



Infrastructure Projects

Guidance: What good looks like

Version: May 2017a



Our Lifesaving Rules





Purpose of this document

This document has been created by Network Rail Infrastructure Projects in collaboration with its suppliers to create consistent guidance on how our construction sites should be set up and how certain common task should be undertaken.

This document establishes a visual benchmark by which all our sites should achieve **as a minimum**. It does not prescribe how tasks should be undertaken nor alleviate those undertaking works of their obligations to comply with legalisation and standards.

The overarching objective is to set a consistent bar for all our sites to drive up overall safety performance and remove ambiguity. This document should also support our workforce by making it clear what to expect on site.

Overall, we know that **getting the basics right** has a direct impact on reducing accidents and creating an environment that supports the right culture.

Using this document

When constructing and managing worksites the Principal Contractor shall ensure they review the performance of their sites to this document and address any areas of shortfall. Subsequent inspection of sites by staff (Network Rail or contractor) shall ensure that sites continue to meet as a minimum the benchmark set by the document.

If any hazards or unsafe behaviours are identified Close Calls are to be raised and wherever suitable, safety conversations held with the relevant person(s) to understand not only the immediate cause, but more importantly the underlying causes so that these can then be addressed to prevent future re-occurrence.

This is a live document that will be updated over time. If you have any comments regarding the content please contribute to the continuing improvement of the guide by emailing comments and pictures to mark.carter@networkrail.co.uk.

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Health and safety

Personal protective equipment (PPE)

Minimum requirements according to NR/L2/OHS/021:

- ✓ Orange high visibility top with reflective tape
- ✓ Orange high visibility trousers
- ✓ Safety helmet - white (or blue where required) if on or near the line
- ✓ Safety boots - ankle support/protective toe cap/mid-sole protection

In addition Infrastructure Projects requirements:

- ✓ Light eye protection
- ✓ General purpose hand protection (to EN388 cut resistance level 5)

PPE shall be provide free of charge by the employer, kept clean and in a good condition and replaced when required. **Additional task specific PPE shall be required as determined by the task risk assessment.**



Walking routes

- ✓ Clearly designated and signed access routes provided to all work areas
- ✓ Pedestrians physically segregated from vehicles and other site activities
- ✓ Sound, level and well draining surface
- ✓ Inspected and maintained on a regular basis
- ✓ Kept clear of materials and rubbish
- ✓ Adequate lighting to be provided along the route



Pedestrian [railway] access points

- ✓ Use authorised access points
- ✓ Must be appropriate for the intended work
- ✓ Gates must be kept secured at all times
- ✓ Suitable steps and handrails, in particular where accessing on slopes or off platforms
- ✓ Inspected and maintained on a regular basis
- ✓ Kept clear of vegetation, materials and rubbish
- ✓ Adequate lighting to be provided
- ✓ Be considerate of lineside neighbours, in particular noise and parking



Site entrances

- ✓ Lockable gates kept secure at all times
- ✓ Security point and gateman where suitable
- ✓ Pedestrians to be physically segregated from vehicles
- ✓ Firm and well draining surface
- ✓ Clear advance site entrance warnings for approaching vehicles
- ✓ Consideration given to driver sighting when exiting
- ✓ Traffic management in place to manage vehicle movementsPrincipal Contractor logo and emergency details displayed
- ✓ Key site rules and warnings displayed (e.g. Life Saving Rules, PPE, etc.)
- ✓ Mud to be removed from vehicles prior to exit
- ✓ Damping down where dust is a hazard
- ✓ Site speed limit displayed and enforced
- ✓ Entrance set back from road to provide space for waiting vehicles
- ✓ Be considerate of local neighbours with respect to noise, litter, lighting etc.



Lifting operations

- ✓ All lifting operations (including simple/repetitive) planned and recorded
- ✓ Competent person appointed to supervise all lifts
- ✓ Exclusion zone in place and demarcations to maintain exclusion zone
- ✓ Collapse radius considered to avoid potential fouling hazards
- ✓ Lifting equipment inspected prior to use
- ✓ Lifting equipment examined upon use for first time
- ✓ In line with requirements of Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)



Never enter the agreed exclusion zone, unless directed to by the person in charge.



