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DESIGNER'S RISK ASSESSMENT;
ALTERATION & EXTENSION TO DEPOT FACILITY AT GORTRUSH – OMAGH DISTRICT COUNCIL

Activity	Hazard Identification	Design Action to Reduce Risk	Project Specific Information
1.0 Excavation	Collapse of excavation, underground services, falling material or plant, falls of persons.	Ground conditions will be established by investigation carr ied out by the client. Prior to commencement of excavation the need for and method of support should be determined. Support materials should be on site before excavation starts. If there is a possibility of underground services being present, the area should be surveyed. Plant and materials should be kept away from the side of excavation to prevent undue pressure or ingress of exhaust fumes. If the depth is of 2 metres or more, suitable guard rails and access equipment should be provided. If there is a risk of water ingress, suitable methods or equipment to prevent or remove the water is required.	There are existing services identified on the record drawings which must be traced and protected on site prior to commencement of earthworks. A site investigation has been carried out by Ground Check Ltd, and a copy of their report No. 15-1226 is provided.

2.0 Placing In-situ Concrete	Falls on to working areas, collisions with mobile plant, vibrations, entanglement in machinery and reinforcement cages, lengthy exposure to noise, exposure of the eyes, ears and skin to concrete.	A safety method statement is required for this work. The method of importing and placing of concrete on site should be clearly identified. Safe systems of work should be developed to cover pumping operations and their restrictions. Washing facilities should be provided. Concrete should not be poured too quickly. Falsework and formwork should be checked before concrete is put in place. Appropriate protective equipment should be worn. The accumulation of concrete spillage should be prevented. The effect of weather conditions should be considered and appropriate allowances made.	
3.0 Constructing Masonry	Slips, trips and falls, manual handling of masonry units, falling masonry, exposure to mortar, faulty guards on mixing plant	Bricklayer's foreman should ensure bricks stacked close to working area are on a level base and stacked to a safe working height. Foreman should ensure working area is clear of debris. Small bags of cement used to minimise risk of back injuries. Site management should ensure that safety helmets and footwear are worn. Management should arrange for the safe delivery of materials to the work area. All operatives should be informed of the hazards of dermatitis and the control measures to avoid it. Washing facilities should be available on site to ensure good personal hygiene. Workers should be made aware of all hazards. Mechanical cement mixers should be inspected for faults before use. To make trestles safe, use steel pins, no overloading platform and trestle spacing < 4 feet.	

4.0 Erecting Structural Steelwork	Falls from height, falling materials, high winds	The work should be carried out in accordance with a design plan. A safety method statement should be prepared detailing management and supervisory responsibilities, stability of structure, loading limits, prevention of falls and materials, delivery and storage of materials. Erection should be carried out by competent workers. The lifting appliances used must be appropriate to the task. If loads are likely to rotate, hand lines should be utilised. A site survey should be undertaken to detect overhead power lines. Appropriate personal protective equipment should be worn. Relevant notices, signs or barriers erected.	
5.0 Welding Operations	Fire, explosion of gas tanks, ignition of other flammable materials during operations, metal sparks, hot materials, exposure to heat, high levels of light, gases, fumes	Where possible, all flammable material should be removed from the welding operations area. Fire resisting sheets should be used to protect the surroundings from flame and spatter. Personal protective equipment should be worn. Extra ventilation should be introduced to reduce the likelihood of heat stress occurrence. The placing of a second person on stand-by in case of emergency should be considered. Reduced time exposure should be considered. Effective fume control equipment should be provided. Where other operations are being undertaken adjacent to the welding area, eg painting, the combined effect should be considered and suitable systems of work put in place. Contractors undertaking welding operations should produce a method statement before work begins.	

6.0 **Roof Work**	Falls of operatives, plant or materials from height.	A proper system of access to the roof area should be provided, eg ladders, tower scaffolds, independent scaffolds, mobile platforms. Space at ground level must be provided for materials and equipment. For work of short duration, a proprietary roof ladder or crawling board could be used. For works of longer duration an access scaffold and edge protection, eg toe boards and guard-rails should be used. Suitable means of getting materials to the roof level should be provided, i.e. lifting appliances. Redundant materials and debris must not be thrown off the roof (bombing) - a debris chute should be used or materials and debris lowered in suitable containers. All persons involved in or working adjacent to the work must wear appropriate personal protective equipment (PPE) Warning notices ("Men working overhead") should be placed around the area of work. The roof and equipment should be checked each day before work to ensure they are in a safe condition. For complex work, a method statement should be prepared. Safe systems of work should be established and followed. For work on a sloping roof, suitable barriers and platforms should be used to prevent falls. For work on a fragile roof, roof ladders or crawling boards must be used. If the above precautions cannot be taken, safety harnesses and nets should be used.	

7.0 Falsework	Falls from height of personnel, materials and plant. Collapse of falsework, manual handling, noise, trips on electric leads from portable tools.	A pre-start site inspection should be undertaken to identify all foreseeable naturally occurring hazards. A method statement should be developed for this work. Safe access should be provided and maintained at all times. Working platforms should be at least 600mm wide. Falsework must not be overloaded. Temporary electrical systems utilised for the work should be installed by a competent electrician. Suitable lighting should be provided if work is to take place during darkness or times of reduced light. P.P.E. should be worn. A noise survey should be undertaken to determine if area should be declared a noise zone.	
8.0 Demolitions	Collapse of structure, underground services, falling material or plant, falls of persons. Damage to equipment	Prior to commencement of demolition works the need for and method of support should be determined. Support materials should be on site before excavation starts. If there is a possibility of underground services being present, the area should be surveyed. Plant and materials should be kept away from the side of excavation to prevent undue pressure or ingress of exhaust fumes. If the depth is of 2 metres or more, suitable guard rails and access equipment should be provided.	Breaking out concrete slab, demolishing wall panels and existing elements of steelwork.

9.0 Piling Operations	Excessive vehicle movements on/off site. Contaminated spoil. Ground water contamination. Piles located in positions with restricted working space, e.g. corners of site and adjacent to public areas outside the site. Infection of piling operatives, contamination of the site and the surrounding area. Personal injury from falling debris, crushing. Unsafe removal of guards or auger cleaners. Risk to third parties.	Piling techniques that reduce or eliminate spoil will reduce this risk. Use displacement piling methods unless these are technically unsuited to the site soil conditions or performance requirements of the foundation. Carry out foundation risk assessment in accordance with Environment Agency guidelines [(1)]. Consider increasing pile size or number of piles to allow piles to stop above water table Wherever technically feasible use reaction piles or other means of providing the reaction. Design the foundation to cantilever sufficiently to allow adequate working space without the need to remove safety equipment. Enforce exclusion zones for any persons not directly involved in the piling operations.	Mini piles are proposed for this site due to the restricted access.