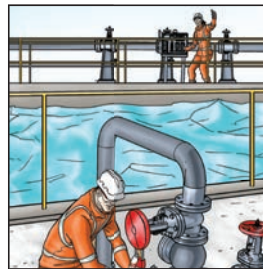




HSI 43

- Thames Water Visual Standards



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1. Introduction and Triple Zero

Welcome to our health, safety, wellbeing and environment standards handbook. This is a condensed version of the requirements in our Health & Safety Management System (HSMS) and Environmental Management System (EMS).

Excellent SHEW performance is a shared responsibility, and our aim is to create a safe site and a safe environment where everyone is happy to speak up about safety. We genuinely want everyone to keep each other safe and healthy, even improve our health, and not harm anyone or the environment around us.

All personnel are expected to follow our standards on every Thames Water site. This includes our supply chain partners, who must show that they have appropriate health, safety, wellbeing and environmental (HSWE) management systems in place and monitor and control their duties and tasks to be in line with our standards.

Our HSWE requirements do not take the place of legislation, Approved Codes of Practice (ACOP) or Health and Safety Executive (HSE) guidance, or any other authorising bodies, but must instead be followed alongside them.

If there is any doubt or concern about the information provided, please consult the site manager for your project.

A selection of Thames Waters Essential Standards have been referenced to throughout this document. Please find the full list of Essential Standards and other useful information available on the Health and Safety Hub, which may also be relevant to your working environments/activities.

The Thames Water Health and Safety Hub shares learning across a wide variety of topics:

<http://www.healthandsafetyhub.co.uk/>



 **Zero incidents**
Zero harm
Zero compromise
Keeping you **healthy** and **safe**, every day **at work**.

2. Lifesaving Commitments

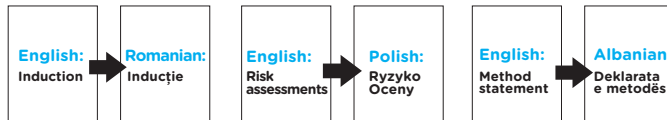


3. Language

Workers whose first language is not English must be able to demonstrate they have a basic understanding of both written and spoken English.

If a worker cannot demonstrate this basic understanding, their employer must:

- Translate the induction, risk assessment, method statement and briefings for them.



- Assign an English-speaking worker who can translate and communicate to a group of workers (maximum of four in a group).



4. Supervision

Supply Chain Partners must:

- Provide supervision for their own operatives.
- The ratio of supervision to operatives will be based on a risk assessment of the specific works being undertaken.



5. Health and Wellbeing

Thames Water takes a zero compromise approach to health and wellbeing. People should not be negatively impacted by the health risks of the work they perform and their health and wellbeing should be positively impacted by personal medical assessments and campaigns.



5.1 Health surveillance

A routine of ongoing health assessments is required by legislation for those exposed to specific health risks at work, such as dust, noise, vibrating tools or equipment and chemicals.



5.2 Safety critical worker medicals

Workers who suffer from certain illnesses or conditions can compromise their ability to perform safety critical tasks and be a safety risk. Workers in such positions must have regular safety critical worker medicals to ensure they are fit to perform their tasks.



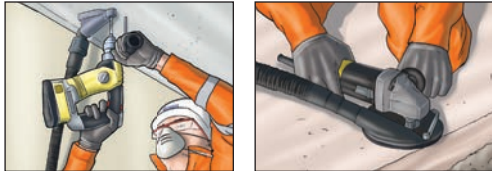
5.3 Personal medical assessments

An individual and confidential assessment that gives an overview of workers' health and lifestyle, as well as practical advice to enhance their general health. E.g. weight check, blood pressure test, lung functioning, etc.



5.4 Dust management

Where it has not been possible to design-out dust creation, on-tool extraction (OTE) or suppression equipment must be used.



5.5 Face-fit testing

Quantitative and qualitative face-fit testing must be provided by the employer and this shall be assessed according to health and safety requirements and risk assessments to ensure legal compliance.

Workers must provide a certificate of fit testing as evidence during induction.

Workers must be clean shaven and carry out daily fit checks and maintenance of respiratory protective equipment.



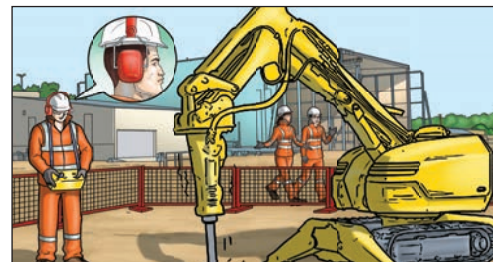
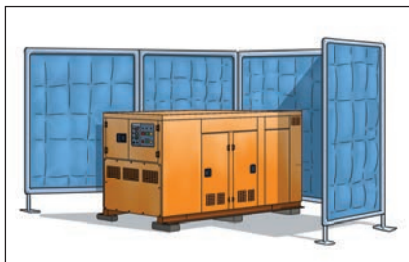
5.6 HAVS

- Plan work to eliminate, or at least reduce, HAVS as much as possible.
- Workers must be trained on how to use equipment properly to reduce unnecessary or avoidable vibration.
- Full health surveillance needs to be in place if 100 points is exceeded.



5.7 Noise

- Plan work to eliminate, or at least reduce, noise as much as possible.
- Operators using noisy machinery or equipment must wear appropriate hearing protection.
- Those who work near noisy machinery or equipment must also wear appropriate hearing protection.



5.8 Drug and alcohol testing

Thames Water can test for drugs and alcohol:



- Before work on site begins.



- Randomly or unannounced.



- After an incident has taken place or if someone is suspected of being unfit for work.
- Those who refuse to take a drug and alcohol test will be removed from site.

6. Controls

6.1 Risk assessment and safe systems of work

All Supply Chain Partners must provide detailed safe systems of work, including:

All documentation must be submitted to Thames Water for review and approval at least 10 working days before any works are due to start. Delays will be at the Supply Chain Partner's cost.

Supply Chain Partners must also provide evidence that all of their workers on site have been properly briefed, and keep records of attendance for review and audit purposes.



6.2 Task briefings

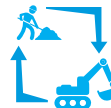


All supervisors must provide regular briefings to their teams:

- At the beginning of every shift
 - Start of Shift briefings
- For new activities covered by risk assessment method statements (RAMS)



- If there's a change in the work process or environment
- Supervisors performing the briefings must:



- record it
- provide records on request

6.3 Emergency arrangements

6.3.1 Fire prevention

All projects must be set up so as to minimise the risk of fire in the first instance i.e. a fire risk assessment must be undertaken and suitable controls introduced. An emergency plan must also be in place, in the unlikely event of a fire arising, based on the understanding that the emergency services should not be relied upon.

All site personnel must cooperate/comply with:

- Emergency Coordinator
- Fire Warden/Marshal
- Hot Works Responsible Person

General requirements:

- The project management team must use the method statement review process to approve the storage of gas and flammable liquids inside, under and on buildings.



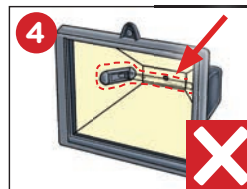
- A hot works permit must be in place and followed.



- All flexible temporary protective coverings used on internal finished surfaces or fittings must conform to the Loss Prevention Standard LPS 1207 and LPS 1215.

Don't:

1. Burn any materials on any project, office, depot or factory.
2. Store fuel in plastic containers.
3. Use jubilee clips for connecting gas supply hoses.
4. Use halogen lamps.
5. Smoke, unless in designated smoking areas.

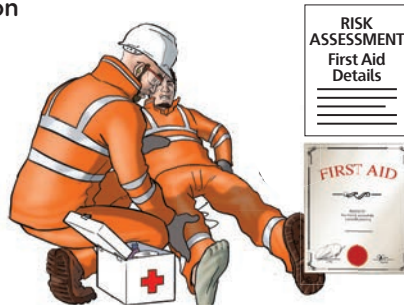


6.3.2 First aid provision

Supply Chain Partners must provide their workforce with first aiders and supplies based on their task's or project's risk assessment.

All first aiders must hold full First Aid at Work competency.

Mental health first aiders should also be available.



6.3.3 Rescue plans

Supply Chain Partners must provide:

- Suitable rescue plans when their workers will be working in locations where emergency rescue may be necessary, for example confined spaces or working at height.
- Equipment that is regularly inspected and maintained to implement the rescue plan.
- A schedule for rescue drills.



6.4 Permits to work

Permits to Work should only be operated and received by persons assessed as competent.

A Permit to Work guarantees that as long as the controls identified upon it remain in place, then the persons working under it will remain safe.

