practice for noise and vibration control on construction and open sites. The Noise Assessment undertaken by Noise Consultants was also used to inform controls to manage noise during construction and operation of the proposed welfare compound (refer to: *107780-PEF-XX-500-T.RP-EN-0003*).

The nearest sensitive receptors to noise and vibration include disturbance to nearby residential properties and people. The closest residential receptors approximately 200m southwest of the site.

Sources of air pollution during construction include:

- > The operation of construction vehicles and plant
- Removal of topsoil
- The laying of type 1 stone surfaces
- The running of generators;
- > The use of tools, including power tools
- Vehicle movements from deliveries

The Principal Contractor will be required to follow Best Practicable Means to reduce noise impact upon the local community during both site setup and demobilisation, including the following:

Construction contractors should be obliged to adhere to the codes of practice for construction work given in BS 5228-1 and the guidance given therein regarding minimising noise emissions from the site.

- Construction shall comply with the Construction Traffic Management Plan to minimise disruption and disturbance;
- Site fencing to be erected prior to the commencement of construction;
- > Implementation of a no-idling policy for vehicles
- > Construction plant and equipment should comply with UK noise emission limits;
- Machines in intermittent use should be shut down in the intervening periods between work or throttled down to a minimum;
- Ancillary plant such as generator, compressors and pumps should be positioned so as to cause minimum disturbance, e.g. furthest from receptors or shielded by portacabins. If necessary, acoustic enclosures and/or acoustic shielding should be provided.
- > Restriction of the use of radios, other sound systems or tannoys on site; and
- Minimisation of cutting operations or other noisy tasks through off-site fabrication wherever practicable. Localised shielding of noisy operations could be required where there may be a risk of exceeding sound levels at the agreed monitoring points.

5.4 Control of Light Pollution

The proposed scheme is located within an Area of Outstanding Natural Beauty (AONB). The Isle of Scilly Local Plan 2015 – 2030 promotes the protection of Scilly's dark skies.

Appropriate lighting has been embedded within the scheme description as detailed in Section 4.11. This include the use of podium lights installed with prismatic lenses to direct light and limit light spill.

In addition to the type of lighting, the Principal Contractor will implement the following management measures to ensure site lighting does not cause nuisance and minimise impact on natural receptors (e.g. Bats):

- Directed lighting towards the working area and away from site boundaries to minimise light spill away from the site.
- Switched off lighting when not required.
- Undertake daily assessments for need and appropriateness of task lighting.
- > Ensure that task lighting as height and direction adjustments to minimise light scatter.

5.5 Control of Surface Water Runoff

As stated in section 4.10, no formal SUDS system has been proposed for the scheme. The following measures are to be implemented to manage surface water runoff from the construction site:

- To limit silt run-off during construction, top-soil stripping will be limited to necessary areas (access track, parking, and laydown) and drainage ditches with topsoil berms will be constructed perpendicular to the slope to slow and direct flows through silt traps consisting of strawbales/geotextile;
- Access tracks will be kept free from dust and mud deposits to prevent tracking of material on to the public highway;

- No site traffic will be allowed to leave the site until the site team are satisfied that the vehicle is clean. A wheel wash station will be located within the site next to the entrance / exit gate;
- > A 5-mph speed limit will be introduced and monitored on site; and
- > Silt traps will be inspected for damage after intense storms and before and after intensive use.

5.6 Control of Pollution Risk from Accidental Spillage

The site is underlain by a Secondary A Aquifer that provides the current drinking water source to the site. The access road to the compound area is located within the Outer Zone (Zone 2) of a SPZ. Consequently the aquifer is considered have high vulnerability to pollution. The groundwater also presents a pathway to the lower-moors SSSI, which could also be adversely affected by accidental spillages.

Measures will be required to control the risk of pollution from the accidental spillage of chemicals and substance required during construction. This includes fuels and lubricants associated with construction vehicles and plant. Construction works which have the potential to affect groundwater need to adhere to the following environmental legislation:

- > DEFRA Construction Code of Practice for the Sustainability Use of Soils on Construction Site (Ref. 8); and
- > The Environmental Protection Act.

The Principal Contractor will be required to develop detailed method statements for key aspects of work and handling of materials / liquids which have a potential for environmental impact. These should encompass proposals for the control of pollution, together with emergency response plans. The Principal Contractor will be required to observe and adhere to relevant legislation and guidelines. Plant and equipment will only be stored in the parking and layout area.

Fuel will only be required on site for generator use. The generator and fuel will be stored in a double bunded area limiting contamination risk. Documented inspections of storage areas conducted at least monthly. It is expected that spill kits will be located at the generator and its fuel tanks.

Two COSHH storage containers will be located on site. These will be used for storing cleaning and maintenance equipment required for the cleaning and upkeep of the offices, welfare facilities and accommodation units. No other chemicals, oils or lubricants are expected to be stored at the proposed welfare compound. Again, it is expected that spill kits will be available at this location.

Controls are also discussed in Appendix E: Health & Safety Toolbox Talks.

5.6.1 Spill Prevention and the Storage of Environmentally Harmful Substances

The contractor will implement good practice measures when using and storing potentially harmful substances, in line with the EA's Protect groundwater and prevent groundwater pollution guidance (Ref. 9). This are expected to include:

- Potentially harmful chemicals are to be correctly stored.
- Sources of potential contamination (fuels, the generator) will be double bunded to mitigate pollution entering the groundwater.
- Good housekeeping in work areas and around equipment;
- Storage of fuel in a double bunded containment area;

- Use of secondary containment under or around portable equipment that is stationary when in use including generators, compressors, and plant;
- Continual observation of fuel transfers;
- > Plant and equipment requiring repair will have plastic sheeting or hardstand beneath to capture spills; and
- > Regular preventive maintenance on equipment.

5.6.2 Spill Control, Response and Clean-up

In the event of spills and releases fuels during refuelling of the generator, the spill shall be cleaned up immediately by staff who have been appropriately trained and qualified to clean up the quantities and types of material spilled.

In the unlikely event of larger spills, the area would be cordoned off and a qualified spill response team employed. Spill sites shall be secured until clean-up and response activities are completed.

Where required, spillages will be reported to the EA and the IoS Council.

5.7 Managing Construction Waste

The Principal Contractor will be responsible for updating and implementing the Design Stage SWMP (report ref. 107780-PEF-XX-500-T.RP-GG-0001) prior to commencement of construction.

Waste will be stored on the Parking & Laydown area and will be appropriately segregated and sealed. This will encompass:

> Proposals for the control of pollution as well as emergency response plans;

For more details on the control of waste please refer to the Site Waste Management Plan.

5.7.1 Control of soils

Control of soils will be limited to the construction and mobilisation of the site compound. Recommendations include:

- > Clearly define stockpiles of different soil materials; and
- > Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.

5.7.2 Stockpiling

For soils that require stockpiling the following recommendations include:

- Stockpiles should not be positioned within the root or crown spread of trees;
- Soil will have a natural angle of repose of up to 40° depending on texture and moisture content but, if stable stockpiles are to be formed, slope angles will normally need to be less than that.
- Once the stockpile has been completed the area will be cordoned off with secure fencing to prevent disturbance or contamination by other construction activities; and
- Soils will be used to create berms within the site. These are to be in place for the lifespan of the welfare compound and will therefore be seeded with a grass/clover mix to minimise soil erosion and to help reduce infestation by nuisance weeds that might spread seed onto adjacent land.



5.7.3 Land Contamination

It is not expected that land contamination will be encountered at the site. Nevertheless, the following measures will be taken:

- The construction works should be managed to comply with the necessary standards and consents as identified by the EA and the local authority; and
- If during the development works, new contamination or risks are encountered, works should cease, and the Local Authorities should be notified.
- Contaminated soil removed from the site will be removed to a licensed landfill and meet full regulatory requirements related to the storage, removal and disposal of this type of waste.
- If suspected or unidentified contamination has been found work in the contaminated area shall stop immediately. The contaminated land shall be clearly identified and quarantined to prevent access to the contaminated area. The Principal Contractor will report the incident to the Site Manager who shall seek advice from the EA.

5.8 Biosecurity and the Control of Invasive Species

Biosecurity measures must be implemented to prevent the spread of Invasive non-native species (INNS) including rats between the islands, as well as to prevent the introduction of Dutch elm disease form the mainland. The following biosecurity measures should be implemented:

- > A toolbox talk should be given prior to works within the identified areas of infestation;
- Prior to site clearance, a minimum 4m around identified INNS;
- Ensure equipment, clothing and footwear does not contain seeds of INNS;
- New plant and equipment will be washed prior to use on-site. Washings will be captured and disposed of in sealed containers for disposal;
- Imported timber should not contain elm and should be treated plyboard (or similar);
- Existing hedgerows and trees should be maintained. Native non-elm species should be used if these require replanting; and
- Examine equipment, clothing, and footwear for plant material before entering the site.

