

3 Sunningdale Avenue Whitefield

Drainage Maintenance Strategy

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Author	Signature	Date
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1.0 INTRODUCTION

The purpose of this document is to outline the proposed maintenance schedule for the drainage system for the proposed development and discharge condition 8 of Planning consent no. 70105

The maintenance schedule set out here complies with the CIRIA SuDS Manual (C753), which is identified as providing current best practice in the industry. The report does not replace manufacturers' requirements and these should be followed for each product in addition to the information in this document.

1.1 PUBLIC SEWER

There are no public sewers located within the site. The public combined sewer is located within Sunningdale Avenue and it is United Utilities Asset. United Utilities are responsible for the maintenance the sewer.

1.2 PRIVATE DRAINAGE

The Owner of the property will be responsible for undertaking maintenance of the proposed drainage for the whole life of the site. The Owner will arrange and program required private drainage maintenance.

2.0 CHANNELS, GULLIES, SILT TRAPS, MANHOLES & PIPEWORK

On completion of construction, the internal surfaces of the drains and manholes shall be thoroughly cleansed to remove all deleterious matter, without such matter being passed forward into the soakaway.

All trapped gullies, silt traps, manholes are to be regularly inspected every three months and cleared out on a regular frequency for the first nine months. After this period, the frequency can be reduced to every six months.

All drainage runs will be inspected once a year. The system is to be jetted clear if/when necessary. The jetting water should be managed to prevent it from reaching the soakaway.

Channels and gullies should be inspected and cleaned in accordance with the manufacturer's details. Channel units can be cleaned through the use of a high-pressure hose; this can be fed into the channel system through access units strategically placed along the channel run. The throat section of channel units should be kept clear at all times to ensure uninterrupted flow of surface water into the drainage channel and any debris within the throat should be removed.

Locking bolts should be replaced and sufficiently tightened, taking care that the bolt heads do not stand above the top surface of the cover or grate. If covers are allowed to move within their frame, this may cause damage to the frame or seating.

Sediment\material removal should be undertaken in consultation with the environmental regulator to confirm appropriate protocols; especially where run-off is taken from potentially contaminated areas such as the car park channels.

3.0 SOAKAWAY

The recommendations from the soakaway crate supplier for maintenance should be considered alongside the guidance provided in the SUDS Manual C753. C753 advises maintenance should be carried out manually, although a suction tanker can be used for sediments and debris removal. If maintenance is not undertaken for long period, deposits can become hard-packed and require considerable effort to remove.

Table 13.1 Outlines the proposed operation and maintenance regime for soakaway. This is adapted from The SuDS Manual (C753).

