
Appendix 2

Designer's Risk Assessment

Designer's Risk Assessment

PART OF PROJECT - ALL WORKS							COMPLETED BY: Joseph Way BSc (Hons)
PROJECT: REPAIR, REINSTATEMENT AND REDECORATION OF Crosby COB Quarantine and Generator Building, Hall Road, West Liverpool, Liverpool, L23 8SY							DATE: October 2017
Ref	Activity Element	Significant Potential Hazards	Population at Risk	Risk Classification			Design Action to be taken to reduce risk
				Likelihood	Severity	Risk Rating	
1.00	High level repairs to fire boarding	Falls from height. Falling materials from height.	Workforce	2	3	6-9	Controlled procedures and methods of work including: <ul style="list-style-type: none"> Method statement to outline contractors proposals; Safe method of accessing high level; Proposals to cordon off areas immediately below high level works; Relevant personal protective equipment including hard hats and safety harnesses where required; Relevant signage to alert the workforce and visitors of high level works overhead.
2.00	Formation of new openings within existing walls	Collapse of existing masonry. Masonry and cement dust.	Workforce and visitors	2	3	6-9	Controlled procedures and methods of work including: <ul style="list-style-type: none"> Contractor's method statement outlining proposals; Suitable method for safe removal and temporary support work to existing walls where openings are formed; Cordon off work areas; Provision of personal protective equipment including dust masks, hart hats, steel toe capped boots, high visibility vests etc. for workmen undertaking works; Relevant signage to alert the workforce and site visitors of demolition works; Specialist design by qualified Structural Engineer for new vehicle roller shutter opening.

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3.00	Control of substances hazardous to health (COSHH)	Hazard to health.	Workforce, visitors and adjoining occupants	2	2	3-4	System of controls should be established: <ul style="list-style-type: none"> • Elimination of hazard; • Substitution by a less hazardous substance; • Totally enclosed process and handling systems; • Restrict access and/or reduce number of employees; • Reduce or prevent emission of fumes or dust; • Partially enclose with local ventilation; • Provide full exhaust ventilation; • Regular, routine cleaning; • Provide means of safe storage and disposal.
4.00	Hazardous substances	Injury	Workforce	3	2	3-4	Data sheet for mortar to be made available to all operatives. Direct skin contact to be avoided, gloves to be used in handling mortar. Exposure to be treated with soap/water or eyewash. Dust mask and eye protection to be worn when possible contact with dust from construction processes. Review in case new hazardous substances are introduced or encountered on site.
5.00	Scaffold Towers	Fall/Collapse of Tower	Workforce	2	3	6-9	An assessment should be made prior to the use of the tower to ensure that it is suitable for its intended purpose. All site operatives are to be appropriately trained for erection, use and dismantling of scaffold towers.

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6.00	Fire/explosion from ignition of fuel or rubbish	Injury	Workforce, visitors and adjoining occupants	1	3	3-4	Diesel fuel and petrol to be held in minimum quantities and stored in lockable cage with appropriate fire hazard sign affixed. Suitable fire extinguishers to be kept in vicinity. Good housekeeping to be monitored by supervisor. All waste materials to be removed from site to designated areas as agreed.
7.00	Hygiene/ Comfort	Illness	Workforce	1	1	1-2	Appropriate on-site welfare facilities are to be provided by the client and agreed with the principle contractor prior to commencement. Such welfare facilities to include toilets, hot and cold water and heated mess room.
8.00	Waste	Slips, trips and falls around the site	Workforce and visitors	3	2	6-9	Good housekeeping to be maintained at all times. All waste material to be removed to designated areas (eg. Skip). Temporary storage locations to be agreed with contractor administrator.
9.00	Glazing	Broken glass. Falling glazing. Handling glass	Workforce, visitors and adjoining occupant	1	2	3-4	<ul style="list-style-type: none"> Secure arrangements for transporting glass safely. Protective clothing and equipment for handling glass e.g. gloves, suction pads, etc. Correct tools for glazing to be used. Proper access equipment to reach working positions safely. Glazing works should not proceed in adverse weather conditions. Safe and secure storage arrangements should be provided. Control measures are effected to ensure a safe system of work in place. Adequate protection of existing high level glazing to external elevations.