Always be sure the required plans and permits are in place, before you start a job or go on or near the line.



Haul road

- ✓ Firm and well draining surface
- ✓ Site speed limit clearly signed and enforced
- ✓ Pedestrian crossing points clearly signposted
- ✓ Size accordingly to accommodate vehicles – two lanes where possible or with passing points
- ✓ Inspected and maintained on regular basis
- ✓ Dust suppressed where required
- ✓ Detailed within the schedule of temporary works



Lighting

- ✓ Suitable and sufficient lighting provided across the entire site
- ✓ Task specific lighting to be provided
- ✓ All staff issued with suitable personal head torches
- ✓ Consider the position and direction of lighting – avoid dazzling train or road vehicle drivers, obscuring signals or intruding on adjacent properties
- ✓ Avoid disturbing protected species sensitive to light. e.g. bats.
- ✓ Use energy efficient lighting where possible (e.g LEDs, Solar Powered) and keep lighting to a suitable level
- ✓ Maintain a minimum level for site security



Work at height – Fixed scaffold

- ✓ Design, erected, altered and dismantled by a competent person(s) only
- ✓ Tied/fixed to adjacent structure
- ✓ Adequate toe board, guard rail and intermediate rail fitted
- ✓ Safe access and egress to scaffold via staircase
- ✓ Safe system for lifting materials up to the working platform
- ✓ Work platforms fully boarded with no gaps
- ✓ Kept tidy
- ✓ Scaffold tube ends and fitting threads capped
- ✓ Debris netting if required
- ✓ Inspected by a competent person(s) before first use, at an interval of no more than 7 days thereafter and after any circumstance that may jeopardise the safety of installation e.g. high winds
- ✓ Emergency and rescue arrangements planned and tested/practiced



Work at height – mobile access tower

- ✓ Selected, erected and dismantled by a competent person(s) only
- ✓ Working platforms boarded with adequate toe boards and guard rails
- ✓ Diagonal bracing and stabilisers/outriggers in place
- ✓ Set up on stable level ground and all wheels locked when in use
- ✓ Inspected by a competent person(s) before first use and at an interval of no more than 7 days thereafter
- ✓ Do not use in strong winds
- ✓ Do not move while people or materials are on the tower
- ✓ Emergency and rescue arrangements planned and tested/practiced
- ✓ When not in use mobile access towers to be dismantled and securely stored



Working at height – mobile elevated work platforms (MEWPs)

- ✓ Selected and operated by trained and competent persons
- ✓ Daily pre-use equipment check by competent person
- ✓ Have a current Certificate of Thorough Inspection within last 6 month
- ✓ Set up on stable level ground
- ✓ Fully body harness with restraint lanyard worn where required
- ✓ Exclusion zone in place around working area of the MEWP
- ✓ Control guards to prevent inadvertent movements and crush injuries
- ✓ Emergency and rescue arrangements planned and tested/practiced



Always use a safety harness when working at height, unless other protection is in place.



Always be sure the required plans and permits are in place, before you start a job or go on or near the line.



Never undertake any job unless you have been trained and assessed as competent.



Work at height – loading/unloading of vehicles

- ✓ Work at height avoided wherever practical – safe loading/unloading of materials pre-planned and agreed using mechanical means
- ✓ Lift plan(s) agreed and documented for all lifts (including simple/routine)
- ✓ Where access required onto vehicles:
 - Prioritise use of collective fall prevention measures e.g. handrail
 - Otherwise provide collective measures to minimise harm from a fall e.g. air bags
 - If not practicable to provide collective fall protection as a minimum provide individual protection, e.g. full harness and restraint lanyard
 - Suitable access available such as steps or access platform



Always be sure the required plans and permits are in place, before you start a job or go on or near the line.



Always use a safety harness when working at height, unless other protection is in place.