5.9 Management of Tree Root Protection and Exclusion Areas

As stated in Section 4.5, sections of the site access and upper stretch access track will be located within the RPZ of Scott's pine woodland and elm hedgerow. The contractor will install this section of access track using a no-dig solution.

The site perimeter fencing is to be installed along a section of the root protection zone (RPZ) (refer to Appendix A: Site Layout Plans). Consequently, no additional tree protection fencing is required.

- Perimeter fencing alongside a section of the RPZ (alongside the access road) will be erected at the outset of the development before activities (including demolition and ground works) are carried out and materials / plant are brought onto site. The preferred material for the fencing is treated plyboard (or similar material).
- The perimeter fencing to create an exclusion zone and protect the trees and hedgerows from construction activities. All-weather warning notices will be attached to the fencing to clearly identify the area as a tree protection exclusion zone into which access is not permitted. This exclusion zone and associate signage will be maintained for until decommissioning of the welfare compound has been completed.

- The Principal Contractor will be responsible for maintain this fenced exclusion zone throughout the life of the project.
- Once erected, the protected area should be regarded as sacrosanct, and the fencing shall not be removed or altered without confirmation from the local authority.

5.10 Ongoing Ecological Management Requirements

The following avoidance options should be followed where possible within the construction of the project. Where these cannot be followed, further surveys and mitigation option are set out below.

- The Scott's woodland at the western field boundary and boundary hedgerows are to be retained. Works to trees and vegetation are to be avoided wherever possible. Where required this work will be restricted to the light trimming of overhanging branches.
- Construction works within the grassland habitat should aim to avoid the bird nesting season. This is due to the presence of ground nesting bird records including skylark. If this is not possible then the works will require a pre-commencement nesting bird survey to ensure that the habitats are clear of nests.

6 Maintenance and Monitoring

Environmental Auditing of the works for each parcel should be undertaken by the Principal Contractor, or their nominated consultant. This role should be used to:

- Determine conformance with the Outline Construction Environment Management Plan (this document) and Final Construction Environmental Management Plan;
- > Ensure the Outline and Final CEMP are properly implemented and maintained; and
- Determine the extent to which the requirements defined in project consents, management plans and environmental procedures have been met.

7 Review and Close Out Reporting

As stated previously, the Final CEMP should be a live document which can be reviewed and updated subject to compliance with relevant planning conditions and as often as necessary, for instance when new information becomes available relating to organisation change, scope of works, changes in legislation or best practice guidance, equipment, environmental risks, amongst other things. Changes to the CEMP should be recorded for auditing purposes.

Close out reports will be produced in line with contractual requirements.



8 References

Ref. 1: Control of Pollution Act (1974) [online] Available: https://www.legislation.gov.uk/ukpga/1974/40

Ref. 2: Clean Air Act (1993) [online] Available: https://www.legislation.gov.uk/ukpga/1993/11/contents

Ref. 3: BS 6031:2009 Code of practice for earthworks (2009) [online] Available: https://www.scribd.com/document/455442049/BS-6031-Code-of-Practice-for-Earthworks-pdf

Ref. 4: Institute of Air Quality Management Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites (2018) [online] Available: https://iaqm.co.uk/text/guidance/guidance_monitoring_dust_2018.pdf

Ref. 5: A guide to workplace transport safety (2014) [online] Available: https://www.hse.gov.uk/pubns/books/hsg136.htm

Ref. 6: The Control of Pollution Act (1974) [online] Available: https://www.legislation.gov.uk/ukpga/1974/40

Ref. 7: The Control of NOISE AT Work Regulations (2005) [online] Available: https://www.hse.gov.uk/noise/regulations.htm

Ref. 8: Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2009) Amended (2022) [online] Available:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/716510/pb13 298-code-of-practice-090910.pdf

Ref. 9: EA's Protect Groundwater and Prevent Groundwater Pollution (2017) [online] Available: https://www.gov.uk/government/publications/protect-groundwater-and-prevent-groundwater-pollution/protectgroundwater-and-prevent-groundwater-pollution

Appendix A Site Layout Drawing





[©] Pell Frischmann Consultants (A1 841x594)

Appendix B Environmental Constraints Map







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Appendix C Habitat Constraints Map





Appendix D Site Training Requirements



Example Training Matrix]																
		Y	Required															
		0	Optional															
Training Class								3 Years			\				5 years	5 years		
Company	First Name	Role	Site Based	Abrasive Wheels	Asbestos Awareness	Banksman's Vehicle + Basic Lifting	Behavioural Safety	Breathe Safety - Confined Space	CITB Site Environmental Scheme	CITB Site Management Safety Training (SMSTS)	COSHH Awareness	CSCS Card	CSCS Electrical	Environmental Awareness	Excavator 180	Excavator 360		
		Project Manager	No	Ŷ	Ŷ		Y		Y	0	Y	Ŷ		Y				
		Site Manager	Yes	<u>Υ</u>	<u>Υ</u>	0	Y		0	Y	Y	Y		Y				
		Site Engineer	Yes	Y	Y	0	Y		0		Y	Y		Y				
		Commissionging Engineer	Yes				Y		0		Y		Ŷ	Y				
		SHEQ Advisor	No	Y	Y	Y	Y	0	Y	0	Y	Y	0	Y				
		Civil Supervisor	Yes	Y	Y	Y	Y	0	0		Y	Y		Y	0	0		
		Civil Machine Operator	Yes	Y	Y	Y	Y				Y	Y		Y	Y	Ŷ		
		Civil General Operative	Yes	Y Y	Y	0	Y				Y	Y Y		Y				
		Mechanical Supervisor	Yes	Ŷ	Ŷ	Ŷ	Ŷ	Ŷ	0		Y	Ŷ		Y				
		Mechanical Fitter	Yes	Y	Y	0	Y	Ŷ			Y	Y		Y				
		Mechanical Fitters mate	Yes	Y Y	Y Y	0	Y Y	0			Y Y	Ŷ		Y				
		Electrical Supervisor	Yes	Y Y	Y Y	0	Y Y	Y	0		Y Y		Y	Y				
		Electrician	Yes	Y Y	Y Y	0	Y	Ŷ			Y Y		Y	Y				
		Electricians mate	Yes	Ŷ	Y	0	Ŷ	0			Y		Ŷ	Y				
				1														
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		3 years			5 years									5 years	5 years			5 years
Face Fit Testing	Fall Arresst + Harness Training	Fire Warden	First Aider	Forklift Truck	Forward Dipper	Genny & Cat	Hand Arm Vibration	Height Training	HSG Team Dig	Ladder Safety	Manual Handling	NPORS N401 Appointed Person	PASMA Card	PAL Mobile Boom	PAL Mobile Vertical	Pollution & Spill Kit	Power Tools	Respirator Fit Test FFP3
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		Y	Y				Y	Y	0	Y	Ŷ		Y	0	0	Y	Y	0
							Y	Y		Y	Y		Y	0	0	Y	Y	0
							Y	Y		Y	Y		0	0	0	Y	Y	0

]						
5 years		5 years							3 years	
Ride on Rollers	Safety Awareness	Site Supervisor (SSSTS)	Stringer / Signaller	Telescopic Handler	Temp Works - Coordinator	Temp Works - Trenching + Excavation	Traffic Banksman	Voltage Awareness	Water Card	Wear RPE
	Y				Y				Y	
	Y	0			0	Y		Y	Y	
	Y	0				Y		Y	Y	
	Y	0						Y	Y	0
	Y	0	0		0	0	0	Y	Y	0
0	Y	Y	Y				0	Y	Y	0
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Appendix E Health & Safety Toolbox Talks



SAFETY - HEALTH - ENVIRONMENT - QUALITY

Title: Housekeeping / Slips, Trips & Falls

Housekeeping is the number one problem on construction sites. In fact, a large number of incidents can be attributed to poor housekeeping.

Why is housekeeping so important?

Poor housekeeping can be a cause of accidents such as:

- Tripping over loose objects on floors, stairs and platforms
- Being struck by falling objects
- Slipping on greasy, wet or dirty surfaces
- Striking against projecting, poorly stacked items
- Cutting puncturing or tearing the skin of hands or other body parts on projecting nails, wire or steel strapping.

What can you do to help improve housekeeping on your site?

- Cleaning and organisation must be done regularly, not just at the end of the working day
- Dispose of waste correctly
- Remove unused materials store / stack safely in lay down areas
- Ensure there are no trailing cables / off cuts of timber in walkways / access routes
- CoSHH items must be returned to locked storage
- Never leave tools laying around on site and ensure all tools are locked away at the end of each day
- Daily inspections to ensure clean-up is complete

Slips, Trips & Falls are the most common cause of injury at work

Most slips occur when floors become wet or contaminated and many trips are due to poor housekeeping.

What can you do to help prevent slips, trips & falls?

