

READ DRAWINGS IN CONJUNCTION WITH
BELOW GROUND SERVICES & PLUMBING
SERVICE DRAWINGS

DRAINAGE PLAN

1 : 50

INVERT LEVELS OF
PROPOSED DRAINAGE TO
BE DETERMINED ON SITE

SOAKAWAY
SOAKAWAY MIN 5 METRES
FROM DWELLING LOCATION
TBC ON SITE WITH BCO

BCO TO CONFIRM AND
INSPECT PROPOSED
SURFACE WATER
SOAKAWAY ON SITE

BC REF:
TBC

SOAKAWAY NOTES:
USE DRAINAGE CRATES IN LAWN AREAS AND IN DRIVE AND HARDSTANDING AREA USE
HEAVY DUTY CRATES (SUITABLE FOR VEHICLE PARKING AREA) WRAPPED IN GEOTEXTILE
MEMBRANE AND INSTALLED AS PER MANUFACTURERS
SIZE TO SERVICE ROOF SURFACE WATER AREA PART DWELLING + ANNEX: 98.034 M²
SURFACE AREA OF ROOFS SERVING RWPS TO SOAKAWAY: 98.034 M²
RESIDUAL SURFACE WATER ALLOWANCE AT 10%: 9.803 M²
EFFECTIVE AREA = 107.83 X 1.29 = 139.11 M²
MAX RAINFALL PER HOUR = 40MM/H
SOAKAWAY VOLUME REQUIRED = 139.11 M² X 0.040M/H (5.5644 M³) / 3
SOAKAWAY CAPACITY: 1.84 M³ BELOW INVERT OF DISCHARGE PIPE
RECOMMEND MIN SOAKAWAY CAPACITY OF 2 M³ USING CRATES.
ASSUMED CRATES 1M X 0.5M X 0.4 = 0.2M³ X 10 CRATES

ALL WORKS TO COMPLY WITH SEWER FOR ADOPTIONS 7TH EDITION.

DRAINAGE BELOW GROUND:

PROVIDE SEPARATE FOUL AND STORM DRAINAGE. ALL PIPEWORK TO BE UPVC AND TO COMPLY WITH BS158 AND BS8012005.
INSTALLATION TO BE IN ACCORDANCE WITH HING GUIDANCE NOTE 5.3 MIN DRAIN COVER TO BE 750MM IN GRASSED AREAS, 900MM
IN PAVED AREAS AND 1200MM IN VEHICULAR AREAS.
ANY DRAIN HIGHER THAN THE MINIMUM TO BE WRAPPED IN POLYTHENE AND ENCASED IN 150MM CONCRETE. ANY DRAIN WITHIN 1M
OF THE FOUNDATIONS AND REQUIRING EXCAVATION BELOW FOUNDATION LEVEL SHALL BE CONCRETE TRENCH FILLED TO THE
LEVEL OF THE FOUNDATIONS.
ANY DRAIN WHICH IS LESS THAN 1M FROM THE BUILDING, THE TRENCH IS TO BE FILLED WITH CONCRETE TO WITHIN THE VERTICAL
DISTANCE BELOW THE BOTTOM OF THE FOUNDATION NOT MORE THAN THE HORIZONTAL DISTANCE FROM FOUNDATION LESS
150MM. SEE DIAGRAM AT CLAUSE 5.3-5.3 HING GUIDANCE.

EXCAVATIONS OF DRAINS ARE TO BE LAID IN TRENCHES WHICH ARE SET OUT, EXCAVATED AND SUPPORTED. TRENCH TO BE CUT TO
THE REQUIRED GRADIENT OR FALL.

A GRADIENT MAY BE DEFINED AS FALL DIVIDED BY DISTANCE.