Excavations

- ✓ Current buried services records available
- ✓ Line of buried services established and indicated on site by a competent person using service locating device
- ✓ Inspected before work at the start of each shift by a competent person
- ✓ Sides prevented from collapse by shoring or battering/benching and temporary works designs in place and signed off
- ✓ Excavation edges protected by guard rails and toe boards
- ✓ Vehicles and materials kept away from excavation sides
- ✓ De-watering measures installed where required
- ✓ Safe means of access and egress, including alternate means of escape
- ✓ No excavation in the vicinity of services using mechanical excavator or power tools
- ✓ Permit to dig completed and signed off prior to commencing excavation



Exclusion zones

- ✓ Establish exclusion zones where vehicle or plant movements, works or falling materials pose a risk to others
- ✓ Clearly demarcate and signed
- ✓ Continuous physical barrier around the area
- ✓ Controlled entry to prevent unauthorised or unintended entry



Never enter the agreed exclusion zone,
unless directed to by the person in charge.



Protection of the public

- ✓ Site boundaries secured by solid and rigid side hoarding in line with temporary works design
- ✓ Sufficient space for public to pass safely
- ✓ Site access and egress controlled at all times with gates locked when not manned
- ✓ Advance and immediate warning of site entrances to members of the public on footpaths and roads
- ✓ Site vehicular access and egress marshalled
- ✓ No lifting loads over public
- ✓ Plant or vehicle movements near pedestrian routes strictly controlled
- ✓ Take measures to secure sites against trespassers



Close Call reporting

- ✓ Close call cards and boxes located on site in suitable locations around the site, giving consideration for privacy
- ✓ All staff encouraged to raise Close Calls
- ✓ Clear demonstration of action taken including “You Said, We Did” boards in prominent location to highlight hazards and other issues addressed
- ✓ Feedback and recognition given on a regular basis



Injury-Free Environment Action Board

You said	We did
<p>CONTRACTOR AT VAUXHALL WAS NOT IMPLEMENTING THE AUREN PEDESTRIAN SAFETY MANAGEMENT PROCESS FOR REMOVING MATERIALS OUT OF THE ARCHES</p> <ul style="list-style-type: none"> • HIGH LEVEL TROUGHING LID REMOVED FOR ACCESS & FIBRES SEEN PROTRUDING FROM BROKEN LID • OPERATIVE SEEN CARRYING TASK LIGHTING DOWN A SCAFFOLD STAIRCASE WITH CABLE GETTING CAUGHT ON HANDRAIL & TRIPPED STAND GETTING STUCK BETWEEN RAIL & STAIRCASE • PEOPLE SMOKING DIRECTLY OUTSIDE OF MAIN ENTRANCE DOOR AT SPECTRE HOUSE 	<ul style="list-style-type: none"> • WORKS WERE STOPPED AND PAVEMENT LID OF MATERIALS. SUPERVISOR TO RE-BRIEF THE OPERATIVES & FEED • WORK WAS STOPPED AND FEED FROM AN INVESTIGATION, FIBRES • OPERATIVE WAS STOPPED & WIND IN THE CABLE AND TRIPPO LEGS • SMOKING IS NOW PROHIBITED IMMEDIATELY OUTSIDE THE MAIN ENTRANCE

Remember Our 5 Golden Rules:

- Be fit for work - mentally and physically able to work safely.
- Always receive a task briefing before starting work - paperwork signed and briefed.
- Report all unsafe events and conditions - inform your supervisor or complete an observation card.
- Stop work immediately if anything changes - seek advice from your supervisor.
- Be aware - stay vigilant, know your site, and look after your team.



Electrical safety

- ✓ Electricity isolated and verified prior to work
- ✓ Permit to work system in place
- ✓ Lockout devices in place to prevent inadvertent re-energisation
- ✓ Fireproof PPE worn when working in the vicinity of live high voltage electricity
- ✓ Work planned (safe system of work) and management by competent person.
- ✓ Warnings in place for live equipment



Never assume equipment is isolated
– always test before touch.