A Permit to Work should identify:

- The permitted work activity and location.
- Date and time.
- Control measures such as isolations, barriers and signage.
- Reference other safety documents such as RAMS, TWOSA and TOCOP.
- Have signatures for ISSUE, RECEIPT, CLEARANCE and CANCELLATION.



7. Working at Height

Follow the hierarchy of control and avoid working at height if possible. Ask yourself: can the task be done from ground level? If you have to work at height, carry out a Risk Assessment and Method Statement, make sure you know the control measures, and have an emergency rescue plan in place – don't rely on the emergency services.

Select the safest method of access to complete the work – scaffold/alloy tower/podium/ladder – and only use ladders/stepladders for short duration and low-risk work.

Most effective



Least effective

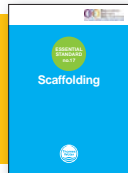
7.1 Scaffolding

- Scaffold contractors must employ a full-time supervisor who must possess a valid Construction Industry Scaffolders Record Scheme (CISRS) supervisor's card as a minimum.
- All scaffolds must have a design.
- Don't alter handed-over scaffolds.
- Don't access scaffolds if unauthorised.
- Check the date on the scaffold's tag.



Before first use or after alterations:

- An inspection must be done by someone who has completed the Basic or Advanced Inspection training course run by CISRS.
- If you've only completed the Basic Inspection course, then you can only hand over a basic scaffold.
- If you've completed the Advanced Inspection course, then you can hand over basic and advanced scaffolds.
- Scaffolds must be appropriately tagged.
- Findings must be recorded and given to Thames Water.
- A handover certificate must be issued to Thames Water.



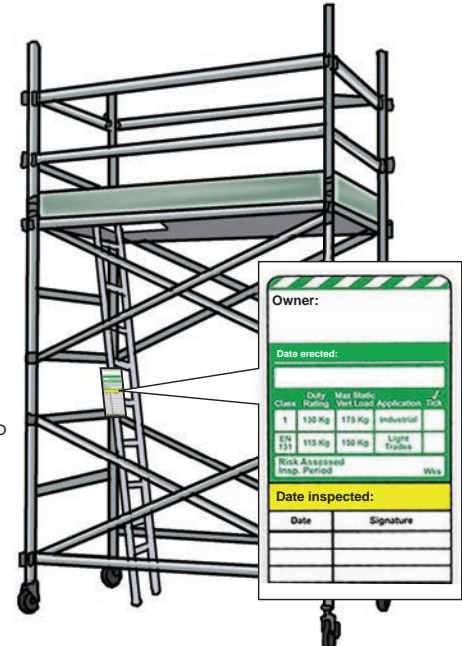
For further details please refer to Thames Water Essential Standard 17 - Scaffolding at: http://docs.healthandsafetyhub.co.uk/Thames_Water/Essential-Standards/Essential-Standard-17-Scaffolding.pdf

7.2 Mobile scaffold towers

All mobile scaffold towers must be controlled using a tagging system that shows:

- Who the tower belongs to
- Who erected it
- The date of the last inspection

A PASMA-trained operative must erect and inspect mobile scaffold towers according to the manufacturer's instructions.



7.3 Mobile elevating work platforms

When working with a mobile elevated work platform (MEWP) ensure:

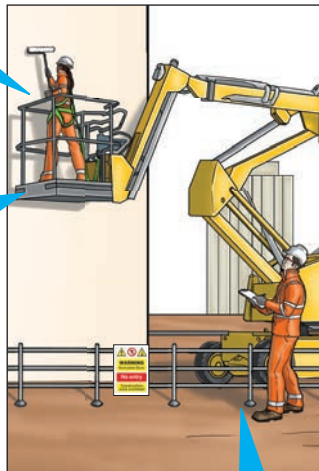
- A competent person who's completed the MEWP manager's course has planned the work.
- A suitable rescue plan and drill schedule is in place.
- A specific risk assessment is in place.
- The users wear a fall restraint harness hooked up to an approved anchor point.



- There are designated, authorised and clearly identifiable users.



- The correct MEWP is used for the task.
- MEWPs are checked by Thames Water before use and through daily and weekly inspections.
- MEWPs have valid certification and are removed from use if defects are identified.

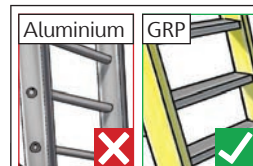


- No one works alone - there is a safety watch at all times.

7.4 Ladders and stepladders

The following requirements must be met when using ladders:

- Only use ladders made of non-conductive materials (i.e. not aluminium ladders) when working in live electrical facilities, such as live switch rooms.
- A competent scaffolder must install and tie-off ladders if they are needed to provide access to scaffolding or under any erection phase.
- All ladders must have a unique number (or other mark) and the contractor's name on them.
- A competent person must inspect ladders before use and once a week thereafter (keep records of this).



Only use ladders if scaffolding, mobile towers, podiums or MEWPs are impractical.



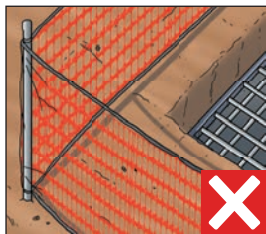
7.5 Open edges and openings

To help prevent slips, trips and falls:

- Permanent works should be installed as soon as possible.
- Temporary coverings must be designed and approved following Temporary Works procedures.
- If construction is steel framed, install edge protection on beams before they are lifted into place and secured.



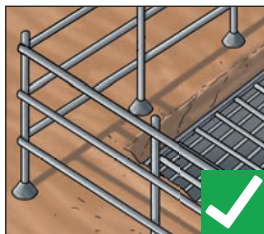
- Clearly mark openings with permanent markings.



- Netlon-type fencing and barrier tape are not allowed to be used as edge protection or as barriers for restricted areas.

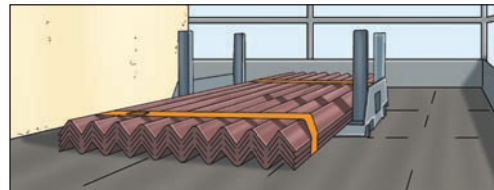


- Staircases must have a handrail system in place.



7.6 Falling materials and tool tethering

Store all items used at height in a suitable manner to prevent them from falling.

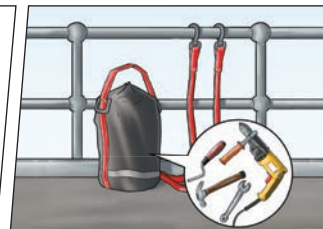


If items can't be secured during use, create storage exclusion zones that are:

- Demarcated.
- Labelled.
- Maintained until the risk is removed.
- Suitable to contain any falling item based on an assessment (e.g. height and potential deflection).



Attach tools to tethers and suitable anchorage points if there is a risk of them falling from height.



8. Temporary Works

All operatives must follow their own defined processes in relation to management of temporary works, allied to the Thames Water umbrella work instruction.

All projects should have a Temporary Works Coordinator (TWC) appointed to ensure that all design and construction work is carried out to the agreed temporary works procedures.

For further details please refer to Thames Water Essential Standard 20 – Management of Temporary Works at:

http://docs.healthandsafetyhub.co.uk/Thames_Water/Essential-Standards/Essential-Standard-20-Management-of-temporary-works.pdf



Excavations:

Thames Water does not operate a 1.2m deep rule for excavations. All excavations must be risk assessed to determine whether temporary works controls are required to support them.



Shoring

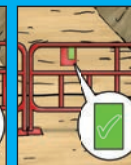


Battering



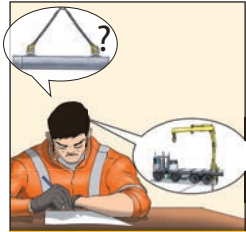
Stepping

Excavations must be regularly inspected – we recommend using a 'Scafftag'-like system to record and communicate the status of an excavation to the workforce.



9. Lifting Operations

9.1 General requirements

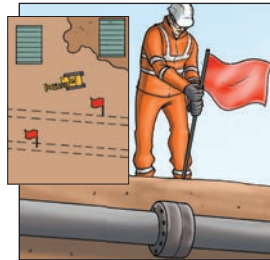


- All lifting operations must be planned and undertaken by approved, trained and experienced people.

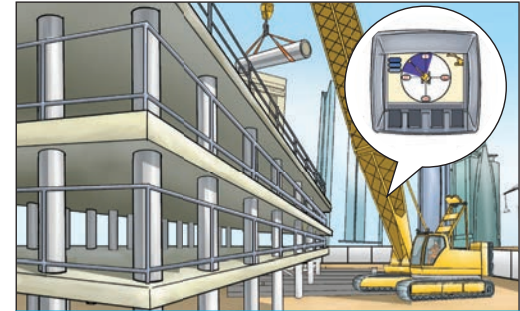
A temporary works co-ordinator, in consultation with the appointed person, must:



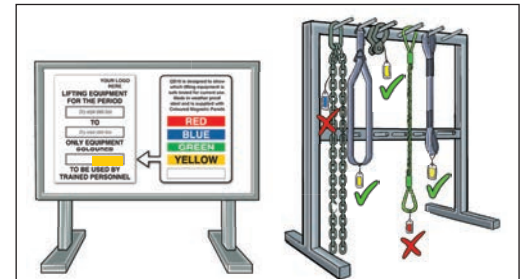
- Ensure an engineering assessment of the ground bearing capacity is done.