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10.00	Joinery/ Carpentry	Injury	Workforce	2	2	3-4	Supervisors/Site Managers should ensure that control methods are effective and should take into account any changes in circumstances eg. New trainees or workers starting on site.
11.00	Painting	Inhalation Skin Absorption Slips on Spillage's Falling from Height Fire or Explosion	<ul style="list-style-type: none"> Painters Persons working or passing below 	2-3	2	3-4	<ul style="list-style-type: none"> Method statements carried out. Suitable control measures if working at height Ladders over 3m should be tied or footed Adequate ventilation should be provided, backed up by respiratory protective equipment of necessary, local extraction ventilation may be required. Adequate hygiene facilities should be provided Good housekeeping should be practised.
				2	1-2	1-2	
				2	2	3-4	
				2-3	3	4-5	
				1	2	1-2	
12.00	Plumbing Work	Inhalation Manual Handling Fire Lead Poisoning		1	1-2	1-2	<ul style="list-style-type: none"> Method statement should be developed for this work The degree of exposure to lead should be assessed by a competent person to determine if exposure is significant or not significant. Where exposure is significant local exhaust extraction equipment should be used to bring the exposure level down to a level deemed insignificant. Eating, drinking and smoking should be prohibited in all areas which are likely to be contaminated by lead. Adequate washing and changing facilities should be provided and used by workers to ensure good personal hygiene standards. Controlled procedures and methods of work.
				1	1-2	1-2	
				1	2	3-4	
				1	2	3-4	

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13.00	Manual Handling	Manual Handling. Bricks, mortar loads, equipment etc. Movement up and down ladders and scaffolding	All Operatives	3	2-3	3-4	Manual handling hazards to be minimised by use of mechanical aids.
14.00	Hazards to Eyes	Hazard to eyes. Cutting, grinding etc		2	2-3	3-4	Eye protection to be worn at all times
15.00	Asbestos	Inhalation of respirable dust	All Persons in building	3	3	6	If the presence of asbestos is identified the Contract Administrator must be informed immediately. Controlled procedures and methods of work.
16.00	Services	Working in the location of existing mains and services installations, i.e. water, electric, gas and other installations.	All persons working in the building	2-3	3	5-6	Controlled procedures and methods of work.
17.00	Electrical Services	Electrocution/ Fire/ Manual Handling	Everyone	2	3	5-6	<p>Surveys carried out before work begins to assess risk of works.</p> <ul style="list-style-type: none"> Only competent electrical tradesmen/contractors should install electrical systems and proof of competence should be obtained. Warning notices ("Electrical Hazard") should be placed on all live distribution equipment. Personal protective equipment should be worn and rubber mats placed on the ground for all live work. Control measures are effective to ensure safe systems of work.

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18.00	Portable Tools	Injury	Site Operatives	2	2-3	2	<ul style="list-style-type: none"> • Reduce vibration by choosing work methods and machines which have a low vibration output • Ask about vibration levels before deciding which tool or machine to select • Can the job be done without using high vibration tools? • Select tools designed to minimise vibration • Tools and equipment must be maintained in a good condition (anti-vibration pads/mounts checked regularly, worn parts replaced) • Ensure the right equipment is being used for the job. • Consider whether the job can be altered to reduce the grip and pressure that the worker needs to apply • Ensure frequent work breaks to avoid long periods of continuous vibration exposure • Enable workers to keep warm during cold weather by providing heating suitable clothing such as gloves • Provide workers with information and training on risks of vibration. • Teach workers ways of minimising the risk through good working practices and keeping good blood circulation with exercises. • Inform workers how they can report the first signs of injury and who to.

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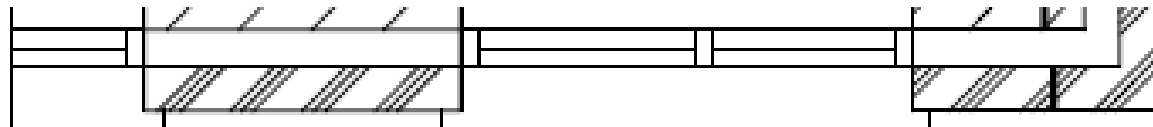
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19.00	Hand Tools	Injury	Site Operatives	2	2	2	Damaged tools to be taken out of use immediately
20.00	Mechanical equipment	Accidents/ Injuries	Operatives in the vicinity	2	2	2	All mechanical equipment to be checked daily and defects reported to the site supervisor. Mechanical equipment not to be left running unattended.
21.00	Visiting Site	Falls from height.	Visitors to site.	2	3	3-4	Provide fixed guardrails.
22.00	Visiting Site.	Falling Objects	Visitors to Site.	2-3	2-3	2	The requirement to wear head protection applies wherever construction operations are being undertaken
23.00	Visitors to site	Trip/slip hazards	Visitors to site.	2	2	2	Remove debris and rubbish. Implement ground clearance operations to areas required to be accessed by visitors.
24.00	Visiting site.	Moving vehicles.	Visitors to site.	3	3	3-4	Site speed limit to be defined, e.g. 5 m.p.h. for all vehicles. Prominent notices to be posted on site.
25.00	Visiting site	Needle stick injury	Visitors to site.	2	2	2	Site induction to make visitors aware of hazard and to ask them to report any sightings of needle sticks. Protective footwear recommended.
26.00	Visitors to site	Cuts / lacerations	Visitors to site.	2	2	2	Remove debris and rubbish. Implement ground clearance operations to areas required to be accessed by visitors.