TABLE 13.1 Operation and maintenance requirements for soakaways

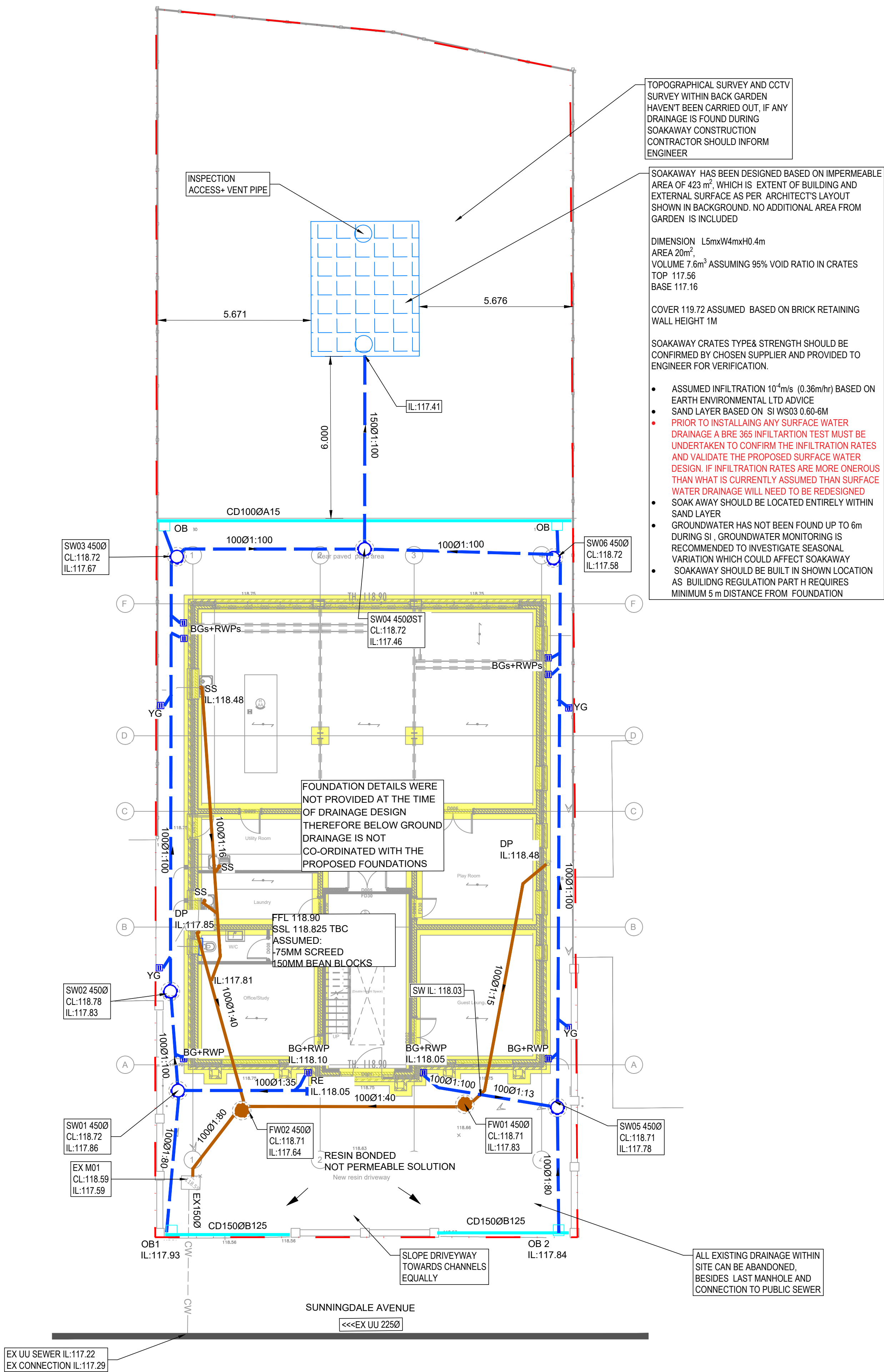
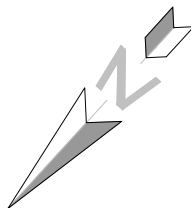
Maintenance schedule	Required action	Typical frequency
Regular maintenance	Inspect for sediment and debris in pre-treatment components and floor of inspection tube or chamber and inside of concrete manhole rings	Annually
	Cleaning of gutters and any filters on downpipes	Annually (or as required based on inspections)
	Trimming any roots that may be causing blockages	Annually (or as required)
Occasional maintenance	Remove sediment and debris from pre-treatment components and floor of inspection tube or chamber and inside of concrete manhole rings	As required, based on inspections
Remedial actions	Reconstruct soakaway and/or replace or clean void fill, if performance deteriorates or failure occurs	As required
	Replacement of clogged geotextile (will require reconstruction of soakaway)	As required
Monitoring	Inspect silt traps and note rate of sediment accumulation	Monthly in the first year and then annually
	Check soakaway to ensure emptying is occurring	Annually