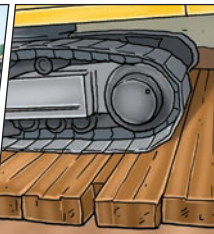
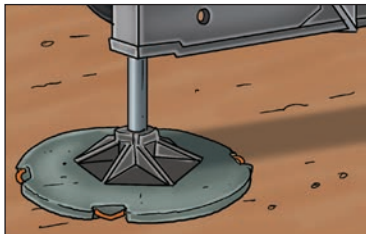
- Consider ground conditions, underground services and the position of any sub-structures.



When a crane or part of the load being lifted can enter prohibited space, such as over a public or Thames Water area, a site boundary or near to overhead lines, the crane must be fitted with zone limiting devices to limit both slewing and derricking.

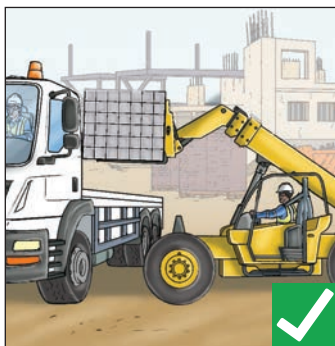
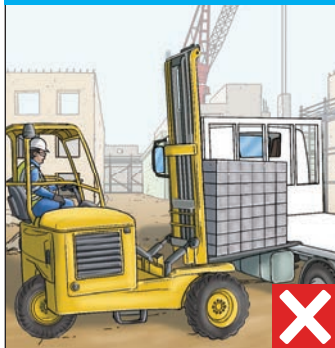


All lifting accessories must be clearly marked (colour coding or tagging system) to identify when they need to be inspected next.



- Ensure there's a design for outrigger pads, haul roads and pavements/piling mats.

Truck-mounted forklifts must not be used for deliveries on construction sites. Deliveries must be restricted to a suitable hard standing segregated compound.



Prohibited:

- Mobile cranes extracting sheet piles.
- Using excavators, telehandlers, lorry loads and lift trucks to lift personnel.

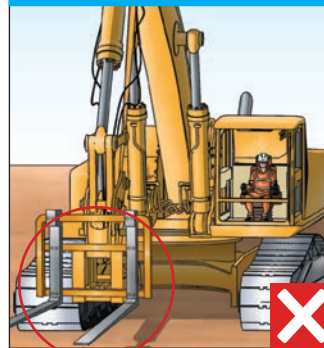


- Slingers/signallers acting as crane operators.

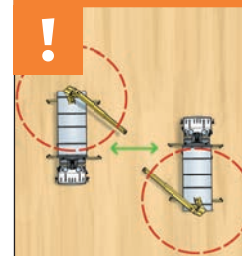
- Under slinging loads under the forks of wheeled mobile plant for transportation.



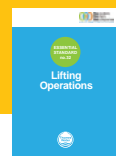
- Using forks fitted to or suspended from 360° excavators or the back of an 180° excavator.



Where there's a risk of a crane coming into contact with another crane, proximity warning and restrictors must be fitted.



For further details please refer to Thames Water Essential Standard 32 - Lifting Operations at:
http://docs.healthandsafetyhub.co.uk/Thames_Water/Essential-Standards/Essential-Standard-32-Lifting-operations.pdf



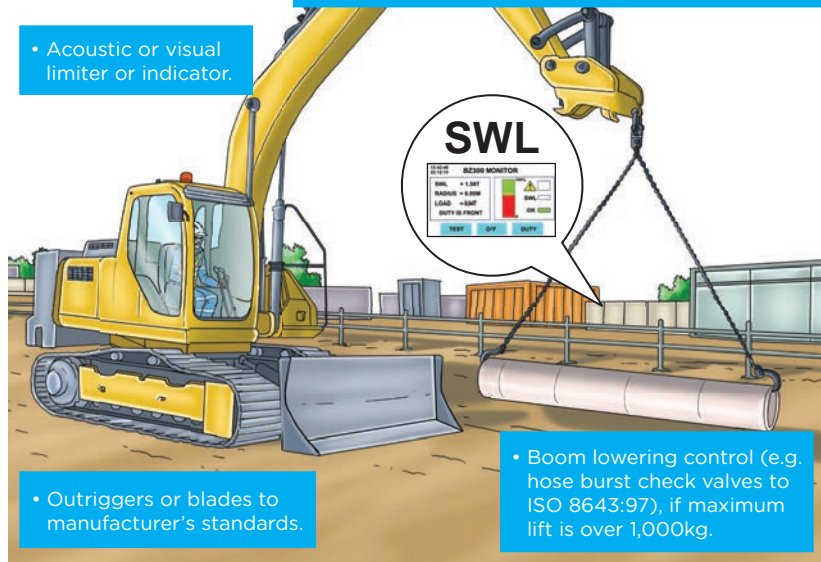
9.2 Lifting with excavators

Consider if an excavator is appropriate for the lifting operation and have an approved lift plan in place.

Excavators used for lifting must comply with the Thames Water Essential Standard 32 and be fitted with:

- Compatible attachments with safe working load (SWL) indicated (and included in weight of the lift).

- Acoustic or visual limiter or indicator.



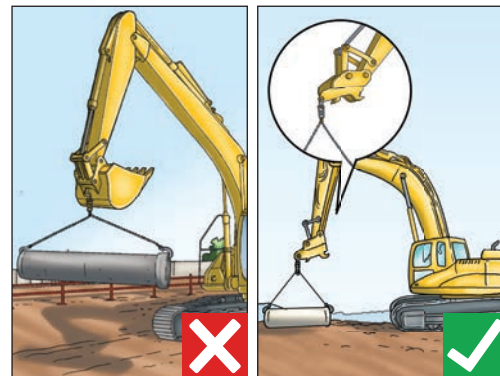
- Outriggers or blades to manufacturer's standards.

- Boom lowering control (e.g. hose burst check valves to ISO 8643:97), if maximum lift is over 1,000kg.

Also refer to the Thames Water HSI22 – Engaging with Contractors and Suppliers document that can be found on the Health and Safety Hub.



Don't rely on rated capacity indicators (RCIs) for working out the weight of a load. Calibrate RCIs at least once a year.

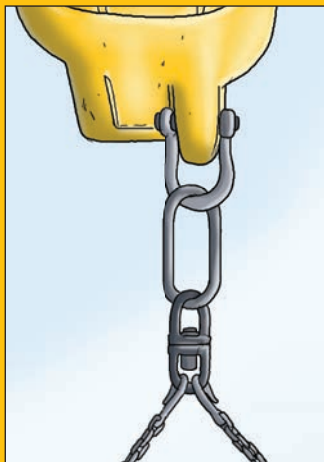


Fit excavators used in lifting operations with a load hooking device. The bucket and other accessories must be removed for lifting operations.

Before lifting:



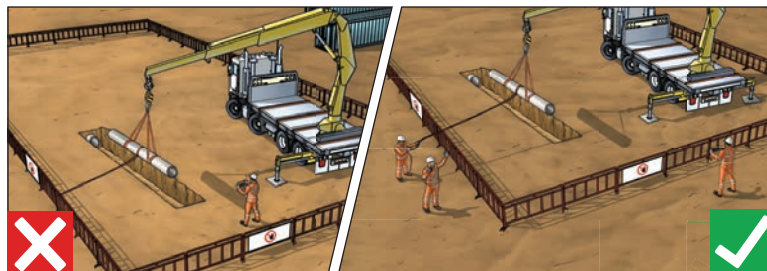
- Remove the excavator's bucket.
- Attach the master link to the designed lifting point - ensure it's free-hanging.



- Use a swivel shackle between the load and lifting point.

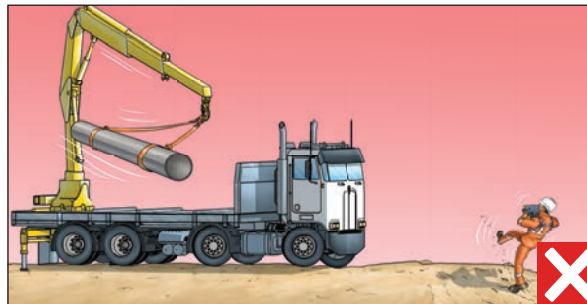
10. Safe Use of Remote Controlled Equipment, including HIABS, Vacuum Excavation and Concrete Pumps

Exclusion zones must be set up and monitored.