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27.00	Noise. From use of equipment e.g. angle grinder	Permanent hearing damage to those exposed to it.	Those using the equipment.	2	2	2	Noise suppressed equipment to be used where available. Ear defenders available for use with equipment.
28.00	Visiting Site	Enabling and Alteration Works	All Persons in Building	2	2	2	Identification of works, safe working practices – notices and signage.
29.00	Deliveries	Site Access/Delivery/Storage	Everyone	2-3	2	2	Controlled procedures and methods of work i.e. not peak periods of activity for the arrival and departures.
30.00	Security	Security of the Building	Everyone & in particular unauthorised personnel	2-3	2-3	2	Controlled access procedures, methods of work including recording arrival/departures, secure and restrict all access routes by the contractors. ID Badges to be worn at all times.
31.00	Working within the occupied area	Injury to persons/damage to property	Everyone	2-3	2-3	2	Controlled procedures and methods of work, ensuring notices/signage etc., protected zones, provide barriers around working areas with designated routes.
32.00	Fire Evacuation	Fire/ Emergency Escapes	Everyone	2	2	2	Notices/signage and prohibit parking (note emergency exit locations)

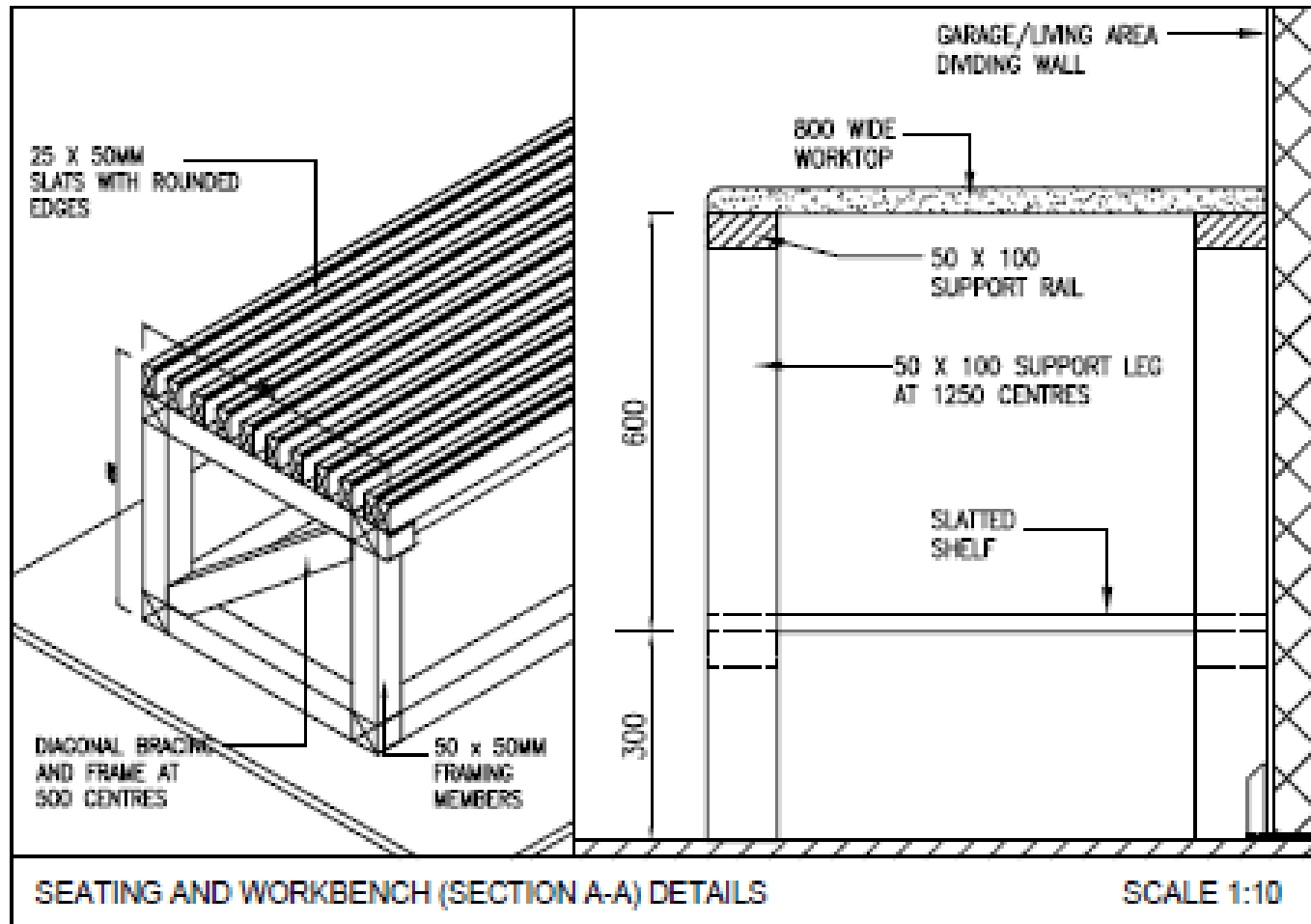
Appendix 3

Workbench and Seating Construction Details

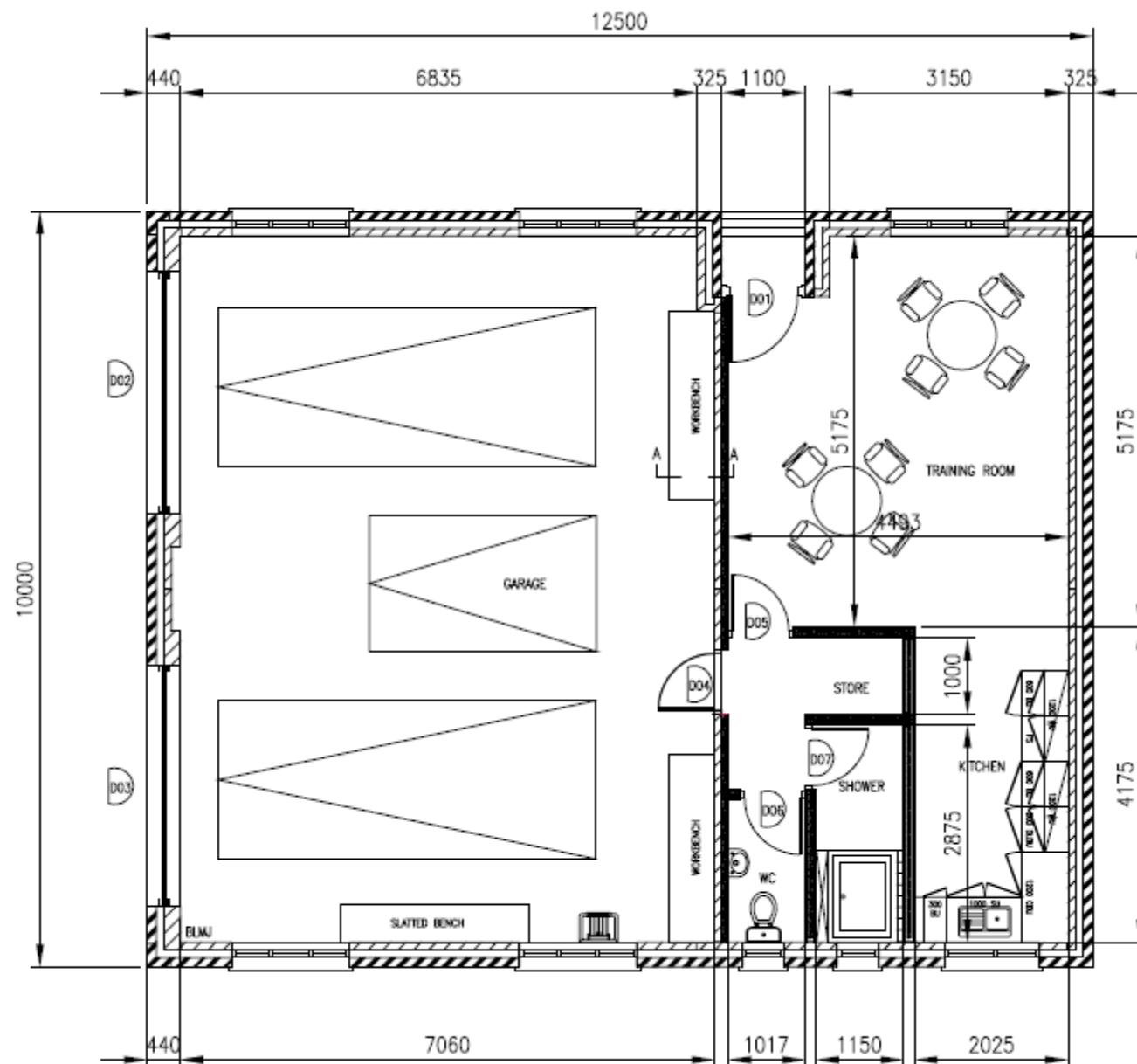


KITCHEN UNITS

SCALE 1:10



INTERNA



Appendix 4

Bracket Specification

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Store Finder Country Settings Help