- Have procedures in place for both routine and responsive cleaning
- In case of a spillage, clean it up immediately
- If floors remain wet after cleaning place signage to make others aware
- Good segregation of site walkways and pedestrian routes
- Look out for trip hazards such as uneven floors or trailing cables and move them / make the area safe
- Ensure all workers are wearing suitable footwear for the environment they are working in
- If boots get muddy, scrape muds off boots before climbing ladders



Rain: Following heavy rainfall, ensure all floors in site cabins and welfare units are kept dry/mopped regularly and rubber mats placed in walkways, wherever possible.

Would you allow your work areas to get like this?

Snow/Ice: In freezing, snowy and icy conditions, rock salt or sand should be used to help clear and make safe all designated walkways/pedestrian routes.

Remember to check ladders, scaffolding and stairways for slippery surfaces too.





A tidy work area reduces the risk of accidents and increases fire safety



TRANT ENGINEERING LTD

Toolbox Talk





What is the worst that

Toolbox Talk - Trant Lifesaving Rules

Introduction

We all know that in order to maintain a safe and healthy work environment it takes constant effort from all of us. Various studies identify that at least 80% of incidents are related to behaviours.

It is now over a year since Trant released six Lifesaving Rules. By now we should all have a good understanding of these and be able to relate how they apply to our work activities.

They are all based around higher risk activities that if we get wrong could result in serious or fatal injuries.

We all need to realise that the consequences of our actions, or failure to act, can be far reaching with severe outcomes for individuals, the Organisation, our Clients and the public. By raising the profile on these activities by introducing some very clear rules or standards, all individuals understand their responsibilities.

The six Trant Lifesaving Rules:



Fall Prevention

We will always ensure we have identified and managed the risks to remain safe at height. A means of collective or individual protection MUST be in place where there is a fall risk. 100% tie off > 2 metres, risk assessment for lower heights.



Work Permits

We must not carry out works without a valid permit on a task that requires one. The Permit conditions must be fully observed.



Energy Isolation

You must not work on electrical, mechanical or any other equipment without all of the energy sources being isolated and made safe via the appropriate permit.



Defeat of Safety Critical Devices

You must not defeat or override any safety critical device. Any requirement to do so must have the appropriate authorisation / Permit.



Line of Fire

We will not place ourselves in harm's way through putting ourselves in the 'line of fire' by defeating physical barriers or entering danger zones.



Operation of Vehicles

We will always drive in a safe manner with due consideration for all other road users by observing speed limits, wearing seatbelts, never texting and remaining free from the influence of alcohol or drugs.

Implementation of the Rules

- We need to realise that breaches of these rules will be taken seriously and treated on a case by case basis using the flowchart below to determine how the breach has occurred.
- Breach of these rules may invoke the Disciplinary Procedure.
- Remember, there should be absolutely no reason these rules are breached if we are all following the basic safe systems of work identified in our RAMS as well as legal requirements.
- These rules fully apply in the same manner to our Subcontractor Supply Chain.
- The rules are already established within existing procedures and Policies.
- Further Guidance is available within the Trant Lifesaving Rules Handbook (available on the Trant Intranet; *SHEQ Trant Lifesaving Rules*).
- These rules are also included in the Trant Induction Template.
 Decision making guidelines for breaches of Lifesaving Rules
 Understand With All and a strange to the strange to th





- As a development in 2019, we are re-issuing the SHEQ Walkabout card in a revised format which includes the Lifesaving Rules. This will allow discussion around the application of these rules to your work to become a central part of *Effective Workplace Discussions* which your management will be conducting to help all sharpen their Continual Mental Risk Assessment (CMRA) skills.
- Your Management teams and your SHEQ Advisors will be assisting to raise the profile of these discussions during the year and your support is much appreciated.
- Continuous Mental Risk Assessment of your surroundings will enable us not only to fully adhere to the Lifesaving Rules but also to identify those additional dynamic risks that may require us to pause and ask, 'What is the worst that can happen?
- The important point is then that we check we have adequate controls in place before proceeding, please feel empowered to **STOP** and ask your Supervisor a question **before** proceeding.
- Adopting a high appreciation of our expected health and safety standards will keep us all safe during 2019.

Toolbox Talk SAFETY - HEALTH - ENVIRONMENT - QUALITY

Safely Digging around Services

Services are still being broken or damaged whilst digging around or near to them, putting the workforce and/or members of the public at risk. This must stop. You must use safe digging techniques which will help you to dig safely. Site Managers must ensure that their digging team are trained.

Training

We run two in-house courses on this subject. Both courses are EUSR approved and include the use of CAT/GENNY.

HSG 47 for Supervisors & Managers

If you are putting personnel to work or writing method statements, you should attend this course.

Team Dig

Aimed directly at the workers that are going to break ground including the use of CAT/GENNY.

Please contact the Training Department for further information or to book a training course.

Dangers

Power cables: Burns, fire, shock, electrocution

Gas pipes: Explosion, fire, leak, asphyxiation

Water mains: Pressurised energy, debris, flooding, drowning, rapid excavation collapse.

Drainage: Contamination, hepatitis, leptospirosis, needle injury, asbestos pipe exposure

Telecom/fibre optic: Shock, inhalation of glass dust, eye injuries from looking into fibre ends

Product lines: Pollution events, fire, explosion, contact with product.

Documents

The following must be in place prior to excavation works commencing and be available at the point of work:

LAC/Permit to Work as per Client rules.

Permit to Dig/Excavation Permit: This will outline the specific working area, any known services you are looking for, specific restrictions/controls.

RAMS: This will outline what risks are present and how they will be managed. There should be a clear methodology for you to work through. Ensure you read, understand and then sign the document.

CAT Scan Survey Record: This may have been completed at an earlier stage but details the area and what has been found before digging.

Tile Drawings/Hazard Plan: Detailed drawings of all underground services following mapping of the site by a specialist.

Safe digging reminder cards: These are available to help you remember main points.

And, of course, you should have your daily briefing and completed your Take 2's at the point where the work is going to take place (not done in the tea shed for the week). It is your chance to have your say - take it.

EB/Mar2023/TBT/05

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Advice for Safe Digging pocket cards

Service Strikes – in pictures



Service Detection Tools





PPE – Visual Standard

Poster available to download via the SHEQ Intranet page, or from the SHEQ Department, upon request.

PPE: OVERALLS / WORKWEAR VISUAL STANDARD





HSG 47 Avoiding Danger from Underground Services

HSE Guidance document aimed at those involved in carrying out works on or near underground services.

For ease of reference, this document can be found within the 'other useful documents' section on the SHEQ intranet page.



TUR/A/VUL

SAFETY - HEALTH - ENVIRONMENT - QUALITY

Title: Hand Arm Vibration Syndrome (HAVS)

What is HAVS?

A disturbance to the hand function caused by over-exposure to vibrations transmitted from powered hand tools.

FACT: <u>All</u> power tools transmit vibration to the user.

Are you at risk?

You are at risk if you regularly use hand-held or hand-guided power tools and machines beyond the regular maximum time, or if you hold tools and equipment that vibrate while being processed by powered machinery.

You may be at more risk if:

- You regularly operate hammer action tools for more than 15 minutes per day – examples include concrete breakers, hammer drills, scabblers or needle guns
- You operate some rotary or other power tools for more than an hour per day
- You grip power tools too tightly

What are the symptoms?

- Pins and needles in your fingers/hands
- Loss of sense of touch numbness in fingers
- Constant dull pain and shooting pain to fingers and hands
- Difficulty in completing everyday tasks such as fastening buttons or tying shoelaces
- Tips of your fingers going white, particularly in cold and wet conditions, and becoming red and painful on recovery

Following repeated exposure, there may be:

- Loss of manual dexterity making it difficult to pick up small items
- Severe pain and numbness
- Symptoms which appear more frequently and spread to more parts of your fingers/hands





Trant uses a colour coded tagging system to identify the vibration level and working time.

(Tank)	Hand-Arm Vibration	Trans and	Cf-	05-238
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What you can do:

- Use tools with lower vibration levels (green tagged tools)
- Check tools before use for defects/poor maintenance as this can increase vibration levels
- Make sure you know the trigger times for tools you are using and NEVER exceed the trigger time – refer to HAV Register for guidance
- Take periodic breaks when using power tools, as per the Trant tagging system
- Do not use power tools for sustained periods of time, share the work with trained colleagues
- Massage your hands and fingers
- Keep your hands warm in cold weather
- Ensure you wear correct gloves and they fit properly
- If in any doubt about HAVS, speak to your Supervisor / SHEQ Advisor.



MEMORANDUM

TO: Trant Engineering Contract & Site Managers

DATE: July 2017

FROM: SHEQ Department

REF: APD/July17/TBT

SUBJECT: SHEQ TOOLBOX TALK – July 2017

Driving Behaviours & Safer Driving

We have enclosed a handout for one of the July 2017 toolbox talks.

On completion of the toolbox talk immediately send a copy of the completed "Attendance Record" (at the end of this document) of all those who attended at your location to the **Training Department** at Head Office, Rushington who will record the details in the company and personnel training records.

