5. Bollard Installation Procedure (Lit or Unlit)

Method of works

- Assess pre-works information. Including Asbestos information and report and briefing by Supervisor/manager.
- Competent and trained operatives to carry out CAT & Genny scan to identify services below ground and mark accordingly. Permit to dig to be opened, submitted to H&S Dept and closed on completion of works
- Cordon off area to avoid third party encroachment and trespassing or unauthorised access during normal or out of hours. Cordon to also include warning signage as required.
- PPE to be worn (gloves/eye protection/safety boots and hi-vis vest). Regular breaks, undertake maintenance of tools.
- Ensure tools and equipment are not acting as a trip hazard.

Bollard Installation (Lit or Unlit)

- On completion of site set up, working within the compound area mark out the area/s to be excavated
- Cat & Gen scan to be undertaken by competent and trained operatives with ground being marked where services have been clearly identified.
- Photos to be taken by operatives prior to breaking ground should adverse weather remove markings and submitted to supervisor for recording.
- If a lit bollard to be installed full trench in which power supplied to be scanned and fenced off
- Trial holes may be required to locate cabling already in situ where new bollards will be installed.
- Turf to be carefully cut out and removed to one side to be replaced following works
- If bollard to be installed to tarmac/concrete ground, cut using diamond blade grinder and using breaker to remove and dispose of spoil
- Soil/sub-base to be hand dug to a depth of 450mm
- Trench to be excavated to a depth of 450mm and is to be left open for others to install cabling.
- Open trench to be cordoned off using road pins and safety netting. Care must be taken when driving in road pins to ensure they do not come into contact with buried services.
- If areas of excavation are on transit routes by either foot or road traffic, steel road plates to be installed and warning signage erected.
- A 1:3:6 ration concrete base to be poured for each bollard (dimensions of pad to be determined by size of bollard and manufacturers installation guides) and compacted with a flush level finish.
- Once the concrete has cured drill and fit bollards to the base with M8 Rawl bolts
- Qualified electrician will lay, connect, energize, test and certificate electrical installation.
- Trench and perimeter of bollard to be backfilled and compacted with turf being re-laid or if hard ground tarmac repair kit or concrete to be reinstated to match existing ground area.
- On completion and handover, site to be cleared and clean prior to dispersal.

Make good all areas affected by the installation or any other works, dispose of all debris and leave site in a clean and tidy condition.

See additional docs

Permit To Dig
Rotary Disk Cutter
CAT and Genny Procedure
Excavations

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Risk Assessment

Hazard	Control Measures
COSHH	When using any chemicals, the COSHH safety data sheet will be followed to ensure that the safe working practice is followed. This includes storage and use, including the correct use of PPE. Common material sheets are within this document - Cement
Hygiene	Good personal hygiene is a necessity washing of hands prior to any breaks (food – ingestion).
Asbestos	All operatives are to be Asbestos awareness trained. HSG264 R+D Asbestos survey is to be referred to before any works commence. Ensure asbestos are not disturbed during works. Tradesmen are to remain vigilant at all times when onsite and if any additional suspect materials are identified, site manager is to be informed immediately.
Slips, trips and falls	Site kept clean and tidy at all times, trench/excavation to be fenced off or barriers erected with warning signs installed. All designated access/egress routes shall be kept free of slip and trip hazards, and obstructions. All equipment is switched off and/or isolated when unattended. All material that could potentially cause injury is either secured behind barriers or removed from site. The need for good housekeeping is to be explained in the site induction.
Inclement Weather	Regular checks of the weather forecast are to be carried out by the contracts supervisor. When working in wet conditions (washing down – no painting in wet conditions), suitable waterproof clothing must be provided. Electrical equipment must be checked to ensure that it is not at risk of water ingress. If this is the case, it must be isolated until conditions improve. In times of high UV radiation workers are obliged to use sun screen protection. Workers are not permitted to 'strip off'. Minimum dress code is to wear a T-shirt. Anything less and the person/s must be ordered to cover up, or, on refusal to do so, removed from site. WMS are to check wind protection to ensure resident's possessions are not damaged.
Manual handling	Correct lifting techniques are to be used at all times when moving equipment, materials or any heavy loads. Paying particular attention when lifting (stable stance, good grip, keep load close to your waist and do not flex your back), in accordance with their training. 2 person lift to be adopted when oversized or heavy materials require moving. Site manager to ensure that mechanical assistance is used where appropriate.
Excavations	CAT & Genny scan to be completed. Trial holes to be dug by hand if required. Chapter 8 or Heras fence barriers to be erected to protect operatives and third parties alike. Excavations to be backfilled as soon as reasonably practicable.
Electrical	If lit bollard installation, connection and testing to be carried out by qualified electrical contractor. Only battery operated or 110v tools to be used All electrical equipment is to be PAT tested. The equipment is to be inspected prior

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	to use to check for defaults or any other issues that could cause harm when the item is used.
Vibration	Wear PPE, regular breaks and ensure tools are correctly maintained. HAV register to be completed if breaking/cutting hard ground such as tarmac or concrete
Noise	Wear PPE, ear protection, regular breaks and inform persons of loud works. If high levels of noise are expected, ear defenders and control measures are to be introduced if lower noise action value is expected to be exceeded (80dB weekly average or 135dB peak). If there are concerns that noise levels are above this, further investigation will be carried out. Site manager to monitor noise levels and make building users aware if ay high levels are planned.
Respirable dust	Wear face fitted FFP3 mask, where dust may arise from cement, tarmac if disc cutting. Dust suppression equipment to be used for diamond cutting equipment Control measures are to be implemented when any operations are being undertaken that could give rise to respirable dust. Particular attention is to be made to silica dust. When cutting blocks, dust extraction/ suppression techniques are to be used to ensure operatives are not working above the 8hr control limit (0.1mg/m3) and FFP3 masks that have been face fitted to the individual are to be worn.

PPE

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