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Search by phrase / item code

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Home > Home Electricals > Aerials & Satellite > Aerial Mounts & Brackets > Cranked Bracket 30cm



Cranked Bracket 30cm

Code: A30FB

★★★★★

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- Base: 20 x 20cm
- Wall to centre of cranked pole: 30cm
- Maximum load: 100kg

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Cranked Bracket 30cm

- Base: 20 x 20cm • Wall to centre of cranked pole: 30cm • Maximum load: 100kg • Height of mast: 30cm • Diameter: 50mm • Quality: white zinc

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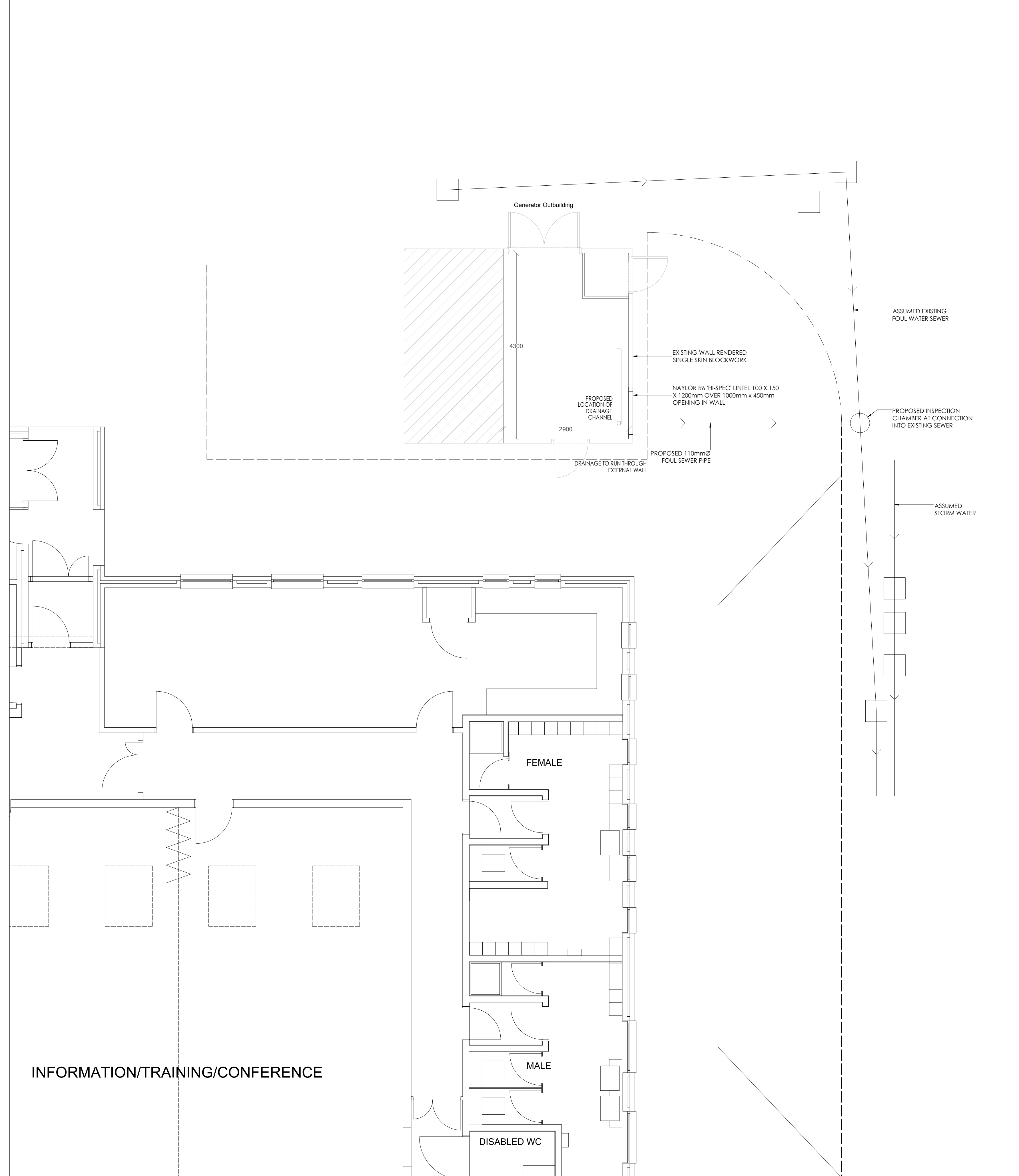
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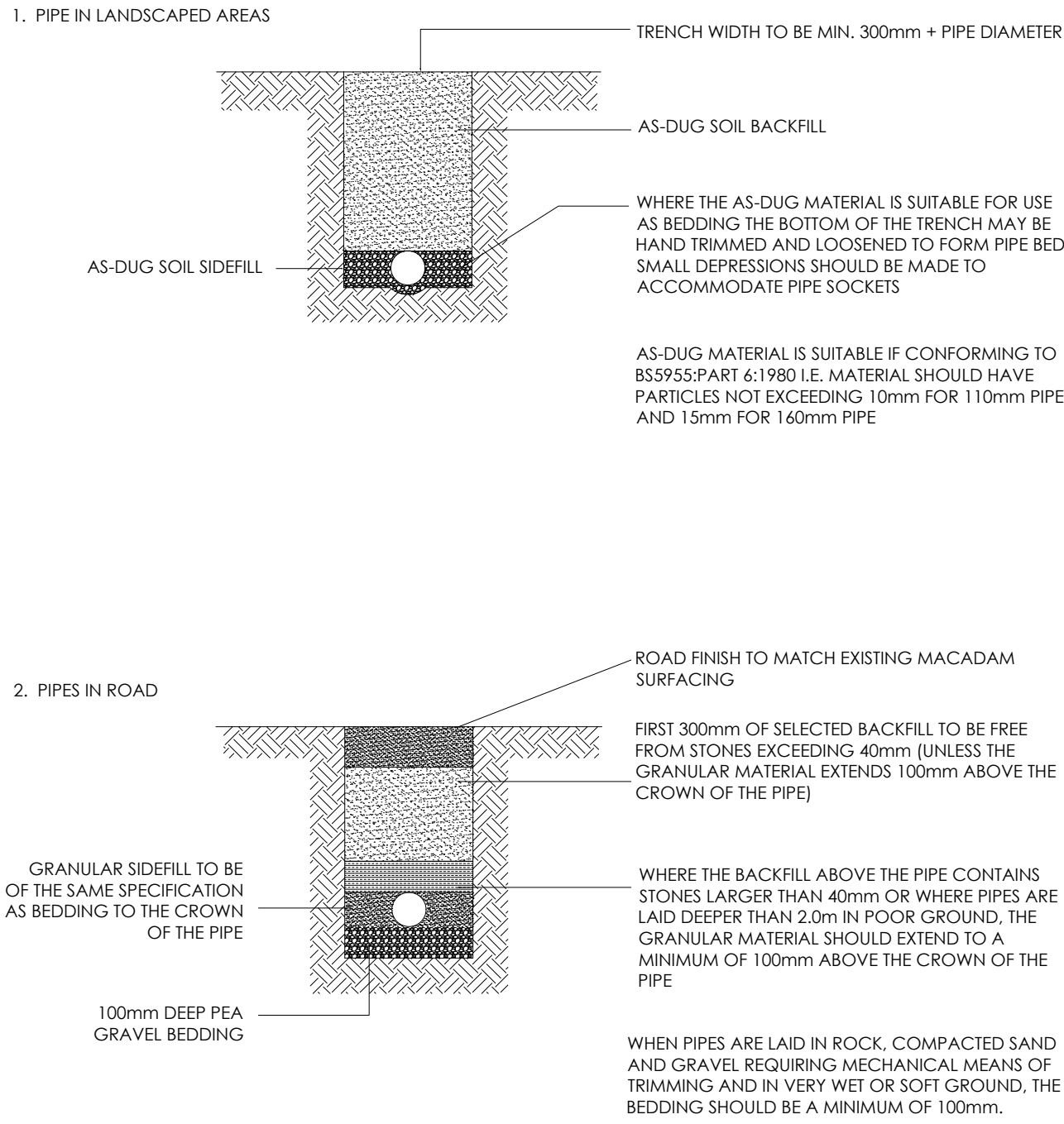
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Appendix 6