NB:

- Remember to prepare what you are going to say
- > Make it relevant to Trant Engineering Ltd and your site/location
- > All attending must print their name clearly and sign in
- Introduction tell them what you are going to talk about
- ➢ Give your talk
- Sum up tell them what you have told them
- > Ask questions give answers if you don't know, say so find out and tell them all later
- Get feedback on SHEQ issues, complete the form and send a copy to the Training Department at Head Office and retain a copy on the PMS for the site safety records.

Good luck

SHEQ Department





THINK – WHAT IS THE WORST THAT COULD HAPPEN?



ENGINEERING LTD

SHEQ Toolbox Talk

Driving Behaviours and Safer Driving

THINK SAFETY - Yours and others

Driving Behaviours and Safer Driving - Toolbox Talk

More than a quarter of all road traffic incidents may involve somebody who is driving as part of their work at the time (Department for Transport figures). Health and safety law applies to work activities on the road in the same way as it does in all work activities.

Distractions occur any time you take your eyes off the road, your hands off the wheel and your mind off of your primary task: driving safely. Any non-driving activity you engage in is a distraction and increases your risk of having a road traffic accident.

When you're at the controls of any vehicle, it is important to remember that defensive driving is a full-time job. The most dangerous mile you have to drive is the one directly ahead of you.

A safe driver is not merely someone who has been lucky enough to avoid injury, but one who drives defensively and looks out for others. Today's road conditions and driving standards demand more skill, knowledge and decision-making ability.

Potential distractions include, but are not limited

to ...

- Text messages
- Talking on the phone
- Eating and drinking
- Turning to talk to passengers
- Adjusting the radio/CD player
- Satnav changes/map reading

There are three main types of distraction:

- Visual taking your eyes off the road
- Manual Taking your hands off the wheel
- Cognitive taking your mind off what you are doing





Texting with a handheld phone while driving is dangerous and illegal. It attracts a significant fine and points on your licence. It is one of the most alarming distractions because it involves all three of the above simultaneously. *Sending or reading a basic text takes your eyes off the road for approximately 4.6 seconds; at 55MPH that is like driving the length of an entire football field, blindfolded!*

Put your phone away for the duration of the journey. Put it away in the glove box or in a bag in the boot. No message is that important to risk your safety and potentially injure or kill others through your actions.

Now for some dos and don'ts

DO – Stay safe:

- ✓ Use a seatbelt at all times driver and passengers
- ✓ Adjust your driving for the conditions, including traffic, weather, pedestrians, rough roads, obstacles and tight areas on site and the level of light
- ✓ Be well rested before driving
- ✓ Obey the highway code rules including speed limits
- \checkmark Set a realistic goal for the number of miles that you can drive safely each day
- \checkmark Avoid medication that makes you drowsy before driving
- ✓ Carry out a pre user inspection of the vehicle, tyre pressure, lights etc
- ✓ Reverse park you vehicle. This is a site rule.

DO – Stay focused:

- ✓ Driving requires your full attention; try to avoid distractions such as adjusting the radio, eating or drinking
- ✓ Practice Defensive Driving by keeping your eyes on the road well ahead for any potential hazards approaching
- ✓ Stop for frequent breaks, get out of the vehicle to stretch, take a walk and get refreshed
- ✓ Be patient and courteous to other road users
- ✓ Plan your route in advance and leave early to avoid any stressful situations
- ✓ Always use mirrors and check blind spots when changing lanes
- ✓ Take great care when reversing both on the road and on our sites by using mirrors, cameras and a Banksman where necessary to safely avoid people, other vehicles and equipment
- ✓ Give cyclists plenty of room as you overtake

DON'T:

- × Text while driving
- × Drive under the influence of alcohol or drugs
- × Drive aggressively
- × Tailgate or speed, keep a safe distance back from the vehicle in front, (two second rule)
- × Drive after an argument
- × Take other driver's actions personally
- × Enter data into your Satnav whilst driving
- × Turn and talk to others

Vehicle Inspections



Safety is the most important and obvious reason to inspect your vehicle. A vehicle defect found during inspection could save you having an accident or worse. For example, the difference in wet braking distance between a tyre worn to 3mm and one worn to 1.6mm can be as much as 44%. Ensure you carry out a vehicle inspection prior to every journey **and for works vans** make sure you complete the Weekly Transport Vehicle Safety Checklist (CM-FM-270-02) and hand it in to Management / Plant and Transport.

Further guidance is provided in the Highway Code, the Trant Driving and Mobile Phone Policies and the Trant Drivers Handbook, issued with your Approval to Drive Company Vehicles.



Typical Stopping Distances

DRIVING: QUICK QUIZ ...

What is the best way to overcome drowsiness after a long day at work?

- a) Get fresh air
- b) Drink coffee
- c) Do exercises to get the blood flowing
- d) Pull over, take a break and rest

When approaching a STOP sign what must you do?

- a) Slow down and proceed when clear
- b) Stop whether there is traffic or not and proceed when clear
- c) You know it's clear so carry on as normal
- d) Stop, only when there is traffic

When taking prescription medication whilst driving you should ...?

a) Carry on driving, chances are they will have no effect

b) Consult your doctor as to whether it is safe to drive

- c) Take them as soon as you wake up because you won't be driving for a few hours
- d) Drive as normal because you took them the night before

Which of these actions is not recommended when driving on slippery roads?

- a) Reducing speed
- b) Decrease following distances
- c) Brake slowly

True or False ... Seat belts can double your chances of surviving an accident?

True Falco

False

True or False... Hydroplaning occurs when water lifts tyres completely off the road? True

True

False

One of the dangers of driving in snow and ice is an increased chance of skidding?

True

False

THINK – WHAT IS THE WORST THAT CAN HAPPEN? 24/7



TRAINING ATTENDANCE RECORD

COURSE/SESSION TITLE: 'Driving Behaviours a

'Driving Behaviours and Safer Driving' (July 2017)

LOCATION:

COURSE CONTENT:

DATE	E(S): - FROM	<u>T0</u>	TIMES: – <u>START</u>	<u>FINISH</u>			
	PRINT NAME	SIGN	LOCATION/DEPA	RTMENT/COMPANY			
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DUR	ATION:						
TRAI	NING PROVIDER:						
NAM	NAME OF TUTOR:						
SIGN	SIGNATURE OF TUTOR:						
• Return the completed form to the Training Department, Head Office, together with completed							

Training Feedback Questionnaires (if applicable). (FM-PER-002).

CoSHH Housekeeping

Recognising CoSHH (Control of Substances Hazardous to Health)

Hazard symbols appear on product packaging – these mean they contain chemicals that could be harmful to health and damaging to the environment.



Why Management/Housekeeping is Important?

- Poor storage of materials can lead to risk of contact/exposure, damaged product, risk of an unwanted chemical reaction, spillage, risk of slips trips & falls and hazardous waste,
- Where surplus CoSHH materials cannot be used there are high disposal costs.

This is an area where everyone on site can make a positive contribution to safety and the environment, merely by applying some straightforward housekeeping controls.

CoSHH Cabinet (storing hazardous material) Examples of poor practice* -







Examples of Good Practice* -



Products segregated and neatly stored. Appropriate MSDS & CoSHH assessments available from plastic



Waste timber used to construct spray can holder for keeping them tidy & organised.



CoSHH locked away, stored on bunded platform. MSDS & CoSHH assessments available.



Metal drums with clip top lid, clearly labelled with hazardous waste type & List of Waste (LoW) code N^o. Placed on bunded platform & secured behind fence.

sleeve/pocket.

General Management/Housekeeping Controls: The Do's and Don'ts

Do	Don't
 Do Only store CoSHH materials in the site CoSHH cabinet. Place CoSHH materials neatly and upright in CoSHH cabinet to avoid spills/damage. Ensure CoSHH products are returned to CoSHH cabinet after use and not left out on site. Ensure CoSHH pack/containers are sealed, with lids firmly in place when not in use. Keep CoSHH material in their original packaging. Segregate CoSHH packs/containers when storing in CoSHH cabinet – some hazardous substances may be incompatible under storage conditions. Use all product in the pack/container wherever possible. Always select and use partially used material before starting a new pack/container. When ordering product, try and keep quantity to a minimum to minimise wastage. Make sure any spill of CoSHH is contained and cleaned up immediately. Dispose of reatominated cleane up materials in correct 	 Don't Leave empty tins, cans, containers, discarded on site or beside/near, or even inside the CoSHH cabinet. Over order. Store CoSHH material in different containers/tins. Leave discarded containers lying about the site. Throw away partially empty containers. Mix different wastes. Use CoSHH cabinet as a waste bin.
 Make sure any spill of CoSHH is contained and cleaned up immediately. Dispose of contaminated clean up materials in correct bin. Do not mix with non-hazardous waste. 	
 Dispose of empty pack/container to the appropriate bin - hazardous waste must be disposed of separately and correctly e.g. sealant tubes, epoxy tins, oily rags in designated bin/drum. 	
Keep waste bin area tidy.Never burn waste on site.	