Appendices

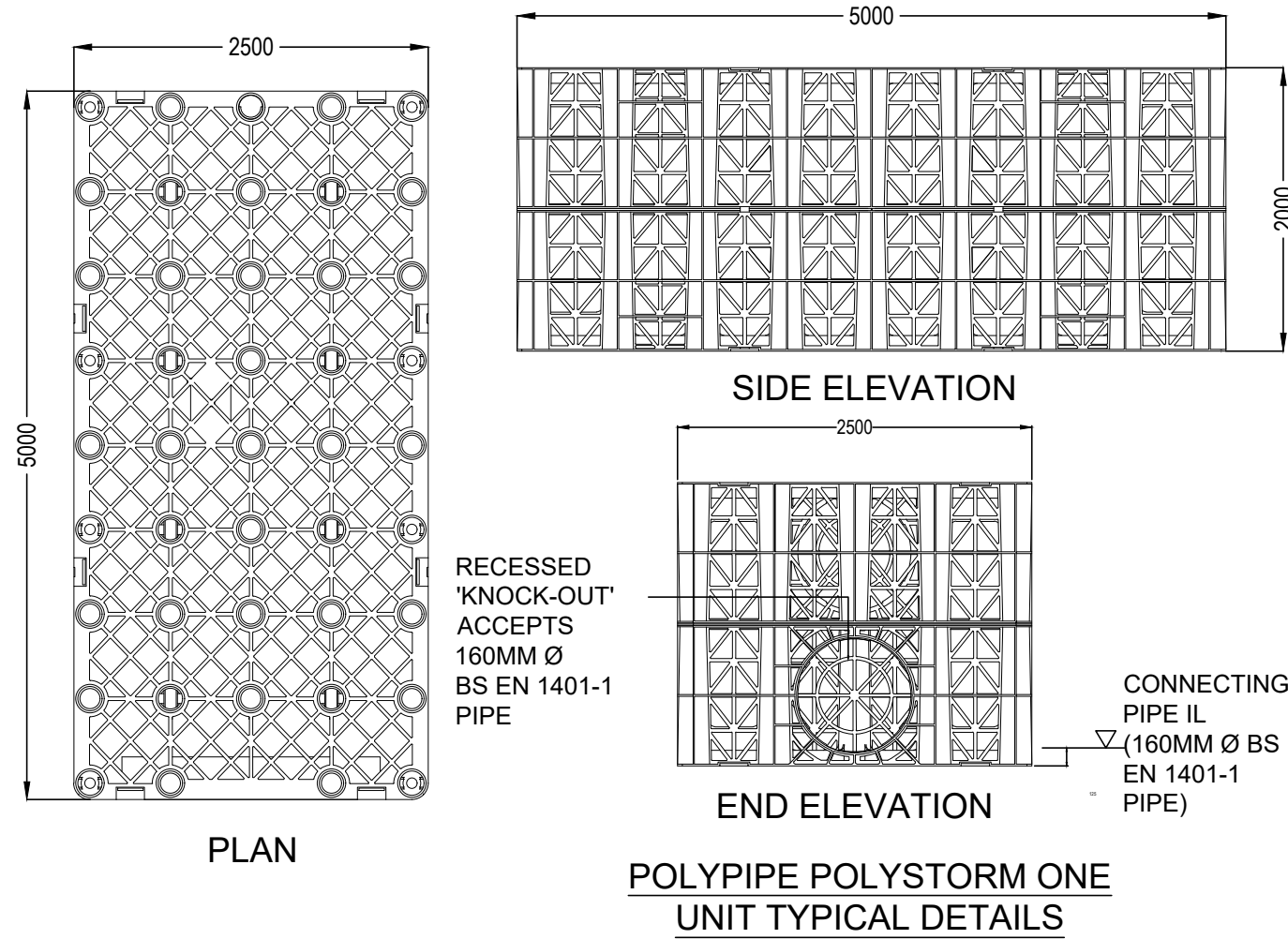
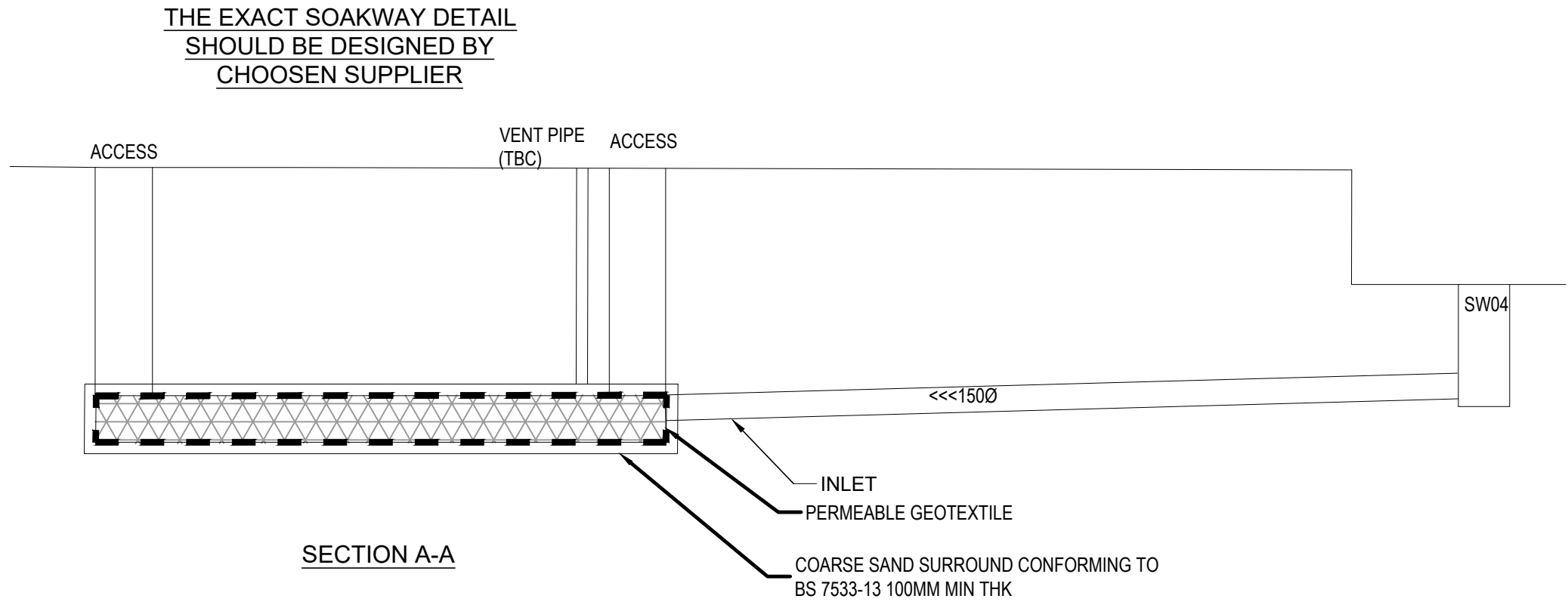