No lone working of this equipment should be undertaken.

Operators must ensure others working in the area are familiar with controls to assist in the event of an incident.



Operators must not carry a live remote control unit except when on firm level ground i.e. not climbing.

11. Bio-hazards/Sharps



Wear full PPE when working with bio-hazards or sharps. E.g. put on extra PPE such as disposable overalls, wellies, gloves and face shield when working with sewage.

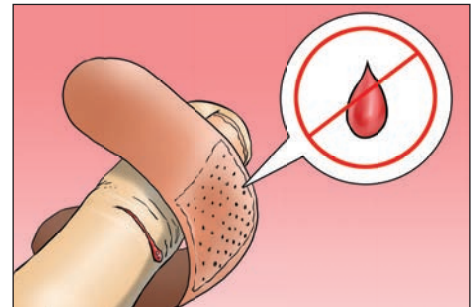


Remove PPE before entering the canteen. Wash your hands before eating and smoking.

Supervisors to brief on hazards and operatives must follow RAMS.

Wear a mask in the vicinity of aeration lanes.

Operators must tell a supervisor if they discover a needle and create a segregated area.

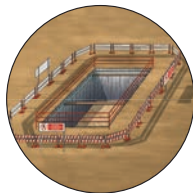
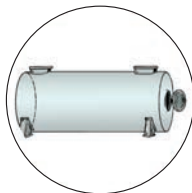


Cover cuts with waterproof plasters.

12. Confined Spaces

Everyone involved in planning, supervising or undertaking confined space work must be appointed, trained and experienced.

- A manager must check isolations are all in place.
- Supervisors to brief workers on the safe system of work and rescue arrangements before working in confined spaces.
- Test emergency arrangements and debrief on their effectiveness.



Examples of equipment to be carried:



• first aid kit



• gas monitor/detector



• resuscitation kit



• breathing apparatus



• safety harness



• escape set
breathing equipment

13. Excavations and Buried Services

Breaking ground must be carried out in a controlled manner to prevent damage to services and to protect the workforce and third parties.

- All works must be carried out in accordance with HSG47.
- Design works to avoid breaking ground and plan to avoid any utility strike, and have a responsible, authorised person in charge of all undertakings where we break ground.
- Suitable and sufficient access and egress is to be installed for all excavations.
- All ladders used within excavations should be non-conductive.
- The following mandatory steps must be taken for any known live electricity service encased in concrete prior to breaking ground or on the discovery of a cable encased in concrete:
 - Ensure the necessary plans, service drawings, tools, equipment and materials are available on site to carry out the work safely.
 - Always ensure the correct method is used at all times to minimise the risk of service strikes.
 - In line with HSG47 there is a legal requirement to isolate known live services prior to breaking ground.



- stop work



- discuss with your line manager



- investigate and look at service and utility drawing records



- contact the Asset Owner (electricity provider) to request isolation



- retain a record of the request

- Anyone undertaking excavation work must be trained, competent and understand the risks and control measures.

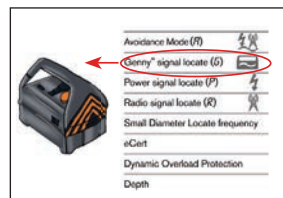




- Supply Chain Partners must train all responsible persons who locate underground services so they are competent.



- Supply Chain Partners who perform drilling operations through structures, e.g. core drilling, must provide the responsible person with a hand-held cable detector and manufacturer training on how to use it.



- Agree on the type of equipment to use, but ensure it provides a depth reading in genny mode and record of usage, and live data transfer (e.g. GCAT or similar).



- The use and upkeep of site safety information boards are essential to communicate safety information as conditions and personnel change.

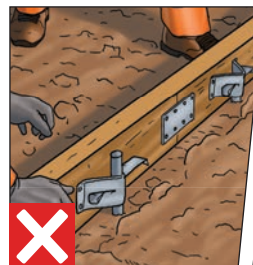
When breaking ground:



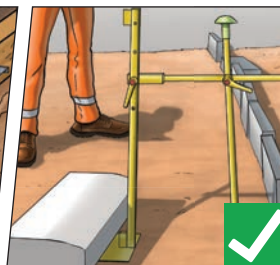
- Use non-contact methods for excavating where possible, e.g. vacuum excavation or air lance for excavating.



- Use electrically-insulated digging tools when digging by hand and wear the mandatory PPE appropriate for the task at all times.



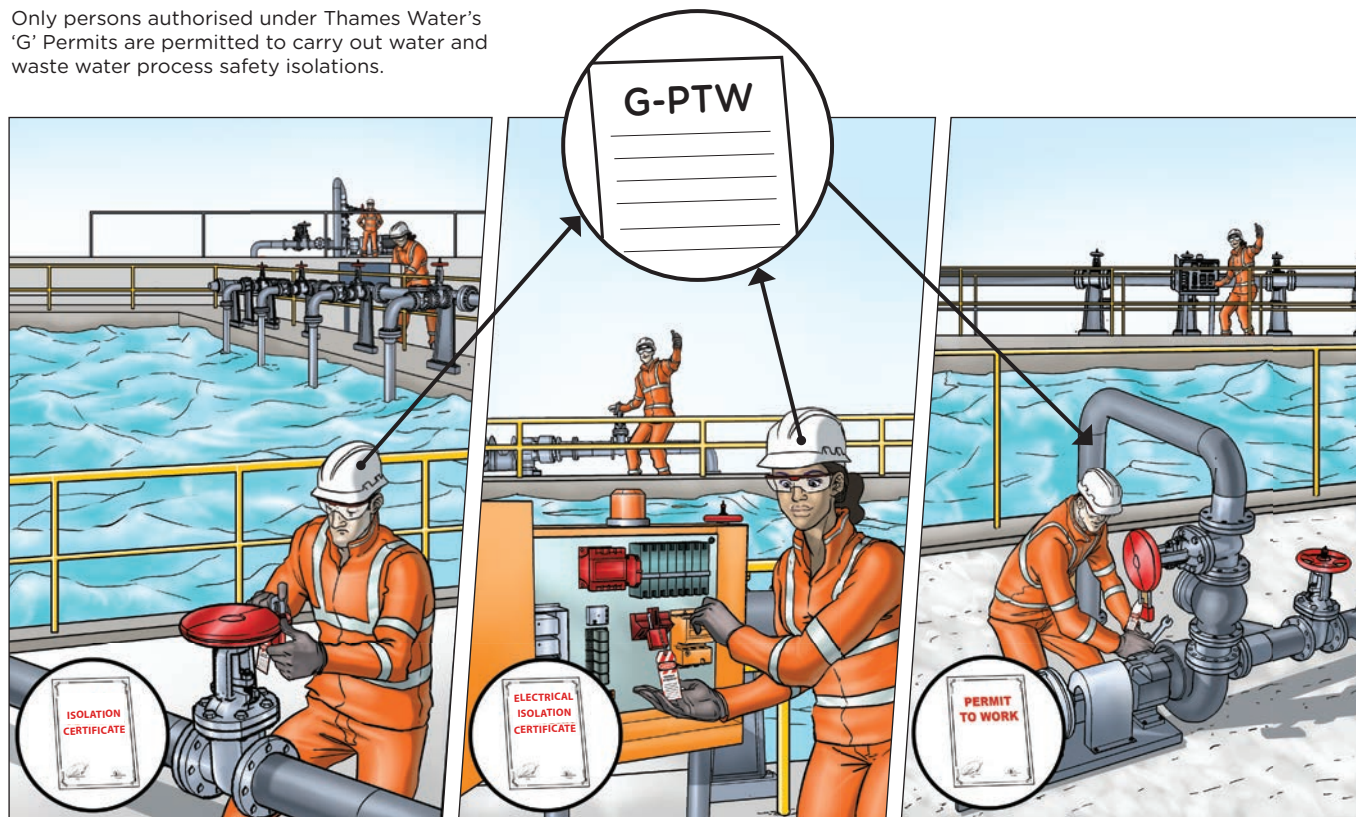
- Avoid using road pins where possible, and use alternatives like 'Pinsafe'. If this is not possible, use non-conductive road pins (fibreglass).



Always ensure excavations are adequately protected from collapse and that the edges are protected to prevent persons from falling in.
See **section 8 - temporary works** for guidance on design and shoring of excavations.

14. 'G' or General Permits to Work

Only persons authorised under Thames Water's 'G' Permits are permitted to carry out water and waste water process safety isolations.