The SHEQ Team can provide support on storage, transport, waste classification.

Storage of CoSHH Material:

Where different chemicals (hazardous material) are to be stored, the materials should be segregated as per the table below (e.g. kept apart by storage on different shelves) to minimise risk of unwarranted chemical reaction. Section 10 of MSDS's identifies incompatible materials. An additional CoSHH cabinet may be required.

		Class		1	l	2	ļ	3		- 4			5	6	8
Chemical Segregation by				\diamond		\diamondsuit		٢		٨				۵ 🗘 🔄	\Diamond
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Explosive	\diamond	1.0 Explosive	۲		Segregate From	Segregate From	Segregate From	Segregate From	Segregate From	Segregate From	Segregate From	Segregate From	Segregate From	Segregate From	Segregate From
		2.1 Flammable	٠	Segregate From		Keep Apart	Segregate From or Keep Apart	Segregate From	Segregate From	Segregate From	Segregate From	Segregate From	ISOLATE	Keep Apart	Keep Apart
Compressed gases	\Diamond	2.2 Non Toxic Non flammable	٢	Segregate From	Keep Apart		Keep Apart	Keep Apart	Segregation may not be necessary	Segregate From	Segregation may not be necessary	Segregation may not be necessary	Segregate From	Segregation may not be necessary	Keep Apart
		2.3 Toxic	٨	Segregate From	Segregate From or Keep Apart	Keep Apart		Segregate From	Keep Apart	Segregate From	Keep Apart	Segregation may not be necessary	Segregate From	Segregation may not be necessary	Keep Apart
Flammable liquids	۲			Segregate From	Segregate From	Keep Apart	Segregate From		Keep Apart	Segregate From	Segregate From	Segregate From	ISOLATE	Keep Apart	Keep Apart
		4.1 Readily combustible	1	Segregate From	Segregate From	Segregation may not be necessary	Keep Apart	Keep Apart		Keep Apart	Segregate From	Segregate From	Segregate From	Keep Apart	Segregation may not be necessary
Flammable solids	٢	4.2 Spontaneously combustible	-	Segregate From	Segregate From	Segregate From	Segregate From	Segregate From	Keep Apart		Keep Apart	Segregate From	ISOLATE	Keep Apart	Keep Apart
		4.3 Dangerous whan wet	0	Segregate From	Segregate From	Segregation may not be necessary	Keep Apart	Segregate From	Segregate From	Keep Apart		Keep Apart	Segregate From	Segregation may not be necessary	Segregation may not be necessary
Oxidising		5.1 Oxidising substance	٢	Segregate From	Segregate From	Segregation may not be necessary	Segregation may not be necessary	Segregate From	Segregate From	Segregate From	Keep Apart		Segregate From	Keep Apart	Keep Apart
substances	~	5.2 Organic peroxide	٢	Segregate From	ISOLATE	Segregate From	Segregate From	ISOLATE	Segregate From	ISOLATE	Segregate From	Segregate From		Keep Apart	Keep Apart
Toxic			٨	Segregate From	Keep Apart	Segregation may not be necessary	Segregation may not be necessary	Keep Apart	Keep Apart	Keep Apart	Segregation may not be necessary	Keep Apart	Keep Apart		Segregation may not be necessary
Corrosive	\Diamond		۲	Segregate From	Keep Apart	Keep Apart	Keep Apart	Keep Apart	Segregation may not be necessary	Keep Apart	Segregation may not be necessary	Keep Apart	Keep Apart	Segregation may not be necessary	

Dust Elimination & Control

What is Construction Dust?

Construction Dust is a general term used for what may be found on a construction site. There are three main types:

- Silica dust Silica is a natural mineral present in large amounts in things like sand, sandstone and granite. It is also commonly found in many construction materials such as concrete and mortar. The silica is broken into very fine dust (also known as Respirable Crystalline Silica or RCS) during many common tasks such as cutting, drilling and grinding. It is often called silica dust.
- Non-silica dust There are a number of construction products where silica is either not found or present in very low amounts. The most common ones include gypsum, cement, limestone, marble and dolomite. This dust is also mixed with silica dust when cutting things like bricks.
- **Wood dust** Wood is widely used in construction and is found in two main forms; softwood and hardwood. Wood-based products are also commonly used including MDF and chipboard.

How can construction dust harm me?

Anyone who breathes in these dusts should be aware of the damage they can do to the lungs and airways. The main dust related diseases affecting construction workers are:

- Lung Cancer
- Silicosis
- Chronic Obstructive Pulmonary Disorder <u>Chronic obstructive pulmonary disease (COPD)</u>
- Asthma

While some lung disease like advanced silicosis can come on quite quickly, most take a long time. Often this is over years. They happen because during this time regularly breathing even small amounts of dust adds up and damages the lungs and airways. Respirable dusts can get deep into the lungs where the natural body reflexes of sneezing etc, cannot remove all the inhaled dust. Unfortunately, by the time you notice, the damage is often done, and it is more difficult to treat.

Construction dust is not just a nuisance; it is a real risk to your lungs.

Important statistic

 Recent HSE research has estimated that silica may be responsible for the deaths of over 500 people each year who have worked in construction. HSE also estimates that around 4,000 people die every year from COPD linked to work. Construction workers are one of the at-risk groups within this because of the dust that they breathe.

Which tasks create the most dust?

Many construction tasks create dust. High dust levels are caused by one or more of the following:

- **equipment** using high energy tools, such as cut-off saws, grinders, wall chasers and grit blasters produce a lot of dust in a very short time.
- work method dry sweeping can make a lot of dust when compared to vacuuming or wet brushing.
- work area the more enclosed a space, the more the dust will build up.
- time the longer you work the more dust there will be.

How much dust can harm me?

- To protect your lungs the Control of Substances Hazardous to Health (CoSHH) Regulations sets a limit on the amount of these dusts that you can breathe (called a <u>Workplace Exposure Limit or WEL</u>). These limits are not a large amount of dust. To give an example the image below shows the amount of silica dust that if you exceeded breathing in during a shift could put you at risk.
- When compared to a penny it is tiny like a very small pinch of salt:





The CoSHH Assessment will identify a WEL where designated.

This limit is the legal maximum, the most you can breathe **after** the right controls have been used. For tasks that can create high levels of silica and wood dust these controls have to be very good as the risks from these dusts are high.

How do I control construction dust?

You should look at ways of limiting the amount of dust before you start work. For example, you could:

- use the right size of building materials or pre-cut parts so less cutting is needed.
- use a less powerful tool e.g. a block splitter can sometimes be used instead of a cut-off saw.
- using a different method of work altogether e.g. using a nail gun to direct fasten cable trays instead of drilling holes first.

Even if you can stop some of the dust this way you may need to do other work that could still produce high amounts of dust. In these cases, the most important thing is to stop the dust getting into the air. There are two main ways of doing this which both give very good results:

- Water suppression water damps down dust at source. However, it needs to be used correctly. This means enough water for the whole time that the work is being done. Just wetting an area of ground before cutting does not work (typically 0.5 litres a min for petrol cut off saw).
- **vacuum extraction** specially designed tools can be fitted with an industrial vacuum unit that sucks the dust away as it is being created and stores it until emptied

Do I need to use a dust mask as well?

There are several things that can happen when using water or vacuum extraction that can stop the dust being properly controlled. Even if this does not happen, some tasks are so dusty that enough escapes into the air to still be a risk. For this reason, some form of respiratory protective equipment (RPE), usually in the form of a mask, may also be needed for high risk tasks such as:

- using a cut-off saw, grinder or wall chaser on material containing silica
- using powered cross-cut saws and sanders on hardwood, red cedar or MDF
- sanding softwood and hardwoods in an enclosed space

Masks are available that provide different levels of protection.

There are two main performance types you should ask your supplier/ employer for if working with construction dusts: **FFP2 and FFP3.**

FFP3 is the most effective filter if you are doing work that does or could create high dust levels or involves silica or wood dust (the more hazardous substances). HSE now require FFP3 for work with silica dust. Remember to refer to CoSHH Assessments and the RAMS for your activities for specified PPE.



Why can't I just use a dust mask to protect me?

Unless there are real problems doing so you should not just rely on a mask for high risk tasks. There are some very good reasons for this including:

- high risk tasks can produce so much dust that the mask cannot give the amount of protection needed also the filter in a mask can quickly become clogged and stop working.
- a mask only protects the person wearing it anyone else in the area could still be at risk from the dust if they do not wear a mask as well.
- there are many common mistakes that people make with masks these include choosing the wrong type, • not being face fit tested or not wearing them properly.
- Dust release may also become a public nuisance and should be managed at source. ٠

I've been told I need a Face Fit Test for my mask. What is this?