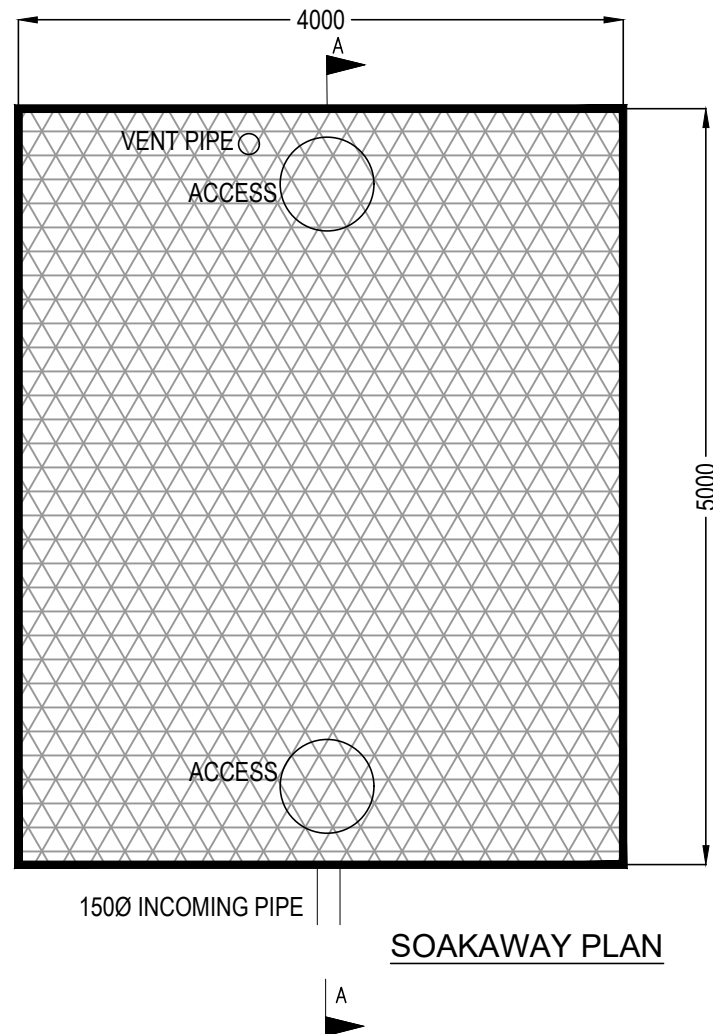
Appendix A Proposed Drainage Plan

