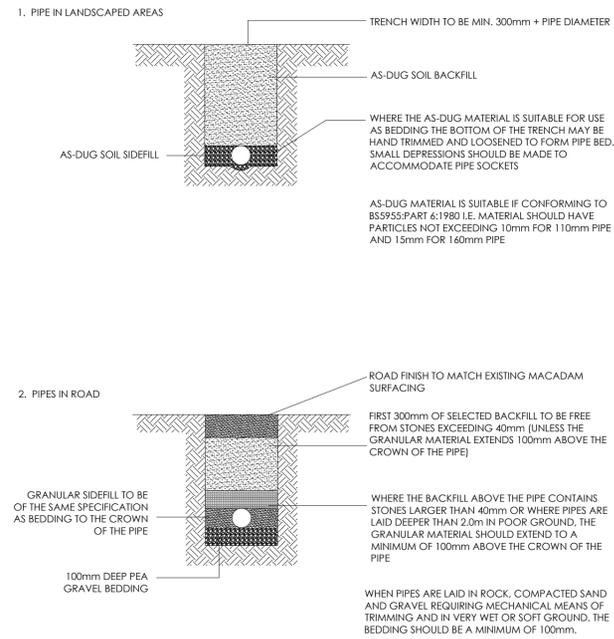
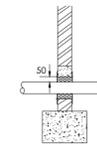


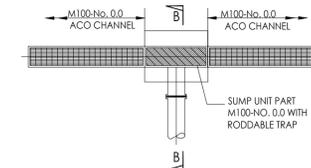
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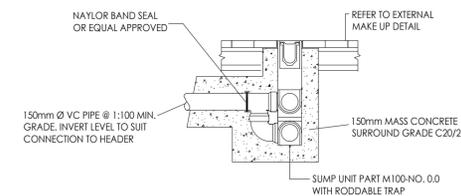
**PIPES THROUGH WALLS**



A. ARCH OR LINTELED OPENING TO GIVE MIN 50mm SPACE ALL ROUND THE PIPE. MASK OPENING ON BOTH SIDES OF THE WALL WITH RIGID SHEET MATERIAL TO PREVENT ENTRY OF FILL OR VERMIN. IMPORTANT! FILL VOID WITH COMPRESSIBLE MATERIAL TO PREVENT ENTRY OF GAS.



**PLAN ON 110 DIA OUTLET**



**SECTION B-B DRAINAGE CHANNEL SUMP DETAIL (BLOCK FINISH INDICATED. REFER TO CHANNEL DETAILS FOR OTHER FINISH TYPES)**

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

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

THE DETAILS DEPICTED ON THIS DRAWING ARE THE COPYRIGHT TO CREATE CONSULTING ENGINEERS LTD AND MAY NOT BE REPRODUCED WITHOUT PERMISSION. THIS DRAWING MUST NOT BE RE-ISSUED, LOANED OR COPIED WITHOUT THE CONSENT. ERRORS OMISSIONS AND DISCREPANCIES SHOULD BE REPORTED TO THE ORIGINATOR IMMEDIATELY.

ALL DIMENSIONS TO BE CHECKED BEFORE SITE OR OFF-SITE FABRICATION BY THE CONTRACTOR, THEIR SUB-CONTRACTOR OR SUPPLIER.

DO NOT SCALE PLANS - USE FIGURE OR GRID DIMENSIONS WHERE GIVEN. ANY DEVIATION FROM THE DRAWING IS TO BE REPORTED TO THE ORIGINATOR IMMEDIATELY.

STRUCTURE, STRUCTURAL MEMBERS & GEOTECHNICAL INVESTIGATIONS ARE TO BE CARRIED OUT & APPROVED BY THE APPOINTED STRUCTURAL ENGINEER. ANY DEVIATIONS TO THESE ELEMENTS ARE TO BE REPORTED TO THE APPOINTED CONSULTANT IMMEDIATELY.

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
2	N/A

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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REV	DATE	DESCRIPTION	DRAWN	CHECKED
C02	30/10/2017	CHANNEL DETAIL & INSPECTION CHAMBER ADDED	JPP	PC
C01	10/10/2017	FOR TENDER	SP	PC

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

**create** CONSULTING ENGINEERS LTD  
 NORWICH LONDON CHELMSFORD GLASGOW  
 109-112 TEMPLE CHAMBERS, 3-7 TEMPLE AVENUE, LONDON, EC4P 3HP  
 TEL: 020 7822 2300

DRAWING STATUS: FOR TENDER

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