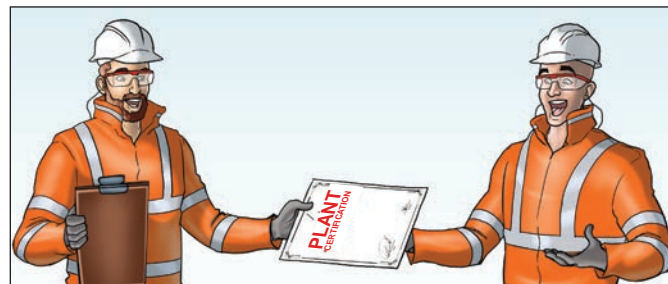


15. Plant and Equipment

Supervisors should not operate plant and equipment.

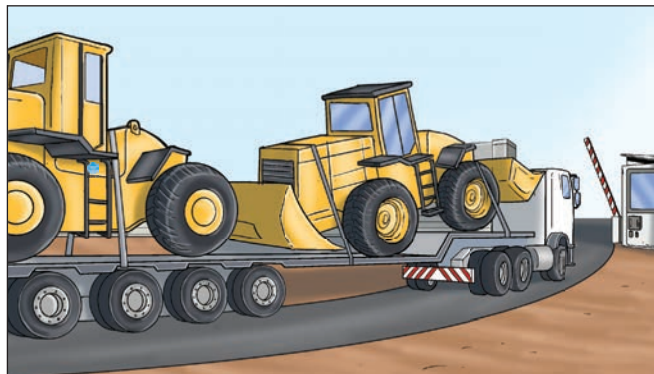
Operators must:

- Hold a current skill card for the plant or equipment they are operating, recognised by the latest Build UK accepted record scheme.
- Get additional training if operating ancillary equipment, such as quick hitches or grabs.

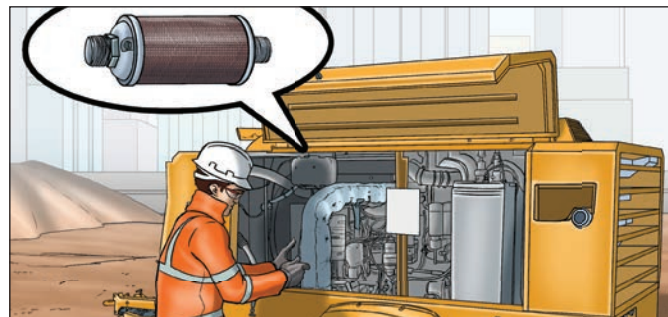


- All relevant copies of certification and documentation must be available on site if requested by Thames Water.

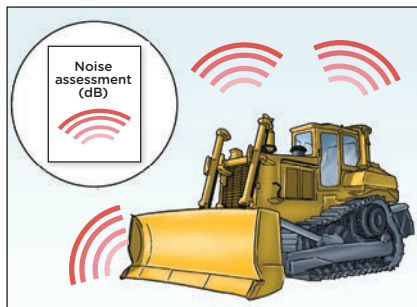
Plant and equipment requirements:



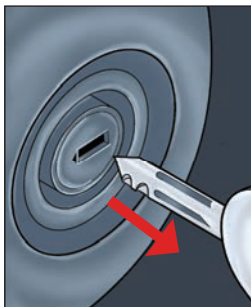
- Make all plant available for a reception check by Thames Water before use.



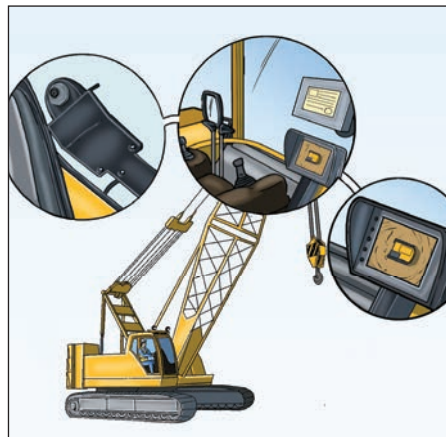
- Fit all compressors, percussion tools, plant and vehicles with effective silencers recommended by manufacturers.
- Maintain all plant and equipment in good working order. Pay special attention to silencers and acoustic panels.



- Provide plant sound power levels in decibels (dB). All plant must comply with permissible noise levels as per the European Directives and any local restrictions.



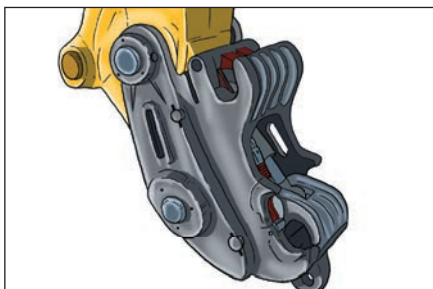
- When not in use, shut down or reduce plant to idling speed.



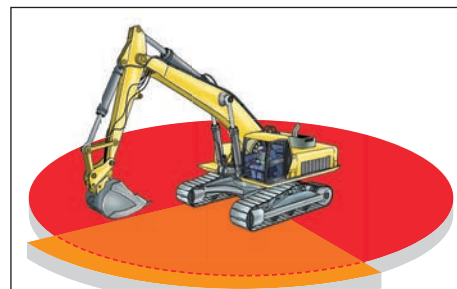
- All items of plant with blind spots (within the scope of the Thames Water standard), must be fitted with a proximity warning system that meets the requirements for all-round 360 degree visibility.



- All equipment and plant must comply with air emission guidelines, for example, London Low Emission Zone.



- Use 'new generation' quick hitches that have a fully automatic double-locking device that locks both pins of the bucket.



- Implement and maintain exclusion zones when using excavators and other mobile plant.

Note: Supply Chain Partners must ensure horizontal directional drilling rigs have safety guards that comply with HSE requirements to prevent entanglement.

- One-tonne dumpers must not be used due to risk of overturning.

Forward-tipping dumpers above six tonnes must have the following to ensure operators have clear visibility:



- Raised driver seat.



- An angled skip to maintain visibility.



- Low head board to prevent overloading the skip.



16. Protecting All Road Users

All parties who bring vehicles on site must comply with the following:

- Sign-up to the CLOCS 'Memorandum of Understanding'.
- As a minimum, have silver FORS status.
- Work towards gold FORS status.

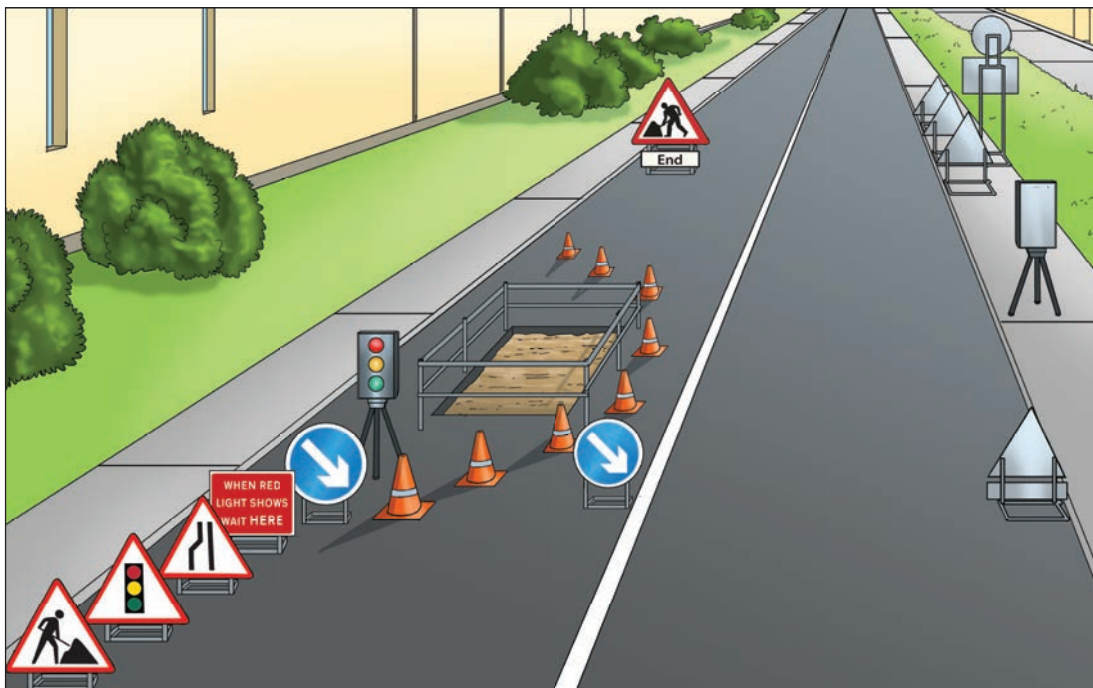


Vehicles must have the correct licence, be roadworthy and operators must perform pre-use checks (e.g. lights, tyre tread, etc.).