Masks rely on a tight seal with the face to work. This is so that only air going through the filter is breathed. If the mask does not fit properly the dust can slip through any gap between the mask and the face and into the airways. Dust particles can be much smaller than the width of a hair, so the face seal needs to be very good. There are many designs of masks. Not all will fit you well enough to form a good seal with your face. To find one that does fit you need to be face fit tested. The SHEQ Department can advise on and arrange Face Fit Testing.

Useful Company Documents:

- **Dust Procedure:** HP-PR-250-00 **Pollution Prevention Procedure:** CM-PR-240-02
- **PPE Procedure:**

HS-205

Appendix F Environmental Tool Box Talks



Safety - Health - Environment - Quality

Working Near Trees

Trees are important to our environment and offer many benefits, to people and the natural environment. We need to protect trees and hedgerows from damage by our activities, whether located on or near working areas. A tree that has taken many decades to reach maturity can be damaged irreparably in a few minutes by taking the wrong action.

Damage to tree roots by severance, soil compaction or from oil spills or concrete washout, is likely to affect the health of the tree and may cause instability or even death of the tree.



Tree trunk

Approximate spread of canopy or branches



TREE PROTECTION ZONES

PROHIBITED ZONE – 1m from trunk

In this zone, do not:

- Excavate unless full consultation with a competent Arboriculturist is undertaken
- Use any form of mechanical plant
- Store materials, plant or equipment
- Track plant or vehicles across.

ROOT PROTECTION AREA (RPA) measure diameter of tree at 1.5m and multiply by 12 to get the radius of the area

In this zone, do not:

- Excavate with machinery hand dig only
- Cut roots over 25mm in diameter
- Repeatedly move/use heavy mechanical plant except on hardstanding
- Store materials, spoil or vehicles.

PERMITTED ZONE – outside of root protection area

Excavation works may be undertaken within this zone. Apply caution and protect exposed roots.

Do not

• Cut roots over 25mm in diameter, unless advice has been sought from a competent Arboriculturist.



When excavating in the Root Protection Area or Permitted Zone:

- If roots are exposed but don't need to be removed, avoid damaging the protective bark covering the root
- Large roots >25mm diameter should not be cut, but whilst exposed should be wrapped in dry, clean hessian sacking to protect them. Ensure this is removed before backfilling
- Roots that are <25mm diameter can, if necessary, be removed using a sharp tool (e.g. secateurs or handsaw). Make a clean cut and leave as small a wound as possible
- When backfilling, large roots should be surrounded with sharp sand builders sand should not be used because it is toxic to roots
- Compact the backfilled sand and/or soil with care around the retained roots
- Notify the SHEQ team if there are any problems or damage occurs.

When working in the Permitted zone only:

• Use Heras fencing with signage to highlight the Root Protection Area and to prevent construction works from affecting the nearby trees.

Good practice is defined by the British Standard BS 5837:2012

Please contact the SHEQ Department if you would like to view this document.







Trees & Hedgerows

systems.

Trees and hedgerows play an essential role in the environment and visual amenity of both the countryside and built up areas. They may take decades to grow but can be destroyed in minutes. Wherever they are growing, whether in public footpaths, private gardens, rural verges or elsewhere, they require space for the adequate development of their root systems and to allow the branches to develop. They provide food and shelter for wildlife such as insects, amphibians, mammals and birds. This means cutting or removal of trees or hedgerows should be avoided during the nesting season (generally 1st March – 31st July).

Certain trees/hedgerows are subject to Tree Preservation Orders (TPO's). Trees/hedgerows protected by a TPO, or within a conservation area, must not be wilfully damaged or destroyed and cannot be cut down, uprooted, topped or lopped without consultation with the local planning authority and/or landowner. Advice from Ecologists may need to be obtained.



Do	Don't
✓ Follow ecologist's advice, where sought.	* Remove any temporary fencing and signage.
 Check with your supervisor before removing or cutting back trees or hedgerows to ensure permission has been obtained. 	 Undertake tree felling or hedgerow clearance during the bird nesting season. Undertake any works to, or near to, trees
 Ask your supervisor what protection is required for trees and hedgerows. 	without authorisation from your supervisor.* Track vehicles or plant over tree protection
 Erect any temporary protective fencing/signage as directed by your supervisor to create an exclusion zone. 	 areas. Store materials, especially fuels and oils under or near trees.
 Check for nesting birds and if any are found suspend work at this location and contact your supervisor IMMEDIATELY. 	
 Check with your supervisor before excavating near to trees and hedgerows. 	
 Ensure plant and machinery are kept out of any fenced off/excluded areas. 	
 Store all fuels and oils and other potential pollutants away from root systems. 	A PARA
\checkmark Only hand digging may be allowed around root	

SAFETY - HEALTH - ENVIRONMENT - QUALITY

Subject: Bird Nesting Season

The bird nesting season runs throughout March to August each year. This is when actively nesting birds, nests, their eggs and chicks are protected.

The protection of birds throughout the nesting season is covered by the Wildlife and Countryside Act 1981.

GOV.UK outlines that you are breaking the law if you:

- Intentionally kill, injure or take wild birds.
- Intentionally take, damage or destroy a wild bird's nest while it's being used or built.
- Intentionally take or destroy a wild bird's egg.
- Possess, control or transport live or dead wild birds, parts of wild birds, or their eggs.
- Sell wild birds or put them on display for sale.
- Use prohibited methods to kill or take wild birds.



It is also an offence to use noisy machinery in close proximity to nesting birds or to carry out any activity that results in disturbance, including moving something that has a nest on it.

Any tree, hedge, area of a building or a machine becomes a protected site the moment a bird starts building a nest, and it could result in having to temporarily shut down an area of site.

The time it takes for chicks to fledge depends on the species.

Important: When a nest is found, you must inform the Trant SHEQ department and it may be necessary to consult an ecologist.

Potential Penalties

Penalties that can be imposed for criminal offences in respect of a single bird, nest or egg is an unlimited fine, up to six months imprisonment or both. Vehicles implicated in an offence can be impounded and both the company, and/or the individual(s) concerned, can be held liable.

How to avoid disturbance:

- Pre-planning is important, try to arrange for any vegetation clearance to be done outside the bird nesting season. Inspect plant and ensure it is not left in situ for long periods of time.
- If you discover a nest or see a bird building a nest, leave the area alone and ensure that all disturbances are removed. Carefully put up a temporary barrier and signs to protect the nest (at least 5m away). Nests are legally protected until chicks have fully fledged. Inform the SHEQ department.
- Consult an ecologist if necessary. Before any vegetation clearance, an ecologist is required to complete a nesting bird check.
- Before starting any works within nesting season, assess the likely impacts to features such as hedgerows, trees, buildings and any machinery that has been left unused for a period of time. If there is any risk of impact, seek advice from the SHEQ department.

Remember: All birds seen to be nesting, along with their eggs and the nest itself, are protected by law.

Bird nests can be found in the most unexpected places!



SAFETY - HEALTH - ENVIRONMENT - QUALITY

Title: Nature Conservation - Bats

What?

- There are 18 (17 breeding) species of bat in the UK and all are protected by law.
- Because so many bats are endangered, both UK and European legislation gives them complete protection.
- They tend to return to the same roosts each year, so these sites are also protected whether the bats are present or not.
- The most common UK bat is the Pipistrelle. It is only 40 mm long and weighs about 5 grams.

Identification

- Places where bats may be found include holes and cracks in trees, roofs and walls of houses and buildings, under bridges, underground in caves and old railway tunnels.
- Every building and mature tree is a potential bat roost Smooth, stained areas may be found around the entrance to roosting sites.
- Look out for bat droppings dark brown or black, about 4 to 8 mm in length. They look like mouse droppings but crumble easily, as they are made up of insect fragments. In well –established roosts, droppings may be several centimetres deep.
- Other signs include a sharp characteristic odour and large numbers of moth wings discarded by feeding bats.
- Bats can crawl into holes only 15 mm wide.



Why?

- Avoid prosecution: It is a criminal offence for anyone without a licence to:
- Kill, injure or handle a bat
- Possess a bat (whether living or dead)
- Disturb a roosting bat
- Damage, destroy or obstruct access to any place used by bats for shelter, whether they are present or not.
- Breaking the law can lead to fines of up to £5000 per bat and / or up to six months in prison.

Questions

- 1. Where are signs of bats expected to be found?
- 2. What tell-tale deposits will help identify bat roosts?
- If it is suspected that bats are present, what should be done?
- 4. Where might bats be seen on this site?

Do	Don't	
 If a bat or bat roost is found on site, stop all works in the area IMMEDIATELY and inform a line manager. 	 Try to touch or handle a bat. They are very delicate and this can cause them serious harm – it is breaking the law. 	



