



HEALTH AND SAFETY



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Introduction

This report will highlight key health and safety issues related to the Englemere Site and provide a strategy for dealing with the issues and different methods of communication to ensure the workforce are aware of them.

Task A

Key health and Safety issues related to the site

Site Challenges

Englemere Site is based adjacent to an industrial estate and close to a residential area, which will need to be taken into account to ensure the safety of the public as well as the workforce.

Site Deliveries

Site traffic can cause issues relating to noise, fumes as well as large plant movement also contributing to major road accidents which affect both the workforce and the public.

Excavations

Before any work can begin the contractor needs should ref to the bore hole log. Services should be located and any underground water courses or structures.

Any of the above can cause collapse within an excavation, as can explosion/fire from services or being hit by plant or machinery.

Working in excavations can also cause material to fall in if the spoil is not set far enough away which in turn may cause suffocation, major injury or death.

If the excavations don't have a barrier, then falling into excavations by plant or the workforce becomes an issue.

The inflow of ground and surface water could cause drowning. The water table is located 0.5m below ground level on this site as identified in the borehole log.

Materials

Any hazardous material that will be used on the site such as cement, should have a COSHH sheet for assessment handling and storage. Incorrect storage, handling, use may cause injuries.

Pylons

Overhead pylons over the southern end of the site are carrying 20,000volts, which could cause serious injury or death if touched by conductive materials such as steel frame being lifted.

Working at Height

When fixing the external cladding, roof trusses and coverings working at height regulations need to be adhered to. Workers could be working on scaffolding or MEWPS so need to be aware of all associated hazards. Working at height however is a fall from a distance that could cause harm so needs to be given consideration for all processes such as falling into an excavation.

Ground Contamination

Previous use of the site shows that it was a petrochemical plant with no perimeter fence and has been used as a dumping ground for industrial and domestic waste. The ground hasn't been remediated therefore could contain dangerous toxins.

Dust

Dust becoming airborne- causes issues for the general public as well as the workforce causing breathing issues and potentially long term illness such as asthma, lung cancer, Chronic Obstructive Pulmonary Disease (COPD) and silicosis.

Noise

Prolonged exposure to noise can cause serious hearing defects and deafness in extreme cases from heavy plant and machinery.

Trespass

The site has been abandoned and used as a dumping ground, the public might become curious as to what is happening on the site and gain access illegally. This could lead to damage to property but more importantly serious injury or death by climbing up ladders in the dark or falling into open excavations for example. CDM Regulations 2015 ensure the Main Contractor has considered this at the design stage prior to anyone going on to site thus helping to prevent illegal access.

Site Access over the Pavement

A vehicle is not allowed to drive over or cross over a footpath without first applying for authorised vehicle crossover. Driving a vehicle over a footpath without the correct permissions could cause damage not only to the footpath but also to any pipes and cables that may be beneath it.

Word count 577

Task B

Pre-Construction

Prior to any work starting on site, services on or above the site need to be located and service providers contacted as necessary.

Meetings are to be held with the local community to communicate key points of the project, how the community will be affected, how the contractors are going to limit any issues and answer any questions locals may have. In attendance the main contractor, architect, local authority and housing association

All parties to the project are to ensure CDM Regulations 2015 are adhered to. Pre-construction, the principal designer will plan, manage and coordinate health and safety issues by identifying and eliminating any foreseeable risks. During the construction phase, this becomes the duty of the principal contractor along with the need for them to prepare a construction phase plan, also prepared pre-construction.

The construction phase plan will contain start and finish dates, when services will be disconnected and the different stages of construction. This information will also be contained in the programme of work activities within the project managers' office. The plan will also contain ways in which health and safety information will be communicated during site meetings, induction, tool box tools, etc. to the workforce and others.

Risk Identification

As part of the health and safety plan, risks will be identified by the Health and Safety Coordinator, who will write the risk assessments and method statements (RAMS) for each of the construction process. See appendix 1 for example of method statements for roofing,

lifting and ground slab works. Appendix 2 for an example of a risk assessment for Englemere to minimise risks on site. Each sub-contractor will be responsible for ensuring their own health and safety as well as the main contractor having overall responsibility. The main contractor will appoint a health and safety co coordinator to ensure all policies, procedures and regulations are adhered to and any further information after induction is communicated to all staff via email, verbally and posted on notice board in staff office and canteen. On Englemere there will be a designated Health and Safety Co coordinator with responsibility for day to day health and safety as well as the Site Manager having overall responsibility.