17. Traffic Management and Signage, Lighting and Guarding (SLG)

All SLG must be installed as per the site plan and inspected daily to ensure it remains compliant. Particular consideration should be paid to vulnerable members of the public, as they are at greater risk.

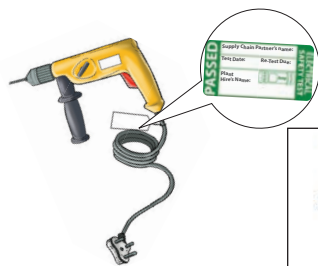
All Traffic Management must be installed to the approved traffic management plan by an approved contractor. It must be inspected visually every day before and after work with a documented weekly inspection, undertaken by a competent person.



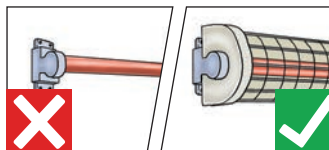
18. Electrical Safety

All electrical portable appliances must be:

- Portable Appliance Tested (PAT).
- Recorded on a register.
- Labelled with:
 - Supply Chain Partner's name
 - plant hire's name
 - next test due date



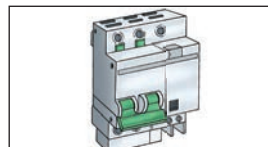
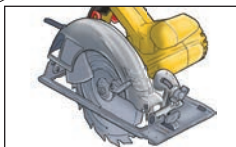
Multiway plug and socket adaptors must be fused and surge protected.



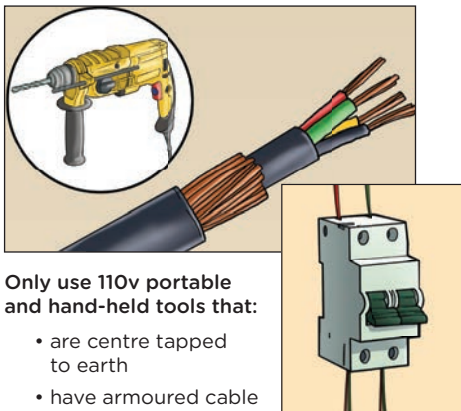
Radiant space heaters, tubular heaters without wire cages and heaters without thermal overloads are not allowed on site.



Only use 240v chargers if they are approved by a project lead and in designated and agreed locations.

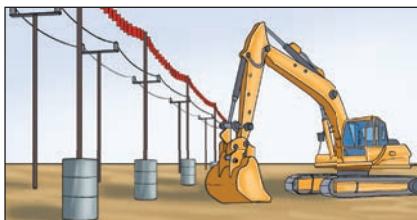


Type of equipment	110v	230v	Fixed RCD's	Equipment in site offices
User checks	Weekly, recorded	Daily/every shift	Daily/every shift	Monthly
Formal visual inspection	Monthly	Weekly	Weekly	Monthly
Combined inspection and test	Before first use, then every 3 months	Before first use, then once a month	Before first use, then every 3 months (portable RCD's, once a month)	Before first use, then yearly



Only use 110v portable and hand-held tools that:

- are centre tapped to earth
- have armoured cable
- have RCD's fitted



Before starting work near overhead power cables:

- The Thames Water project lead must give approval
- Take all precautions and protection, as per HSE guidance and standards

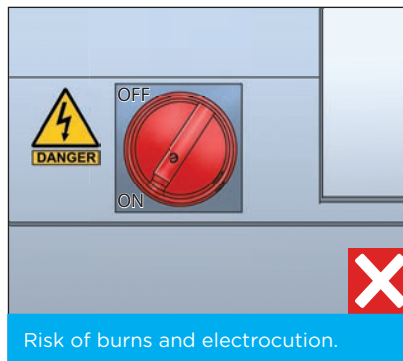
Working on electrical systems

Only persons authorised under Thames Water's PU1735 Electrical Rules are permitted to carry out electrical safety isolations.

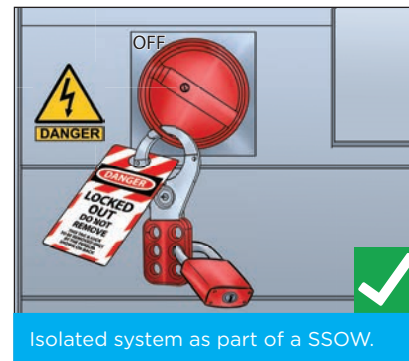
The most common electrical safety document is the Permit to Work when we need to work safely on isolated plant, and Sanctions to Test when we need to safely carry out testing of electrical equipment.

Electrical isolations may be required:

- To enable electrical works to be carried out on equipment that could become live.
- As part of a broader safe system of work in conjunction with process isolations.
- To make safe a piece of mechanical equipment for maintenance, such as a rotating scraper bridge or overhead crane.
- To disable a piece of process plant that has been taken out of service for process reasons.



Risk of burns and electrocution.



Isolated system as part of a SSOW.

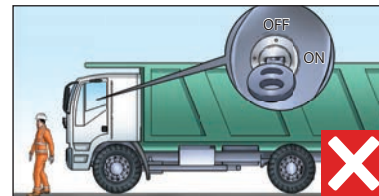
19. Noise, Dust and Vibration – including nuisance

Supply Chain Partners must plan and manage work to minimise noise, vibration and dust caused by their activities.

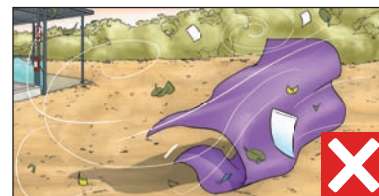
- Ensure noisy activities take place during the agreed-to working hours.
- Site team to fully understand and implement agreements with residents and local authorities i.e. section 61.
- Install hoarding or screens as noise barriers if necessary.
- Choose super silent equipment wherever possible.
- Keep vibration exposure under 100 points (HSE exposure scale).
- Ensure vehicles and equipment are regularly serviced to reduce noise and vibrations.
- Plan and control site deliveries to minimise queuing.
- Install dust screens and use dust suppression systems where dust is unavoidable.
- Use plastic sheets to cover spoil heaps.
- Direct lighting away from shining into house windows, drivers' views, etc.
- Switch off lighting when not in use or at the end of a shift.



Don't:



- Leave plant or equipment running when not in use.



- Allow waste to blow around.

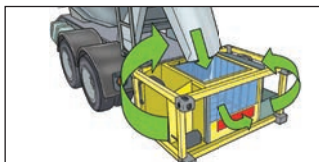


- Burn anything on site.

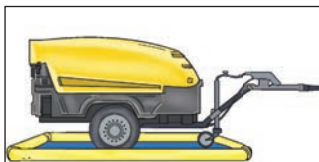
20. Water Management and Pollution Prevention

Before discharging or dispelling water (e.g. to drains, watercourses or even some land areas), ensure you have the relevant permit that's required. For example, an Environmental Permit, permission from landowners or Trade Effluent Consent.

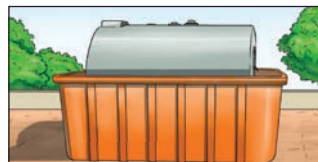
To help prevent and contain pollution:



- Follow regulatory guidelines to prevent pollution when washing out concrete wagons, e.g. use a proprietary concrete wash water treatment system.



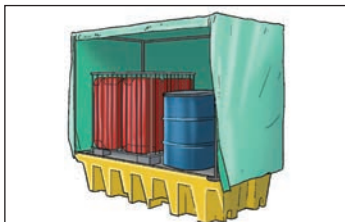
- Ensure mobile fuel bowers and compressors have the correct size drip tray (e.g. Plant Nappies) underneath them at all times.



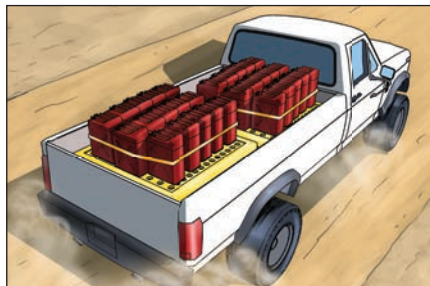
- Place static fuel tanks on an interceptor drip tray, even if they're double-skinned or banded.



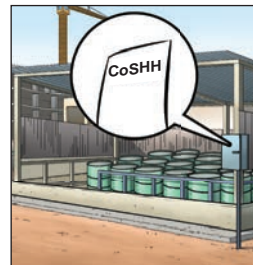
- The appropriate type and quantity of spill kits must be available.



- Bund fuel drums or CoSHH substances to 110% capacity of the largest container, or 25% of all containers – whichever is greatest.



- Jerry cans must be stored upright, banded, and protected from impact.



- Display CoSHH Assessments next to bunds.