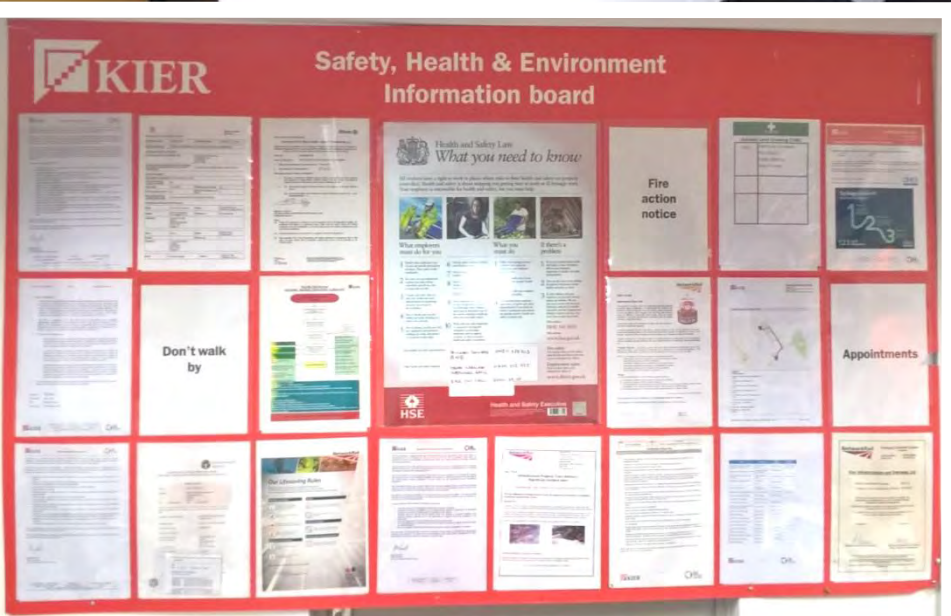


Always be sure the required plans and
permits are in place, before you start
a job or go on or near the line.



Site information boards

- ✓ Information clear and uncluttered
- ✓ Kept up to date/current and refreshed on a regular basis
- ✓ Displayed in a prominent location
- ✓ Minimum information to include:
 - F10 (where the work is notifiable)
 - Health and safety law poster
 - Company health and safety policy
 - Life Saving Rules poster
 - Close calls
 - Site plan showing access routes and emergency arrangements
 - Employers liability insurance
 - Company environment/sustainability policy
 - Environmental consents/permits



Equipment storage

- ✓ Dedicated storage facilities for equipment – accessible, lockable, weatherproof and adequately lit
- ✓ Adequately sized for the storage requirements of the site
- ✓ Nominated person to manage store
- ✓ All equipment recorded on a register
- ✓ Equipment inspected for fitness for use prior to removing from store
- ✓ All equipment to have current test certificates available where required
- ✓ Quarantine procedures establish and maintained on site for defective or certificate expired equipment
- ✓ Equipment stored neatly on shelving – no overloading or hanging over edges
- ✓ Walkways kept clear
- ✓ Refuelling and maintenance activities undertaken in a designated area with drip trays and funnels to avoid contamination



Material storage

- ✓ Dedicated storage areas and facilities
- ✓ Storage areas enclosed by physical barriers
- ✓ Use of chocks to enable easy lifting of materials
- ✓ Material stockpiles on dedicated platforms
- ✓ Materials stored away from pedestrian and vehicular routes
- ✓ Keep materials covered where practicable to reduce contamination and minimise wastage.
- ✓ Easily accessible and arranged to minimise the risk of slips, trips and falls.



Working with concrete

- ✓ Correct task specific PPE worn including water proof gloves (suitable for use with high pH substances) and water proof clothing with long sleeves and trousers.
- ✓ Prevent concrete from entering gloves or footwear
- ✓ Health surveillance in place for those who work with wet cement on a regular basis
- ✓ Follow good hygiene after working with concrete



Emergency (fire/first aid) points

- ✓ Well located, accessible and unobstructed
- ✓ Emergency procedures displayed
- ✓ Muster point for fire/evacuation clearly identified
- ✓ Correct type and quantity of fire extinguishers
- ✓ Correct type and quantity of first aid kits
- ✓ Defibrillator available
- ✓ Workforce aware and trained to use fire extinguishers
- ✓ First aider(s) available
- ✓ Suitable means of raising alarm in case of fire
- ✓ Risk assessment for fire and first aid available upon request



Welfare facilities

- ✓ In line with requirements of NR/L3/INI/CP0036 and welfare summary sheet on display.
- ✓ High quality and fit for purpose
- ✓ Regularly inspected, well maintained and kept clean
- ✓ Soap, towels, toilet paper and other consumables provided with replacement stock on site
- ✓ Hot and cold water available for use
- ✓ Supply of drink water available
- ✓ Conveniently located
- ✓ Adequate for workforce size
- ✓ Heating provided for room spaces and drying room
- ✓ Where required, 'satellite' welfare provided in conjunction with primary welfare