Appendix B Suds Details

Appendix A Proposed Drainage Plan



Appendix B Suds Details



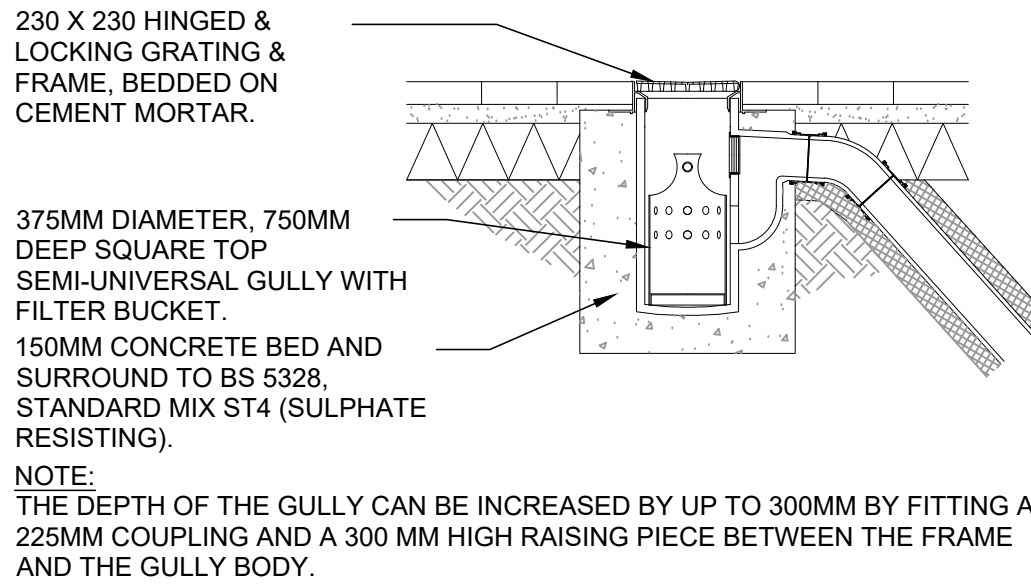
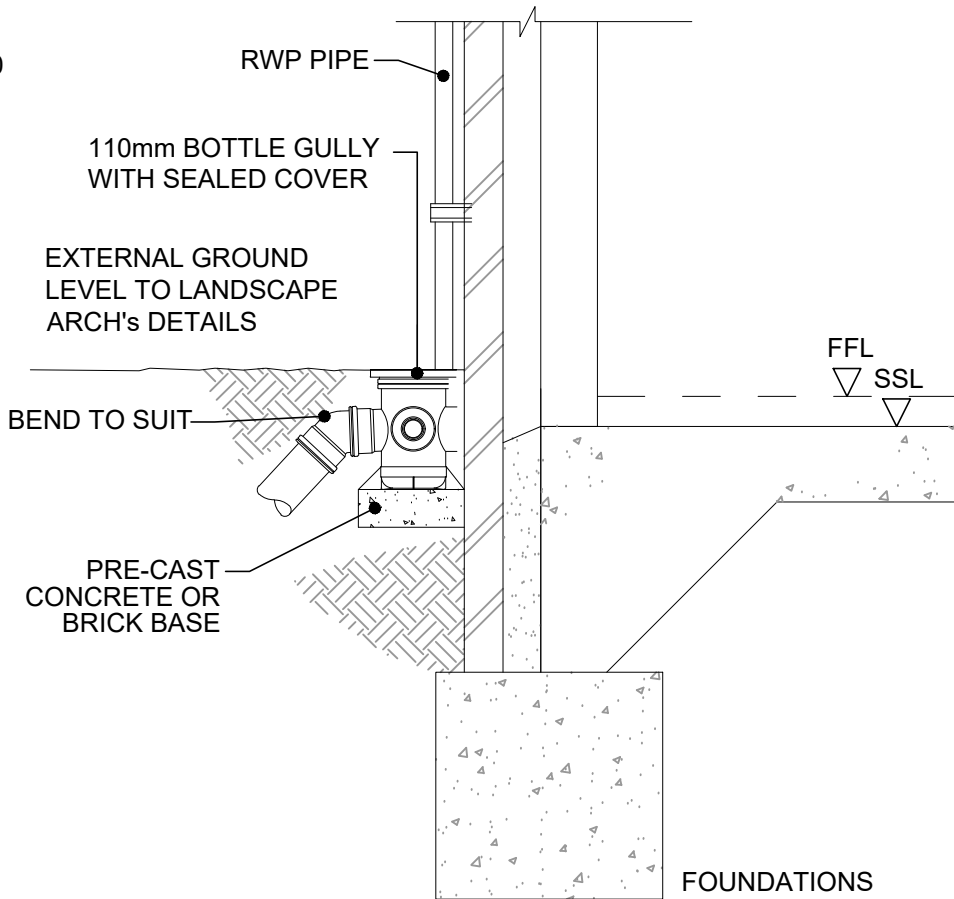
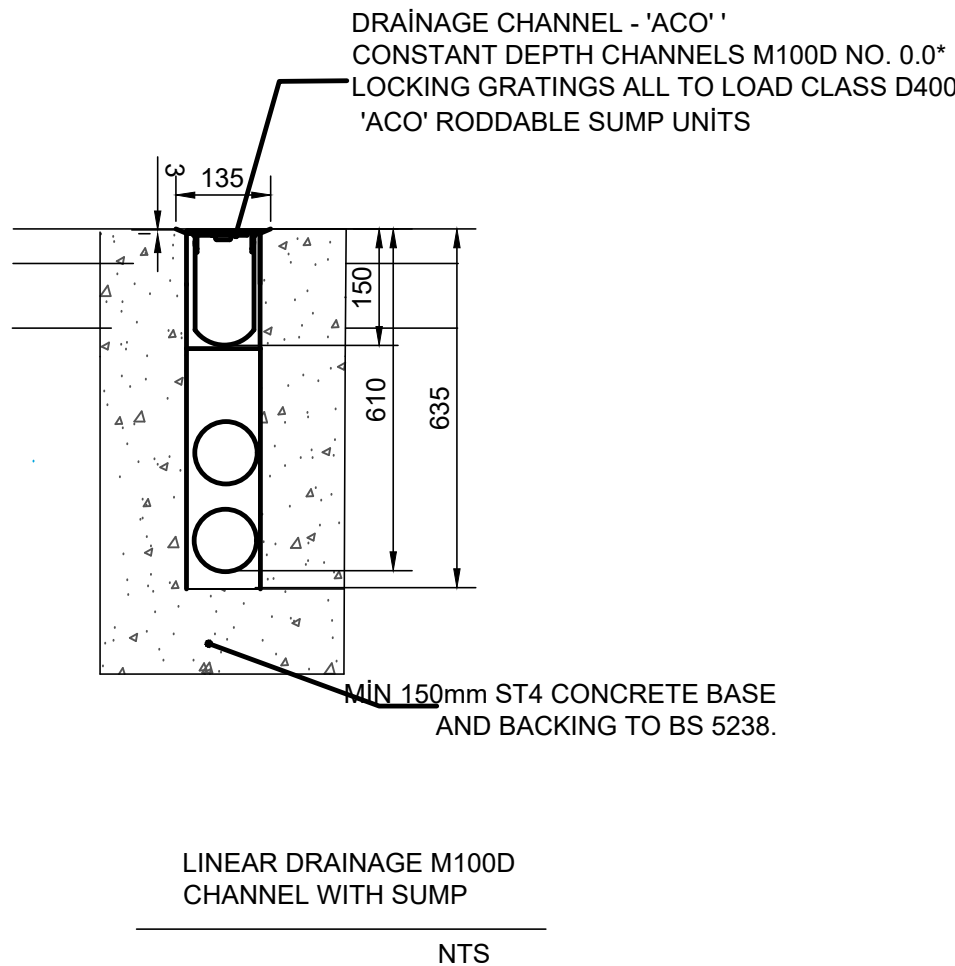
SOAKAWAY HAS BEEN DESIGNED BASED ON IMPERMEABLE AREA OF 423 m², WHICH IS EXTENT OF BUILDING AND EXTERNAL SURFACE AS PER ARCHITECT'S LAYOUT SHOWN IN BACKGROUND. NO ADDITIONAL AREA FROM GARDEN IS INCLUDED