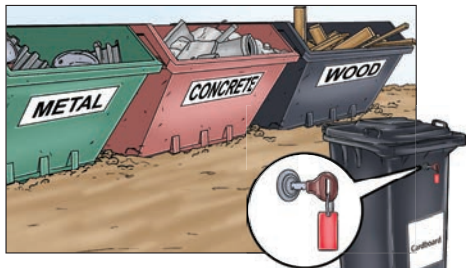


- Store smaller CoSHH items (mastics or aerosols) in site safes with the relevant CoSHH Assessment.

21. Waste

Thames Water has a commitment to delivering zero waste to landfills and a long-term objective to generate zero waste from its projects.

To reduce or eliminate waste, ensure the following are in place:



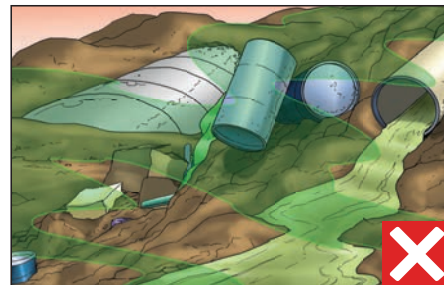
- A waste minimisation and management plan.
- A waste classification undertaken in accordance with the regulatory guidelines.
- Waste carriers registration, as issued by the Environment Agency.
- Environmental permits for all facilities where waste is transported to, e.g. waste transfer or consignment note.
- Authorised people to sign WTNs.

• Minimise. • Reuse. • Segregate.

22. Land Contamination

Land contamination can be identified by:

- Discoloured soil
- Fibrous soil structure e.g. asbestos
- Foreign objects e.g. oil containers, drums, chemicals, etc.
- Unusual odours
- Underground storage tanks
- Waste pits
- Old drain runs



If contaminated land is found:

- Stop work immediately.
- Never move contaminated materials unless told to do so.
- Report it to your supervisor straight away.
- Contact your Environmental Advisor if you have any doubts.
- A method of managing works must be available and followed.
- Store contaminated material on non-biodegradable plastic liners or in secure containers e.g. skips.



• Contain the area as far as possible.

- Keep contaminated materials at least 10m away from surface drains, waterways, sewers, etc.
- Don't mix contaminated and clean materials together.

23. Ecology

If any sensitive habitats or species have been identified before starting works, specialist working methods could be required and, if so, must be followed.

Notify your Environmental Advisor if the scope, design or conditions of your work changes.

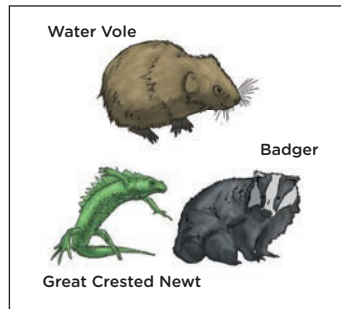
If a sensitive habitat or species is found during works:

- STOP work immediately
- Inform a supervisor
- Get advice from your Environmental Advisor and Project Ecologist
- If these steps are not followed, it could result in prosecution

Avoid clearing vegetation between March and August, which is bird nesting season, or contact the Project Ecologist.

Put up exclusion zones around habitats.

Protected species:



Don't:

- capture, injure or kill wild animals
- take, damage, destroy or disturb protected species' habitats
- take or destroy wild bird eggs

23.1 Invasive Species

Efforts must be made to prevent invasive plants from spreading. If you discover an invasive species:

- STOP work immediately
- Contain the area using a fence or by washing equipment and vehicles
- Report the discovery to a supervisor

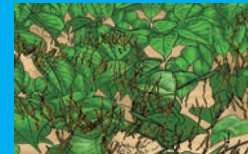


Himalayan Balsam

Stem: dark purple/maroon
Leaves: spear shaped with serrated edges. Dark green and appear in groups of three
Flower: purple/pink (bloom in June-October)



Giant Hogweed



Japanese Knotweed

Stem: hollow and similar to bamboo or purple/red when juvenile
Leaves: spear shaped and pink/red. In summer, leaves are mid-green with dark veins and are large, oval/heart shaped

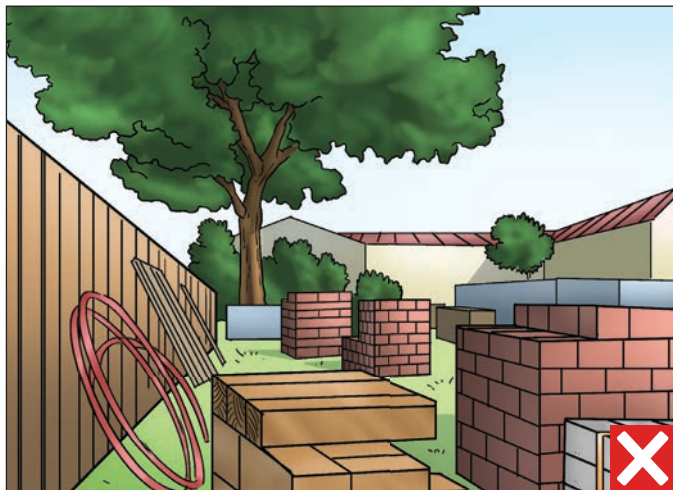
Stem: large and green
Leaves: dark green, large and jagged
Flower: umbrella shaped and cream/white coloured (bloom in June)

23.2 Working near trees and hedgerows

Damaging branches, trunks, roots or even changing the surrounding soil's characteristics can have a negative effect on trees or hedgerows.

Some trees are protected by Tree Protection Orders (TPO), which prevent them from being removed, topped or lopped. Authorisation must be given to work near these trees.

You are legally required to notify the council before removing part or all of a hedgerow, which could take up to 6 weeks before an outcome is reached.



- Never park vehicles or plant or store materials within the precautionary area.

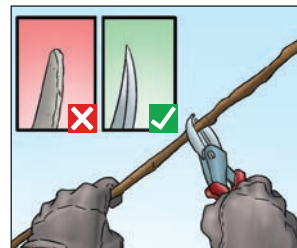
- Restrict plant movement near the precautionary area.
- Carefully compact backfill around retained roots.
- Use an inert granular material and topsoil mix to backfill the trench.



- Cover roots with damp sacking during hot weather.

Don't:

- use machinery to excavate in the precautionary area around hedgerows. Use trenchless techniques or hand dig where possible
- cut roots that have a diameter larger than 25mm without agreement with the Council Tree Officer



- Use a sharp tool to make a clean cut when pruning.

24. Energy, Water and Materials

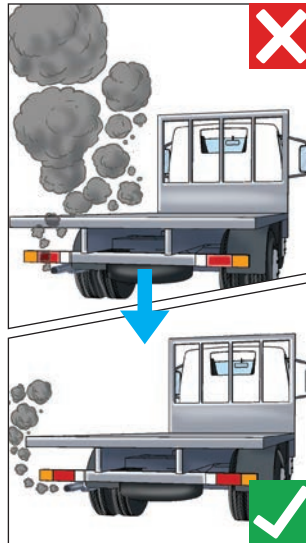
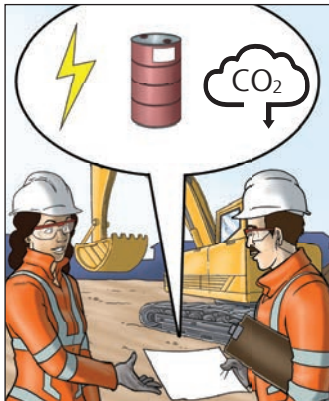


Energy

Thames Water's long-term objective is to minimise energy use and embodied energy contained in its products.

Supply chain partners must therefore:

- Minimise energy use from fossil fuels. E.g. solartainer, solar panels, hybrid engines, green plans, etc.
- Report all energy use (e.g. electricity, site diesel) and embodied energy in materials (for carbon foot printing calculations) to Thames Water on a monthly basis, using the agreed format.
- Include details of how associated emissions and embodied energy during material production have been minimised.



Water

Thames Water's long-term objective is to minimise water use and embodied water contained in its products.

Supply Chain Partners must therefore:

- Report all potable water use and embodied water in materials to Thames Water on a monthly basis, using the agreed format.
- Include details of how associated water use and embodied water have been minimised.





Materials

Thames Water's objective is to only use sustainable materials that are also non-harmful to humans and the environment.

Supply Chain Partners must:



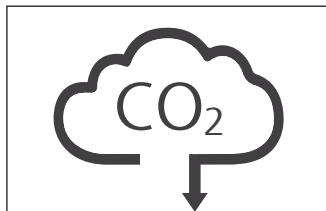
- Report all timber and timber product deliveries.



- Report all quarried product deliveries.



- Record all products that contain recycled material.



- Report all delivery mileage, vehicle type and associated CO₂ emissions, as well as details of how CO₂ emissions have been minimised.