TR/Oct2020/TBT/07

SAFETY - HEALTH - ENVIRONMENT - QUALITY

Title: Protection of Watercourses (Controlled Waters) pg. 1 of 2

What is a Watercourse? 'Controlled Waters' or a watercourse can be pretty much any body of water such as: rivers, streams, drainage ditches (even if dry), field drains, ponds, groundwater, etc. Anything that isn't a puddle!

What impact do we have on Watercourses? Our biggest impact is through pollution: silt, concrete, chemicals, sewage, trade effluent, etc.

What are Polluting Materials? Anything that has a negative impact on the environment! There is no minimum quantity.



Environmental Impacts: Construction activities can have major impacts on the environment:

- High levels of silt suspended in water can suffocate fish by blocking their gills, remove oxygen from the water, kill plants, animals & insects living in the water by preventing sunlight from reaching them.
- Concrete has a very high alkalinity which can be very harmful to aquatic life if it were to enter a watercourse.
- Sewage, trade effluent can have a range of impacts on a watercourse's environment, whether it is at a high temperature, contains chemicals, or is high in nutrients (sewage).

Controlling our Impacts: There are numerous methods and procedures project teams can put into place to make sure we protect surrounding watercourses and ensure no legislation is breached.



Silt: Applying the TEL permit to pump operating standard for when dewatering, over-pumping, etc. The tag to the left should be attached to each pump involved with the permit number, where the discharge point is and a contact number in case of an emergency.

Remove silt from the water before discharge using settlement tanks/lagoons, silt-socks, siltfences/ hay bales, etc. It may also be necessary to have a formal discharge permit in place obtained from the Environment Agency or local drainage board.







Images of Water Pollution

SAFETY - HEALTH - ENVIRONMENT - QUALITY

Title: Protection of Watercourses (Controlled Waters) pg. 2 of 2

Concrete: Concrete washout needs to be controlled to avoid pollution of watercourses. Designated washout point needs to be created, which could be a 'Siltbuster' style washout and pH dosing system, or a skip with an impermeable membrane. It should be situated at least 10m away from any drains, gullies or watercourses. The integrity of the skip and membrane should be regularly inspected to avoid any leaks. See photograph's, below.



Chemicals/Fuels: Chemicals, fuels and oils must be kept in a secure, bunded area capable of holding 110% of the max capacity e.g. CoSHH cabinet. Cabinet should be sited at least 10m away from any drain, gullies or watercourses. Refuelling protocol must be followed. Know where your site's spill kits/booms are located!



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DO

- Check with Site Manager what treatment systems are needed
- Check the point of discharge is in the correct location
- Check all couplings & pipework fittings are secure. Check for damage, breaks, leaks
- Make regular checks that treatment systems are working correctly & water being discharged is clear of silt
- Notify Site Manager immediately if you notice pollution, muddy water, oils or if the discharge is causing flooding

DON'T

- Pump without prior approval (any necessary permits) from Site Manager
- Leave pumping operations unattended for long periods of time unless authorised to do so by the Site Manager
- Continue with over-pumping if the receiving location cannot cope with the capacity
- Ignore signs that pollution is occurring
- Change pipework or discharge points without the authorisation of the Site Manager

Appendix G Incident Management and Investigation Procedure



TIRZANNI	In	cident Management & Investigation	MANAGEMENT SYSTEM REF
PROCEDURE		CDM	Issue 02 15/11/2022
	Owner:	Health and Safety Sponsoring Director	Page 1 of 10

Issue N°	Reason for Change	Approved By	Date
02	Verbal reporting chain added.	Simon Robinson	15/11/2022
01	First Issue.	Colin Monaghan	01/02/2019

SCOPE

This procedure describes how all site related incident types are to be managed, reported and investigated. The following types of event fall within the scope of this procedure (*list not exhaustive*);

- All injury events, including First Aid, Medical Treatment, Restricted Work and Lost Time Injuries
- Health related events in connection with work, e.g. HAVs, noise etc.
- Non-work-related medical issues with employees occurring whilst at work, e.g. asthma, seizure.
- Incidents involving members of the public in connection with work activities.
- Incident No Injury (Near Miss) events (high potential events).
- RIDDOR Dangerous Occurrence category events.
- Road traffic and driving related events involving transport in connection with work (on or off site).
- Environmental events such as spills to ground, water, pumping, waste legislation breaches etc.
- Damage to property, plant or equipment.
- Damage to or contact with underground and overhead services.
- Fire.
- Flooding.
- Terrorist and other security related events.
- Quality defects resulting in equipment failures.
- Any other type of event that might need to be reported.

An Incident is an unplanned event that has the potential to or has resulted in personal injury, ill health, damage to property or the environment.

This procedure shall apply to all incidents involving Trant Engineering activities and work undertaken by our supply chain labour and subcontractors / suppliers.

The Contract Director and SHEQ Department shall jointly decide the level of investigation afforded to any of the above events beyond the initial record completed within the Project Management System, (PMS), by the Site Manager (*See High / Low rating criteria below*).

Note; Where an action refers to Site Manager, this can be read as Department Manager in the case of an office based departmental area within this business.

Further guidance and information may be obtained from;

- CITB Construction Site Safety manual (GE 700) Module A12-13 providing details and practical advice and information on incident management and investigation.
- The SHEQ Dept. direct support by the assigned H&S Advisor for specific support in the investigation of an incident.

OBJECTIVE(S)

To ensure that all incidents are managed to minimise further/prevent injury, harm or damage, (including reputational), and that details are accurately recorded within the required timescales and relevant parties are made aware of the situation.

To ensure that all Incidents are appropriately investigated to identify the immediate, contributory and root causes to establish the appropriate corrective and preventative actions considering lessons learnt and opportunities for improvement.

To ensure that actions and lessons learnt identified are fully implemented and communicated within the business to continually improve its performance and avoid a repetition of the incident.

OBJECTIVE(S) MONITORING AND MEASURING

Periodic review of the PMS Incident Data/Actions. Audits Internal and External. Performance and Trend Analysis. Management Review.

RELATED PROCEDURES/FORMS

Incident Report Form	CD207-01
Incident Report (No PMS available)	CD207-02
Witness statement form	CD207-04
Verbal Incident Reporting Chain	CD207-05
Emergency Planning Procedure	CM-PR-230
Construction, Design & Management, (CDM)	CD200
Company Alert Operating Standard	CI-PR-215
Risk Assessment and Method Statement	CD202
First Aid	HS413
Pollution Prevention	EN202
Environmental Aspects and Impacts	EN205

INPUT(S)

Project Management System - Project Dashboard – Incidents (upload portal).

Client Incident Reporting criteria/ documentation.

Investigation documentation/ evidence, e.g. RAMS, briefing attendance records, training records etc. Photographs, drawings & diagrams.

Photographs, urawings & diagrams

Witness Statements.

Correspondence.

Risk Assessment/Plan.

OUTPUT(S)

Actions on the Incident Reporting System / PMS Issues. Quarterly Board Report Incident Statistics Completed Incident Report Forms CD207-02 (only to be used when access to the PMS is not available) Incident Investigation Reports CD207-01. Subcontractor/ Supplier Investigations (for inclusion with Trant Investigation). F2508 Report of Injury/ Dangerous Occurrence (HSE form) (completion by SHEQ Department only). Motor Vehicle Accident Claim Form. Potential Corrective/Preventative Action Outputs; Company Alerts/ Bulletins. Lessons Learnt Register. Toolbox Talks. New/revised Company Procedures/ Operating Standards Documentation. Training Plans.

CONTROLS & PROCESS

COMPETENCE

The Site Manager is responsible for the initial management and notification of the incident This shall be **Verbally** following the notification flowchart at appendix 3 and thereafter via the Project Management System as advised by SHEQ. The Site Manager must hold a SMSTS qualification or higher. All work locations must have a qualified First Aider in accordance with Operating Standard HS413.

Once the SHEQ Department are aware, the incident investigation will be managed using the resources available;

- NEBOSH General or higher qualified H&S Advisor
- Advisor with incident investigation qualification (approved in house or external)
- For higher level events, Taproot[®] Qualified Investigator
- Environmental IEMA or higher qualification (for environmental events)
- External specialist support (various)

IMPLEMENTATION - INCIDENT MANAGEMENT

- Prior to Commencing Operations, through the Site Emergency Planning Procedure CD205, ensure that emergency procedures are established and communicated to all relevant parties via the Site Induction and documented/ updated as part of the project Construction Phase Plan (CPP). *Site Management & SHEQ Dept. Support*
- Ensure emergency procedures are displayed and periodically rehearsed with drills as required by the Emergency Planning Procedure – CD205 and the Construction Phase Plan, Appendix 8. *Site Management*
- In the event of an incident on site the immediate priorities should be;
 - Raise the alarm and implement the Emergency Procedure as appropriate to the nature of the incident.
 - Assess the situation (for assessment of priorities and to prevent further harm/ loss).
 - Attend to any injured parties, alert First Aider/s.
 - In the case of a pollution incident i.e.: spillage or escape, endeavour to contain where it is safe to do so.
 - Make area safe and prohibit any further access as appropriate, shut off mobile plant if safe to do so.
 - Ensure that the area is safe to access if in doubt ask responsible authority.
 - Contact emergency services where appropriate following the requirements of the Site Emergency Plan.
 - Inform Trant site management.
 - Verbal notification of incident following the reporting chain at appendix 3 note: verbal notification requirement takes precedence over notification requirements illustrated in Appendix 1. Call the incident in, advice will be provided on follow up action.
 - Inform the Client.
 - Ensure that the scene of the incident is preserved for investigation purposes.