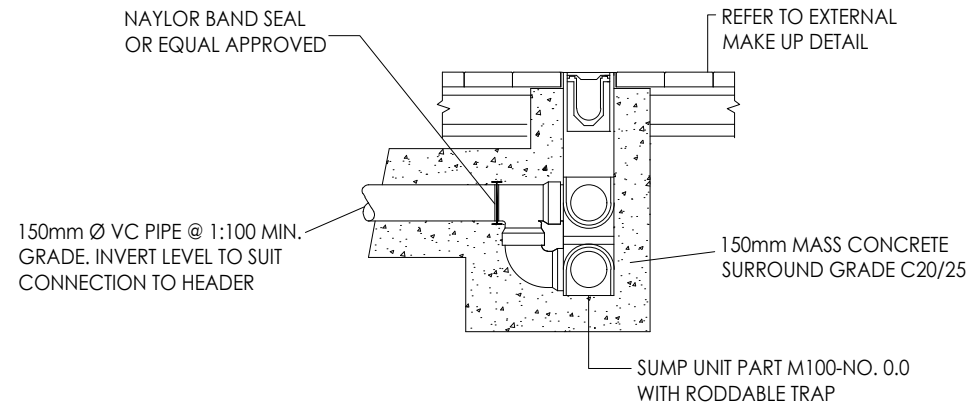
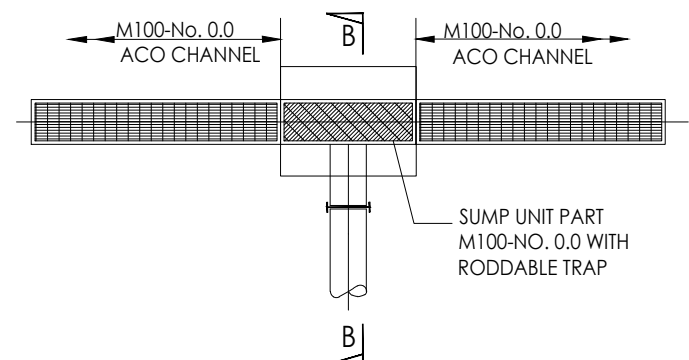
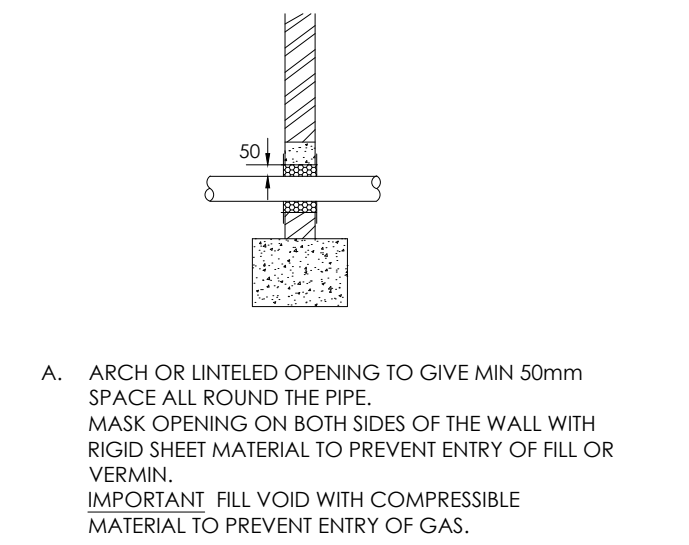
Drainage Design