- Provide supporting delivery notes on request, and clearly show the chain of custody number for timber deliveries.
- All reports must be made available to Thames Water on a monthly basis and in the agreed-to format.

25. Personal Protective Equipment

The following minimum standards of PPE apply to all Thames Water projects. Specify any additional or higher standard PPE, when required according to risks, in the operation or task's risk assessment.

25.1 Workwear/PPE to EN471 (Class 3)

Wear full-body, orange-coloured, high-visibility workwear/PPE. This applies to all projects, visitors and those working at depots and stores. Preferences for one-piece overalls or separate jacket and trousers may be defined in the Construction Phase Plan.



25.2 Flame-retardant and arc-resistant PPE

Anybody breaking ground or working around live services must wear full flame and arc-resistant clothing.

For further details please refer to Thames Waters Essential Standard 24 – Personal protective equipment



[http://docs.healthandsafetyhub.co.uk/Thames_Water/Essential-Standards/Essential-Standard-24-Personal-Protective-Equipment-\(PPE\).pdf](http://docs.healthandsafetyhub.co.uk/Thames_Water/Essential-Standards/Essential-Standard-24-Personal-Protective-Equipment-(PPE).pdf)



25.3 Eye protection to EN166







Eye protection is mandatory at all times, except for operators of vehicles or plant that are fully screened. Specify higher levels of protection, if required, in relevant risk assessments. Operators who wear prescription spectacles must get prescription safety spectacles from their employer. Over-glasses may only be used by short-duration visitors and are not acceptable for site workers.



25.4 Head protection to EN397

In general, all personnel must wear white helmets, with the exception of supervisors who wear black helmets. Helmets must have a completed ICE (In Case of Emergency) tag attached.

Individual projects may visually differentiate between roles, if necessary, using the following helmet colour schemes:

	Black: supervisor		White: site manager, competent operative, vehicle marshall
	Orange: slinger/signaller		Blue: visitor/other
Helmet Sticker:			
	Green: first aider		Red: fire marshal

Note: Sikhs wearing turbans can legally refuse to wear head protection on construction sites on religious grounds.

25.5 Hand protection to EN 388-4131

Wear gloves that provide the appropriate level of protection for the task being done. Flame-retardant and arc-resistant gloves must be worn when undertaking streetworks or manually breaking ground (Arc Flash Hazard/Risk Category 2).



25.6 Safety footwear to EN20345

Provide ankle support.

Have a covered steel toecap.

Include mid-sole protection.



25.7 Additional requirements

Additional PPE, as per a task-specific risk/CoSHH assessment, may be required.

The minimum standard for disposable face masks is FFP3. All users of filtering face pieces RPE must be face-fitted/tested for each specific RPE worn.



25.8 PPE branding

For all public facing works, safety helmets and high-visibility workwear must display the approved branding.

A. Exemptions

Exemptions to the branding and colour requirements for helmets and high-visibility workwear may be granted by authorised Site Managers for short-term workers and site visitors e.g. for those on site infrequently and for less than 14 days.

B. General provisions

PPE supplied by Thames Water will be charged to the contractor's account.

Contractors will provide suitable and sufficient storage and cleaning facilities for employees' PPE.

Thames Water and contractors must ensure that leavers return all branded PPE.



26. Asbestos

Thames Water will inform employees and supply chain partners if asbestos is present or suspected on the project. Before commencing a project, all necessary asbestos surveys will have been conducted and the results translated into the project's health and safety plan.

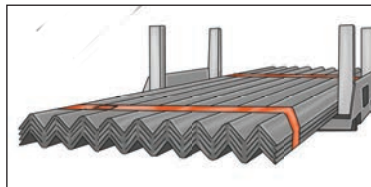
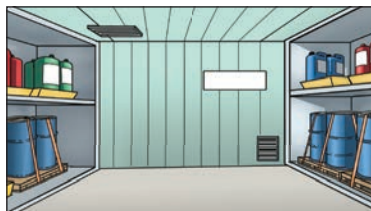
Disturbance of asbestos cement (AC) containing materials through cutting, drilling, and other activities may result in elevated levels of airborne asbestos fibres. The current safest method of cutting AC pipes is using a grit saw. The method of removal and disposal of AC debris must be agreed prior to commencing work.

Also be aware that asbestos is routinely found in electrical equipment, and so suitable precautions should be taken.



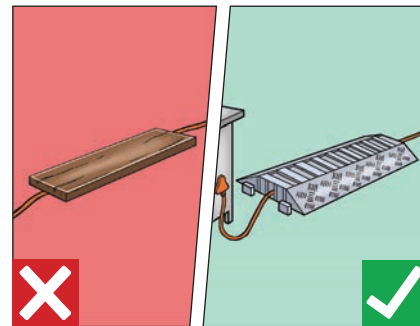
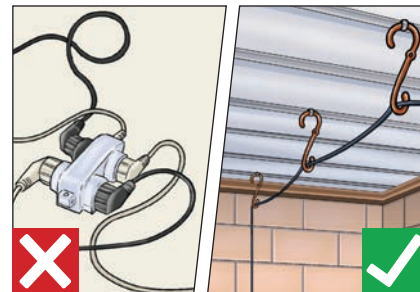
27. Work Areas

Store all materials on pallets, racks or specialised storage systems.



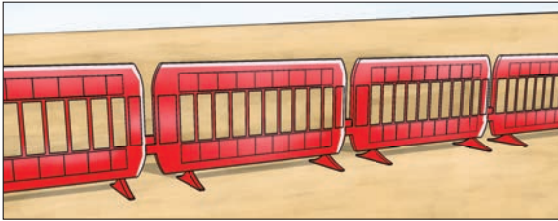
Practice good housekeeping and keep walkways and access routes clear.

Secure temporary electric cables (junction boxes, extension leads, etc.) with "sky hooks" or the equivalent and route them safely so they don't cause tripping hazards.



28. Public Interface

Supply Chain Partners must conform to project-specific requirements for maintaining the site boundary's integrity. All barriers must be erected according to manufacturers' instructions or follow temporary works design.



29. Thames Water Operations Interface

All Thames Water sites must have a Stakeholder Management Plan. TW operational staff wishing to enter Thames Water CDM areas must be site inducted and provide suitable and sufficient RAMS for their task, and have attended the Daily Briefing.

30. Communications

Supply Chain Partner representatives and operatives are expected to participate and support Thames Water regular communication events on all projects. This includes, but is not limited to:

- Toolbox talks
- Health and Safety Stand Ups
- Health and safety alert briefings
- Pre-task briefings



31. Archaeology and Heritage

If there's a risk of finding historical artifacts on-site, perform works according to the relevant method statement and watching brief.

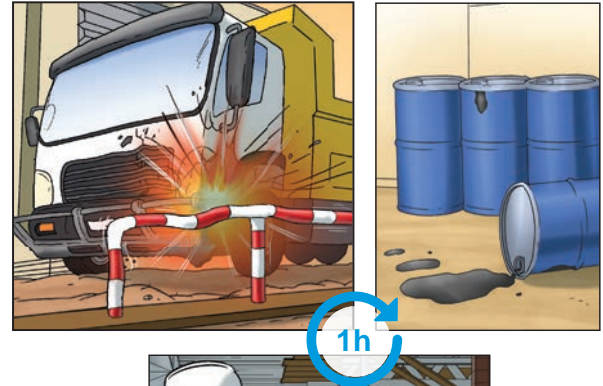
If a discovery occurs:

- Stop work immediately
- Cordon off the area and restrict access
- Inform your supervisor immediately
- Don't remove or damage any findings
- Don't work or drive near findings

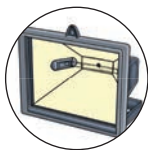


32. Incident Reporting

- Report any and all incidents, including environmental incidents such as spills or pollution, to help us improve conditions and everyone's safety on site.
- All incidents and positive and negative SHE observations must be reported via the site observation reporting system.



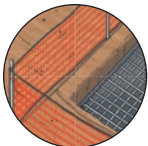
33. Summary of Items that are Prohibited



- Halogen lamps.



- Fuels stored in plastic containers.



- Netlon-type fencing as edge protection or as a barrier for restricted areas.



- Forks fitted to or suspended from 360°/180° excavators.



- Grinders without kickback protection



- Underslung loads from wheeled plant whilst in motion.



- Barrier tape as edge protection or as a barrier for restricted areas.



- Vehicles only certified to FORS Bronze or with no certification.



- Supervisors must not operate plant and equipment



- Manually retractable (fixed) blade knives



- Aluminium ladders or stepladders in live electrical areas and excavations.



- Lifting with excavators without removing the bucket.



- One-tonne dumpers.



- Road pins made of a conductive material.



- Use of bungee cord to tie up tools and materials

NOTES