GRADIENT = FALL / DISTANCE

A FALL MAY BE DEFINED AS GRADIENT X DISTANCE

FALL = GRADIENT X DISTANCE

MINIMUM / MAXIMUM GRADIENTS ARE DEFINED IN PART H OF BUILDING REGS. FOR 100MM PIPE, BETWEEN 1:10 TO 1:80 GRADIENT IS
PRESCRIBED, AND WILL DEPEND ON FLOW RATES. A TYPICAL ACCEPTABLE FALL FOR FOUL WASTE IS BETWEEN 1:80 AND 1:40. BCO
TO CONFIRM ON SITE WITH BUILDING CONTRACTOR. INVERT LEVEL OF DRAINAGE TO BE SET IN ACCORDANCE WITH BCO.

PIPEWORK THROUGH WALLS:

WHERE NEW PIPEWORK PASSES THROUGH EXTERNAL WALLS FORM ROCKER JOINTS EITHER SIDE WALL FACE OF MAX LENGTH
600MM WITH FLEXIBLE JOINTS WITH SHORT LENGTH OF PIPE BEDDED IN WALL. ALTERNATIVELY PROVIDE 75MM DEEP PRE-CAST
CONCRETE PLANK LINTELS OVER DRAIN TO FORM OPENING IN WALL TO GIVE 50MM SPACE ALL ROUND PIPE. MASK OPENING BOTH
SIDES WITH RIGID SHEET MATERIAL AND COMPRESSIBLE SEALANT TO PREVENT ENTRY OF FILL OR VERMIN.
AS THE PIPE EMERGES FROM THE BUILDING A FLEXIBLE COUPLER IS TO BE USED ON EITHER SIDE OF THE WALL WRAPPED IN
COMPRESSIBLE MATERIAL AND BACK FILLED WITH PEA GRAVEL TO A MIN 150MM. PIPE JOINTS MUST BE WATERTIGHT UNDER ALL
WORKING AND MOVEMENT CONDITIONS.

INSPECTION CHAMBERS:

UNDERGROUND QUALITY PROPRIETARY UPVC 400MM DIAMETER INSPECTION CHAMBERS TO BE PROVIDED AT ALL CHANGES OF
LEVEL, DIRECTION, CONNECTIONS AND EVERY 45M IN STRAIGHT RUNS. INSPECTION CHAMBERS TO HAVE SOFT DOWN DOUBLE
SEALED COVERS IN BUILDINGS AND BE ADEQUATE FOR VEHICLE LOADS IN DRIVEWAYS.

BRANCH PIPES TO SOIL STACKS:

ALL SOIL STACKS 110MM WITH 320A WASTES TO WASH HAND BASINS 400A WASTES TO SHOWERS, BATHES AND SINKS. ALL WITH
DEEP SEAL TRAPS. PROVIDE ACCESSIBLE TRAPS TO SHOWER TRAYS.

RAINWATER GOODS:

HALF ROUND UPVC CAST EFFECT 112MM HIGH CAPACITY STORMWATER SYSTEM COMPLETE WITH 68MM DIAMETER DOWNPIPES.
INSTALL RAINWATER GOODS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. COLOUR - BLACK

FIGURE B.14
TYPICAL INSPECTION CHAMBER DETAIL - TYPE 4 (Flexible material detail)
Maximum depth from cover level to soffit of pipe 2 m, non-entry

Plastic chambers and rings shall comply with BS EN 13598-1 and
BS EN 13598-2 or have equivalent independent approval

Sited in driveways/paved areas

Mortar bedding and haunching to
cover and frame to Clause D5.4
150 mm deep concrete collar
Minimum radius to be 500 mm
for a 100 mm diameter pipe and
500 mm for a 150 mm diameter
pipe to allow entry of
maintenance equipment
Joints between base and shaft
and shaft components to be
filled with watertight seals
Granular bedding material

Cover complying with
BS EN 124 and BS 7903
Driveways, footways and
landscaped areas - Class B125
See Clause D2.17
Minimum internal dimensions
150 mm diameter or
225 mm x 100 mm
DOT Type 1 sub base
(thickness varies)
or concrete surround
Base unit to have all connections
with a diameter greater than
150 mm set at soffit level

Sited in domestic gardens

Mortar bedding and haunching to
cover and frame to Clause D5.4
Topsoil
Minimum radius to be 500 mm
for a 100 mm diameter pipe and
500 mm for a 150 mm diameter
pipe to allow entry of
maintenance equipment
Joints between base and shaft
and shaft components to be
filled with watertight seals
Granular bedding material