BEDDING



PIPES THROUGH WALLS



ACO DRAINAGE CHANNELS
TYPICAL CONSTRUCTION DETAILS
(N.T.S.)

ALTERNATIVE MANUFACTURERS
PRODUCTS CAN BE USED
SUBJECT TO THE APPROVAL OF
THE ENGINEER

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IF IN DOUBT ASK !

NOTES:

- DEPTH OF EXISTING SEWERS NOT KNOWN. ASSUME 1m TO LL.
- PROPOSED SEWER PIPE TO BE OSMA D PIPE BN 110 OR SIMILAR APPROVED.
- ALL PIPES, BEDDING AND BACKFILL TO COMPLY WITH THE BUILDING REGULATIONS APPROVED DOCUMENT H.
- PIPES TO BE LAID TO A MINIMUM FALL OF 1:60
- SOFT SPOTS EXISTING BELOW THE BOTTOM OF AN EXCAVATION SHALL BE REMOVED AND THE RESULTING VOIDS BACKFILLED WITH TYPE 1
- ANY ADDITIONAL EXCAVATION BELOW THE BOTTOM OF AN EXCAVATION THAT IS REQUIRED BECAUSE THE CONTRACTOR HAS ALLOWED THE BOTTOM TO BECOME SOFT OR OTHERWISE UNACCEPTABLE FOR THE CONSTRUCTION OF THE PIPELINE OR CHAMBERS SHALL BE MADE GOOD
- IMMEDIATELY FOLLOWING THE EXCAVATION OF THE TRENCH, THE PIPES SHALL BE LAID AND JOINTED ON THE PIPE BED. PIPES SHALL BE LAID SO THAT EACH ONE IS IN CONTACT WITH THE BED THROUGHOUT THE LENGTH OF ITS BARREL. THE PIPES SHALL BE LAID AT THE LEVEL AND GRADIENTS SHOWN ON THE DRAWINGS AND SCHEDULES. THE DEVIATION IN LEVEL FROM THAT SPECIFIED AT ANY POINT SHALL NOT EXCEED 20 mm
- PIPES AND FITTINGS SHALL BE EXAMINED FOR DAMAGE AND THE JOINT SURFACES AND COMPONENTS SHALL BE CLEANED IMMEDIATELY BEFORE LAYING. MEASURES SHALL BE TAKEN TO PREVENT SOIL OR OTHER MATERIAL FROM ENTERING PIPES, AND TO ANCHOR EACH PIPE TO PREVENT MOVEMENT BEFORE THE WORK IS COMPLETE.
- JOINTS IN PVC-U PIPES SHALL NOT BE MADE WITH PLASTIC SOLVENT.
- BACKFILLING SHALL BE UNDERTAKEN IMMEDIATELY AFTER THE REQUIRED OPERATIONS PRECEDING IT HAVE BEEN COMPLETED.
- BEFORE ENTERING OR BREAKING INTO AN EXISTING SEWER OR DRAIN, THE CONTRACTOR SHALL GIVE NOTICE OF HIS INTENTION TO DO SO TO THE AUTHORITY RESPONSIBLE FOR THE PIPELINE TO WHICH THE CONNECTION IS TO BE MADE.
- BACKFILL MATERIAL SHALL BE DEPOSITED IN EVEN LAYERS AND SHALL NOT BE HEAPED IN THE TRENCH BEFORE BEING SPREAD. SPREADING AND COMPACTION SHALL BE CARRIED OUT EVENLY WITHOUT DISLODGING, DISTORTING OR DAMAGING THE PIPE. POWER RAMMERS SHALL NOT BE USED WITHIN 300 mm OF ANY PART OF THE PIPE OR JOINT.
- JUNCTION PIPES SHALL BE MANUFACTURED OF THE SAME TYPE AND CLASS OF MATERIAL AS THE REMAINDER OF THE PIPES IN THE RUN. JUNCTION PIPES WHICH ARE LAID BUT NOT IMMEDIATELY CONNECTED, SHALL BE FITTED WITH TEMPORARY STOPPERS OR SEALS AND THE POSITION OF ALL SUCH JUNCTIONS SHALL BE CLEARLY DEFINED BY MEANS OF STAKES OR TRACING WIRES PROPERLY MARKED OR LABELLED
- ALL PIPELINES LESS THAN 350 mm DIAMETER, EXCLUDING SERVICE DUCTS SHALL BE CHECKED BY DRAWING THROUGH EACH COMPLETED LENGTH OF PIPE A SPHERICAL MANDREL OF A DIAMETER 10% LESS THAN THE NOMINAL BORE OF THE PIPES BEING TESTED.
- THE CONTRACTOR SHALL CLEAN EXISTING DRAINAGE SYSTEMS PRIOR TO STARTING WORK. THE CONTRACTOR SHALL TAKE MEASURES WHEN CLEARING BLOCKED DRAINS TO ENSURE THAT ADJACENT WATER COURSES OR GROUNDWATER VIA SOAKAWAYS, WILL NOT BE CONTAMINATED. CONTAMINATION INCLUDES MUD OR SOIL BEING WASHED OR FLUSHED INTO STREAMS AS WELL AS OTHER MORE OBVIOUS CONTAMINANTS INCLUDING DIESEL FUEL, OIL AND CHEMICALS.

DESIGNERS RESIDUAL HAZARDS
MECHANICAL, ELECTRICAL & PUBLIC HEALTH

IN ADDITION TO THE HAZARDS / RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING DESIGNERS RESIDUAL HAZARDS HAVE BEEN IDENTIFIED AND SHOULD BE ADDRESSED/MANAGED BY THE CONTRACTOR. ANY HAZARDS THAT CANNOT BE ADDRESSED AND REMOVED SHALL BE CARRIED FORWARD AS PART OF THE HEALTH AND SAFETY HANDOVER DOCUMENTATION.

	HAZARD	DESCRIPTION
1	N/A	N/A
2		

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED RISK ASSESSMENT AND METHOD STATEMENT.

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C01	10/10/2017	FOR TENDER	SP	PC
REV	DATE	DESCRIPTION	DRAWN	CHECKED

CLIENT
MARITIME AND COASTGUARD AGENCY

PROJECT
CROSBY COB

DRAWING TITLE
FOUL DRAINAGE DETAIL

SHEET 01 OF 01

DATE	DESIGNED	DRAWN	CHECKED	SCALE(S)
09/10/2017	SP	SP	PC	1:50@A1

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FOR TENDER									
PROJ	ORIG	ZONE	LEVEL	TYPE	ROLE	CLASS	PRESENT	NUMBER	STATUS
1365	CCE	00	XX	DR	C	50	P	0001	D2 C02