Site Induction

A site induction to be given to all persons (workers/visitors) entering site. Declaration of understanding to be signed once induction is complete and kept on file. Site induction format will depend on numbers and will take the form of PowerPoint/ video or induction checklist. Site induction must include accident and near miss reporting procedures, (RIDDOR) fire muster points, first aid stations and first aiders as well as other relevant health and safety information including drug and alcohol abuse.

CSCS Cards

Anyone entering the site is required to have the correct level of CSCS card to ensure their Health and safety competence. This needs to be shown before contractors enter the site to ensure they are up to date and are the property of the person showing it. Signage to enforce this to be on hoardings, stated in contracts with sub-contractors and discussed at pre tender meetings. CSCS Visitor cards have been withdrawn since 2020 but for those still in operation they will be expected to be shown by regular visitors.

Tool Box Talks

To be used when giving information in relation to a single health and safety aspect. These can be short videos / PowerPoint / practical demonstration. They must be time tabled and staff allowed to attend. Staff required to attend should be notified via email, notices put up on the communications board and 48 hours verbal notice given to ensure all work can be planned and managed to allow full attendance.

Site Deliveries

Ensure all entrances and exits are clearly marked and signage visible. Separate entrance and exit gateways to be in place for vehicles and pedestrians

The entrance away from existing road junctions with signage clearly visible from the road.

Please see figure 1 vehicle access highlighting suggested entrance and exit points.

(Exaggerated in red with arrow showing direction to turning point)

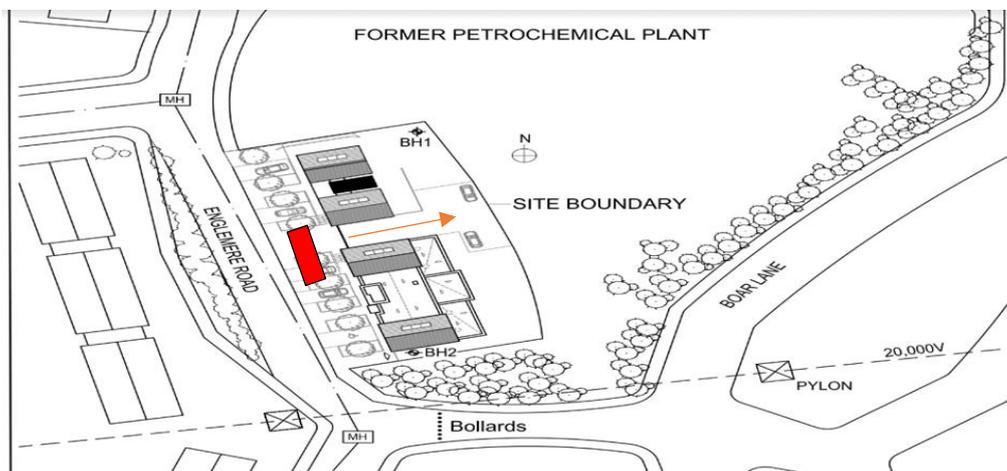


Figure 1 vehicle access

Deliveries to be kept to a minimum and to be on time as much as possible. Deliveries need to be scheduled on a daily basis to ensure planning of arrival and offloading to prevent congestion on the roadside. Deliveries to be made between the hours of 9.30 and 3pm to reduce impact on the road system, pedestrians and school runs.

On site traffic

Ensure contractor parking is segregated from office staff and visitors and is clearly signed.

Materials storage is to be located in a convenient and accessible place but away from parking areas.

Turning circle for delivery vehicles and plant.

Speed limits of 10mph to be displayed and enforced on site.

A lifting plan to be created and crane sighted so the boom reach is away from pylons.

Competent staff and banksmen to operate machinery holding appropriate licences which are to be seen and agreed prior to and on entry to site. Subcontractors to send this information prior to commencing on site.

To prevent any illegal access onto the site via the entrance, it would be pertinent to have a gate person checking ID and if possible, fingerprint scanners to prevent ID being forged or swapped which can cause serious accidents when there are hard of hearing people or non-English speakers accessing illegally.

Trespass

Site security, barrier fencing and hoarding to be erected around the site to prevent unauthorised entry. Gate person/security officer to be housed at gate to check ID, delivery notes etc. and prevent any unauthorised access.

Hoarding to have public viewing panels as well as showing 3D imagery of the proposed project. Hoarding could also advertise local community events free of charge.

Safety signs showing minimum requirements of PPE, speed limits, hazard signage must be at the entrance as well as all fencing or hoardings across the site in order to help prevent trespass.