Cover complying with
BS EN 124 and BS 7903
Gardens - Class A15
See Clause D2.17
Minimum internal dimensions
150 mm diameter or
225 mm x 100 mm
DOT Type 1 sub base
(thickness varies)
or concrete surround
Base unit to have all connections
with soffit levels set no lower
than that of the main pipe

Flexible inlet/outlet
and/or bend
(maximum angle 45°)
Unused inlet to be
sealed and watertight
Where chambers are positioned on 90°
corners, always use the main channel by
fitting a 45° bend on the inlet and outlet
Note: Where the access chamber is in the highway the
Highway Authority can have specific requirements
Not to scale

0m 0.5m 1m 1.5m 2m 2.5m
VISUAL SCALE 1:50 @ A1

USING THESE DRAWINGS:

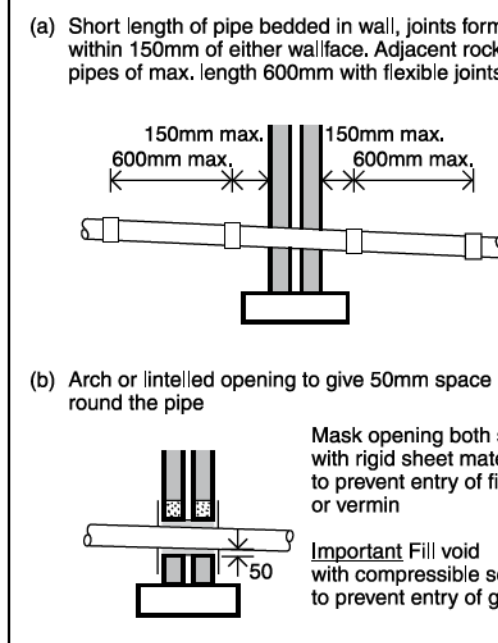
MEASUREMENTS AND DIMENSION LISTED
ON THE DRAWINGS ARE FOR SETTING
OUT REFERENCE ONLY.

ALL DIMENSIONS TO BE CHECKED AND
VERIFIED ON SITE BY THE BUILDING
CONTRACTORS.

MEASUREMENTS AND DIMENSION LISTED
ON THE DRAWINGS, SCALED FROM
WALLS ARE FROM FINISHED WALL
SURFACES I.E. RENDERED OR PLASTER
FINISHED FACES. ANY ALLOWANCE IS TO
BE MADE FOR WET TRADES. IF IN ANY
DOUBT THE BUILDING CONTRACTOR
SHOULD CONTACT THE ARCHITECT.

CONNECTIONS TO NEW AND EXISTING MANHOLES
AND THE ARRANGEMENT OF PIPE JUNCTIONS WITHIN
ANY MANHOLES SHOULD BE IN ACCORDANCE WITH
SEWERS FOR ADOPTION 7TH EDITION AND
SOUTHERN WATER GUIDANCE DOCUMENTATION.

Diagram 7 Pipes penetrating walls



EXPECTATION OF PRINCIPAL BUILDING CONTRACTOR:

THE PROJECT IS TO BE CONSTRUCTED AS PER THE
APPROVED DRAWINGS WITHOUT DEVIATION. ANY
PROPOSED CHANGE(S) TO THE DESIGN ARE TO BE
DISCUSSED AND AGREED WITH THE ARCHITECT AND
OR THE STRUCTURAL ENGINEER. THIS SHOULD BE
DONE IN GOOD TIME AND BEFORE ORDERING ANY
MATERIALS. IT IS NOT THE RESPONSIBILITY OF THE
BUILDING CONTRACTOR(S) TO AGREE CHANGES TO
THE DESIGN.

WHERE SPECIFIED MATERIALS AND OR SPECIALIST
CONTRACTORS HAVE BEEN LISTED, THEY ARE TO BE
USED AND INCLUDED WITHIN THE TENDER.
FOR TENDER THE BUILDING CONTRACTOR SHOULD
CONTACT ANY LISTED SPECIALIST CONTRACTOR OR
MATERIAL PROVIDER TO SEEK AND INCLUDE THE
RIGHT ALLOWANCE WITHIN THE TENDER. THIS
INCLUDES UNDERSTANDING THE PRODUCT
REQUIREMENTS AND MAKE ALLOWANCE FOR LEAD
TIMES.