- The site team shall not discuss any incident with the Media or post any details on social media sites. Any requirement for a Media statement or contact will be handled via the Trant Managing Director as described below;
 - Site Manager will contact the Contract Director of the request / Incident
 - Contract Director discusses any Media statement with Managing Director (in agreement with Client Press Officer where appropriate).
 - Managing Director approves content with external Trant nominated Press Relations Officer.
 - Trant Press Relations Officer to disclose approved content to Media.
- As soon as it is possible to do so following verbal contact with SHEQ, but always before the end of the shift, report the incident via the Project Management System (PMS) Project Dashboard Homepage as below: *Site Management*.

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• Settings		Tick this box if vehicles involved.			
		Are there any injury to people?			
		Is this incident RIDDOR reportable?			

- This will automatically email and SMS message alert the Managing Director, Contract Director, Contract Manager, Insurance Manager, H&S Manager that an event has occurred.
- Notify the Client within the timescales dictated within the project CPP. Site Management
- Using form CD207-04, obtain written and verified Witness Statements from the appropriate individuals and then scan and upload to the Incident page using the Attachment tool along with all other relevant documents gathered as indicated within the Incident Checklist or Appendix 2. *Site Management*

Incident Checklist	+ Add	
Attachments	O Upload	
No documents uploaded.		
• Once the initial information has been gathered (with use of the Checklist) and the description of the incident has been included, the Site Manager can select the Approved tab on the Incident Page which will pass the report onto the SHEQ Manager/ SHEQ Advisor stage. *Site Manager*

		Status	
HOW DID THE INCIDENT OCCUR	✓ Edit Description	ROLE	STATUS
		Site	Submitted
		Manager	

INCIDENT INVESTIGATION

• Depending on the severity of the incident as shown below, the Contract Manager and SHEQ Department shall agree the level of investigation appropriate and the investigation team, including their degree of independence from the events. Typically, investigations will be rated either Low or High level. (*Note; the level of investigation should consider the potential of the event, not just the actual outcome*) **SHEQ Manager & Contract Manager**

Low Level	High Level	
First Aid	Lost Time Injury	
	Medical Treatment Case	
	Restricted Work Case	
	RIDDOR Dangerous Occurrence	
	Damaged Service	
Incident no Injury (low outcome/ potential)	Incident no Injury (high outcome/ potential)	
Environmental spill < 1 litre	Environmental spill > 1 litre	
	Fire	
Damage to plant/ equipment < £500	Damage to plant/ equipment > £500	
Minor vehicle impact with no injury	Road traffic Accident with injury	

Note: the above table is a guide, events may be re-classified

- Notification of incidents to the Enforcing Authority (HSE/ Environment Agency etc.) shall only be undertaken by the SHEQ Department following the approval of the Managing Director. SHEQ Dept.
- High Level incidents involving Subcontractors should be managed by immediately contacting their Project Management to arrange for the Subcontractor/s involved to attend site and investigate under the oversight/ parallel investigation conducted by Trant Engineering. *Site Manager*
- On completion the Subcontractor Report shall be provided to Trant Engineering Ltd and be uploaded to the project Incident Report on the PMS for review. *Contract Manager*
- Subcontractor F2508 Forms to the Enforcing Authority should be copied to Trant Engineering where Trant are Principal Contractor. *SHEQ Advisor*
- A Low-level investigation will involve the assigned Health & Safety Advisor attending site to support the site team in identifying the sequence of events, causes and required actions using the Flowchart included in Appendix 1. This should be completed within 7 days. *Project Health & Safety Advisor*
- A high-level investigation will likely involve the assigned H&S Advisor along with other SHEQ Department and Contract Manager support attending and conducting an in-depth investigation with the site team's support using Form: CD207-03 and Taproot[®] Software/ principles. This should be completed within 14 days. *SHEQ Department & Contract Manager*

 Using the Incident Checklist in Appendix 2 (and within the Incident Page), systematically identify the sequence of events, established facts, photographic evidence, gathered documentation and witness statements to determine the immediate, underlying and root causes and upload to the PMS Incident Pages within the boxes indicated below. *Project Health & Safety Advisor & Site Management Team*



- All documents and evidence obtained, including personnel records, shall be managed confidentially to maintain data protection at all times. Paper copies of personal records must be securely held.
- With the assistance of the SHEQ Advisor/ Department, the Investigation team shall identify appropriate actions to prevent a reoccurrence.



- Once the Investigation is completed, (either the report within the Incident page or the completed Investigation Report CD207-03), it shall be reviewed and approved by the SHEQ Manager and the Contract Director prior to issue. *SHEQ Manager & Contract Director*
- Completed and approved Investigation reports shall be issued to the Project Management Team and Client if required with a copy attached to the PMS Incident Page. *SHEQ Manager*
- Where a learning point identifies a procedural change requirement or a wider Company-wide message to be shared urgently then the SHEQ Department shall generate a Company Alert and seek approval of the Contract Director prior to issue. Also, add to Company Lessons Learnt Register and H&S Risk Matrix for annual review. *SHEQ Manager & Contract Director.*
- An action requiring a local site input or change shall be communicated via an assigned action on the PMS Incident Reporting System or Issues Register where the action is longer term and will excessively delay final closure of the incident on the PMS.
- These must be closed out with suitable verification (evidence) to verify completion/ implementation of the action within the timescales allocated. *Action Owner*

ALLOW SECTORY	
liespoosible Person	Don state

• Incidents shall be investigated in a timely manner to capture learnings and satisfy the Client stipulated requirements for reporting deadlines.

- All road traffic accidents must be reported to the Insurance Dept. and the individual's Line Manager within 24 hours. A Motor Vehicle Accident Claim form, (available either on the Company Intranet or from the Insurance Department) must be completed and appended to the Incident Report and returned to the SHEQ and Insurance Department at Head Office as soon as possible but in any event no later than 48 hours after the accident. NB: Late notification may prejudice the Company's insurance position.
- Any disciplinary measures arising from the investigation findings shall be jointly handled by the HR Department and the Contract Director. *HR Department & Contract Director.*
- Actions still required or overdue are indicated within the Incident Page with a red bar status.
- Once all identified actions have been marked as 'Completed' by the action owner with a green indication, as below, the incident shall be finally closed on the system by the Contract Director.

Status	
ROLE	STATUS
Site Manager	Submitted
Safety Manager	Approved
Contract Director	Closed

• The PMS platform provides a confidential and secure record of all incident data for retention.

RESOURCES

The Managing Director and the Board of Directors shall ensure that adequate and effective resources are allocated to implement this Procedure and achieve it's objectives.

APPENDIX 1: ACCIDENT/ INCIDENT REPORTING & INVESTIGATION



APPENDIX 2:

Incident Investigation Checklist

- Casualty reported to F Aider / F Aid Centre (where applicable)
- Area/scene preserved and made safe (where safe to do so)
- For potentially High-Level incidents inform the Contract Manager, Director and SHEQ Dept. immediately.
- Items of plant and equipment quarantined
- Report to Trant / Client (as rules require)
- Photograph of scene / equipment involved (where appropriate and required permissions granted)
- Plant/equipment/tools recorded registration/serial numbers/certification, etc Statements taken from those involved and witnesses (independently and statement of facts only) Investigator to write out statement and obtain agreement from the Injured party/witness.
- Obtain copies of the following (to be included and uploaded within the PMS Report):
 - o RAMS
 - o Take Two
 - Training records / Competency Cards e.g. CSCS, CPCS, etc
 - Induction Checklist
 - o Daily Briefing
 - o Walkabout Cards
 - o Permits
 - Drawings
 - Other relevant documentation
- Injured Persons details uploaded to the PMS Incident Reporting System including:
 - o Injury details
 - o Hospital details
 - Doctors report (where applicable)
 - Description of event / timeline uploaded
 - Activities underway identified
 - o Immediate, Underlying and Root Causes Identified (use 5 Whys?)
 - o Actions identified
- Make other sites aware if applicable (Company Alert / Lessons Learnt Register)
- Is incident RIDDOR reportable? (SHEQ Dept. only to report event following MD approval)
- Contributory factors i.e. weather, lighting, time of day
- Drug and alcohol testing appropriate / conducted
- Onward communication of findings (SHEQ Dep't Action)

VERBAL Incident Reporting Chain for ALL Incidents - CD207 Appendix 3

Incident