Signage

Signage showing all PPE to be worn on site to be displayed on fencing/ hoarding, around site and in staff/ visitor areas. DANGER KEEPOUT signs to be displayed on security fencing and or hoarding.

Noise

Mufflers on plant and equipment such as piling rigs to be used as well as relevant PPE

Excavations

The sides, supports or battering are safe for anyone entering at the start of every shift. Edge protection using toe boards and guard rails should be erected to prevent people and objects from falling in.

Spoil heaps are to be more than the depth of trench away from the edge to maintain the 45 degree rule. This information contained in the RAMS which should be read and signed by operatives to show understanding of methods and reasons for working in that way.

To prevent the inflow of ground water as indicated in the borehole log, the excavation should be designed to minimise entry by workers. Sump pumps should be used to maintain water levels to an acceptable amount. Ground freezing may be thought about as a means of stabilising the ground.

Dust

To prevent dust getting into the atmosphere assess if there are different ways of working that can reduce or stopping dust by using different materials or tools. Below is a snapshot of the HSE chart from (Dust 2022)

Health and Safety
Executive

Table 1 Controls for common high-risk tasks

Task	Eliminate or limit the dust by:	Control the dust by using:
Cutting concrete kerbs, blocks and paving with a cut-off saw	<ul style="list-style-type: none"> ■ Limiting the number of cuts during design/layout ■ Using lower energy equipment like block splitters ■ Getting material cut off site and delivered 	<ul style="list-style-type: none"> ■ Water suppression and ■ RPE* with an APF of 20
Chasing concrete and raking mortar	<ul style="list-style-type: none"> ■ Limiting the need for chasing at the design/layout stage ■ Using a work method that limits/does not need chasing, like over-covering cables 	<ul style="list-style-type: none"> ■ On-tool extraction using an H or M Class extraction unit and ■ RPE* with an APF of 20 – consider powered RPE for longer duration work
Cutting roofing tiles with a cut-off saw	<ul style="list-style-type: none"> ■ Hand cutting natural/fibre cement slates and other tiles where possible ■ Using ½ and 1½ tiles ■ Correct setting out/design ■ Minimising valleys/using dry valleys 	<ul style="list-style-type: none"> ■ Water suppression and ■ A dedicated cutting area with scaffold board protection and ■ RPE* with an APF of 20
Scabbling or grinding with hand-held tools	<ul style="list-style-type: none"> ■ Specifying architectural finishes that do not need scabbling ■ Using (ultra) high-pressure water jetting ■ Using chemical retarders and pressure washing ■ Casting in proprietary joint formers, eg mesh formwork 	<ul style="list-style-type: none"> ■ Where possible use on-tool extraction using an H or M Class extraction unit and ■ RPE* with an APF of 20
Occasional short-duration drilling with hand-held rotary power tools	<ul style="list-style-type: none"> ■ Limiting the number of holes during design/planning ■ Using direct fastening or screws 	<ul style="list-style-type: none"> ■ Where possible use equipment that stops dust getting into the air. The larger the holes the better this needs to be. Options range from: <ul style="list-style-type: none"> – drilling through a dust 'collector' or using cordless extraction attached to the drill (for smaller drill bits) or – on-tool extraction using an H or M Class extraction unit ■ Otherwise use RPE* with an APF of 20
Drilling holes with hand-held rotary power tools as a 'main activity'	<ul style="list-style-type: none"> ■ Limiting the number of holes during design/planning ■ Using direct fastening or screws 	<ul style="list-style-type: none"> ■ Where possible on-tool extraction using an H or M Class extraction unit and ■ RPE* with an APF of 20

Ground Contamination

Monitoring should take place and if possible be carried out 12 months prior to starting on site by employing the services of competent company.

Pylons

Whilst carrying out lifting operations, a lifting plan will be written, read and understood by all operatives involved in this task. Risk assessment to be carried to assess risks. A

competent person will need to advise on the best way to proceed as the pylons cannot be turned off. Signage to be in place.



(Work near electricity - Electrical safety at work, 2022)

Conclusion

The health and safety plan created by the principal contractor should ensure a safe working environment.

This will ensure all health and safety issues are identified and recorded using the process of risk assessment. To ensure safe working practices, "RISK ASSESSMENTS and METHOD STATEMENTS (RAMS) will be written and shared with all staff carrying out those duties. Induction covers all health and safety issues related to Englemere as well as tool box talks, weekly bulletins and communication via email and notice board for any new issues that arise.

Having sufficient health and safety signage visible allows for safe working practices and less accidents on site.

Word count 1397

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