IF AT ANY POINT BEFORE OR DURING THE PROJECT,
THE BUILDING CONTRACTOR DOES NOT UNDERSTAND,
HAVE THE KNOWLEDGE OR SKILLS TO BUILD WHAT IS
REQUIRED AND WITHIN COMPLIANCE FOR CDM 2015
THEY SHOULD POINT THIS OUT TO THE DESIGN TEAM
BEFORE CONTINUING.

INFORMATION AND GUIDANCE CAN BE REQUESTED
FROM THE DESIGN TEAM AT ANY POINT.

CDM COMPLIANCE

THE PROJECT WILL REQUIRE CDM COMPLIANCE.
NO WORK CAN START ON SITE UNTIL CDM
COMPLIANCE IS IN PLACE.

PLEASE READ PRE-CONSTRUCTION PLAN (PCP)
FOR TENDER AND PLANNING.

THE PRINCIPAL BUILDING CONTRACTOR WILL
SUPPLY A CONSTRUCTION PHASE PLAN (CPP)
AND MAINTAIN A SITE MANUAL (SM)
& HEALTH AND SAFETY FILE (HSF) ON SITE.
THE PRINCIPAL CONTRACTOR CAN
REQUEST A GPP, SM & HSF FROM THE
PRINCIPAL DESIGN PRIOR TO STARTING ANY
CONSTRUCTION WORKS. DURING
CONSTRUCTION THE HEALTH AND SAFETY FILE
MUST BE MAINTAINED AND ON FINISHING
CONSTRUCTION PASSED TO THE CLIENT OR
PRINCIPAL DESIGN.

FOR TENDER THE PRINCIPAL CONTRACTOR IS
TO ALLOW AN ESTIMATED FEE ALLOW OF £1000
FOR CDM COMPLIANCE AND DUTIES.

DETAILS OF THE EXISTING DRAINAGE ARE SHOWN ON
PLAN FOR REFERENCE ONLY. THE POSITIONS OF THE
PIPES HAVE BEEN TRACED ELECTRONICALLY, PLEASE
REFER TO SURVEY MAP AND REPORT.

BEFORE ANY MECHANICAL PLANT IS USED THE ACTUAL
POSITION AND ROUTE OF THE DRAINAGE SYSTEM
SHOULD BE VERIFIED ON SITE.

NOTE IF ANY DRAINAGE AND OR SERVICES ARE FOUND
TO BE OUTSIDE OF THE SPECIFICATIONS, THE BUILDER
SHOULD REPORT THIS TO THE ENGINEER AND
ARCHITECT BEFORE PROCEEDING.

THE LOCATION OF THE EXISTING DRAINAGE COULD
AFFECT THE FOUNDATION SPECIFICATIONS.

PRINCIPAL BUILDING CONTRACTOR IS TO
PUT IN PLACE THE FOLLOWING:

DURING CONSTRUCTION WORKS, A WHEEL
WASHING PROCEDURE SHALL BE FULLY
IMPLEMENTED BEFORE DEVELOPMENT
COMMENCES.

SUCH MEASURES SHALL BE RETAINED FOR
THE DURATION OF THE CONSTRUCTION
PERIOD. NO LORRY SHALL LEAVE THE SITE
UNLESS ITS WHEELS HAVE BEEN CLEANED
SUFFICIENTLY TO PREVENT MUD BEING
CARRIED ONTO THE HIGHWAY. REASON: IN
THE INTERESTS OF HIGHWAY SAFETY.



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Scale is correct when printed to the stated ISO
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preference to scaled sizes and all dimensions must
be checked on site by the contractor before
ordering materials and/or commencing work. All
dimensions in mm (millimetres) unless otherwise
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inspected and completed to the satisfaction of the
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C002

Scale 100% @ A1

1 : 50