Environment and Sustainability

Waste management

- ✓ All waste to be segregated
- ✓ Adequate waste containers available and clearly signed
- ✓ Containers monitored and emptied on a regular basis to ensure always available
- ✓ Area kept clear and readily accessible for emptying operations – exclusion zone to be set up when required
- ✓ Cover waste or use closed skips as appropriate to prevent overflow, odour or vermin infestation.



Concrete washout

- ✓ Concrete washout not discharged to ground or drains
- ✓ Designated washout facility available wherever concrete works taking place comprising lined vessel or pit where washout can be discharged
- ✓ Sufficient capacity for concrete works
- ✓ Washout facilities well maintained
- ✓ Set washout slurry broken out and disposed of appropriately
- ✓ Don't deposit concrete wash out water onto the ground
- ✓ Store concrete wash out in a lined skip or specially dug and lined pit
- ✓ If possible treat washout water for PH and discharge on site
- ✓ Reuse leftover concrete or return to the supplier



Chemical/oil storage

- ✓ Secure at all times and in a flame proof container where possible
- ✓ Robust enough to withstand foreseeable accidental damage
- ✓ Oils/COSHH > 200L secondary containment – 110% of largest or 25% of total volume (whichever is greater)
- ✓ Use drip trays.
- ✓ Reduce buying – Purchase only what you need
- ✓ Appropriate labelling of different types of chemicals.
- ✓ Isolate incompatible chemicals and/ or hazardous waste
- ✓ Have spill kits available and close to storage. Check contents regularly.
- ✓ Appropriately stored away from drains and watercourses - 10m from watercourses and 50m from wells or boreholes.
- ✓ Provide a lockable COSHH store and maintain a COSHH inventory



Nuisance and disturbance

- ✓ Dust suppression systems working on site to minimise the impact on local air quality
- ✓ Use appropriate noise insulation for rotating equipment to minimise the impact on the local community.
- ✓ Unsightly areas to be screened from the view of the local community
- ✓ Effective construction traffic management to minimise vehicle movements that may impact the local community



Biodiversity

- ✓ Protected areas/areas containing protected species fenced off and signed.
- ✓ Invasive species fenced off and signed.
- ✓ Trees with Tree Preservation Orders (TPOs) fenced and signed.
- ✓ Trees exclusion zones 12 x diameter of the trunk.
- ✓ Take care when clearing a site near ponds as Great Crested newts may be present
- ✓ Ensure bats are not present in building to be demolished
- ✓ Stop work when any wild animal is found and report it to the person responsible for environmental management on site



Endorsements

ISLG

Thales Group	Hochtief
VolkerFitzpatrick	RPA / Torrent Trackside
Story Contracting	Balfour Beatty Rail Services
HS2	Galliford Try
Morgan Sindall	Osborne
Network Rail	Kier Infrastructure
ABC	CH2M
Taylor Woodrow	J Murphy and Sons Ltd
Laing O'Rourke	Costain Rail
Walker Construction	Amey Ow
Atkins	BAM Nuttall
Buckingham Group	Keltbray
RSSB	Colas Rail
Spence	Bridgeway Consulting Limited
RSSB	(RICA)
Tes 2000	Skanska
Siemens	Alstom
Babcock Rail	Carillion Rail
Volker Rail Group Limited	Colas Rail
London Underground/ TfL	Arup

RPCG

Thales
Babcock
RSSB
Keltbray
Morgan Sindall
Carillion Plc
Costain
Osborne
Laing O'Rourke
Balfour Beatty Rail
ABC Electrification
Network Rail
Volkerfitzpatrick
Kier
Amey
Buckinghamgroup
Track Safety Alliance
Volker Rail
Siemens
Thales
Atkinsglobal
Coyles
Colasrail
RICA

Southern Shield

BAM Nuttall
BCM
Costain
Kier
McNicholas
Network Rail
Osborne
Siemens
VolkerFitzpatrick
Wessex Capacity Alliance