DIMENSION L5mxW4mxH0.4m
AREA 20m²
VOLUME 7.6m³ ASSUMING 95% VOID RATIO IN CRATES
TOP 117.56
BASE 117.16

COVER 119.72 ASSUMED BASED ON BRICK RETAINING WALL HEIGHT 1M

SOAKAWAY CRATES TYPE& STRENGTH SHOULD BE CONFIRMED BY CHOSEN SUPPLIER AND PROVIDED TO ENGINEER FOR VERIFICATION.

- ASSUMED INFILTRATION 10⁴ml/s (0.36m/hr) BASED ON EARTH ENVIRONMENTAL LTD ADVICE
- SAND LAYER BASED ON SI WS03 0.60-6M
- **PRIOR TO INSTALLAING ANY SURFACE WATER DRAINAGE A BRE 365 INFILTRATION TEST MUST BE UNDERTAKEN TO CONFIRM THE INFILTRATION RATES AND VALIDATE THE PROPOSED SURFACE WATER DESIGN. IF INFILTRATION RATES ARE MORE ONEROUS THAN WHAT IS CURRENTLY ASSUMED THAN SURFACE WATER DRAINAGE WILL NEED TO BE REDESIGNED**
- SOAK AWAY SHOULD BE LOCATED ENTIRELY WITHIN THE SAND LAYER
- GROUNDWATER HAS NOT BEEN FOUND UP TO 6m DURING SI , GROUNDWATER MONITORING IS RECOMMENDED TO INVESTIGATE SEASONAL VARIATION WHICH COULD AFFECT SOAKAWAY
- SOAKAWAY SHOULD BE BUILT IN SHOWN LOCATION AS BUILDING REGULATION PART H REQUIRES MINIMUM 5 m DISTANCE FROM FOUNDATION



1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
3. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
4. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
5. THE DESIGN OF THE SOAKAWAY SHOULD BE PROVIDED BY THE MANUFACTURER OR SUPPLIER TO ENSURE THE SOAKAWAY IS SUFFICIENT FOR THE SITE SPECIFIC CRITERIA.
6. THE SOAKAWAY DESIGN SHOULD INCORPORATE:
 - CRATES SUBJECT TO OCCASIONAL PEDESTRIANLOADING,
 - SUITABLE MAINTENANCE ACCESS; AND
 - VENTING TO PREVENT TRAPPED AIR POCKETS.
7. THE STRENGTH OF THE SOAKAWAY SHOULD COMPLY WITH CIRIA C680 STRUCTURAL DESIGN OF MODULAR GEOCELLULAR DRAINAGE SOAKAWAYS.
8. ACCESS FOR MAINTENANCE SHOULD BE IN ACCORDANCE WITH CIRIA GUIDANCE.
9. VENTING TO THE SOAKAWAY SHOULD BE CONFIRMED BY THE SOAKAWAY MANUFACTURER. VENTING SHOULD BE LOCATED WITHIN LANDSCAPED AREAS, OR ROUTED BACK TO THE NEAREST MANHOLE ABOVE THE DESIGN WATER LEVEL.
10. CONSTRUCTION AND INSTALLATION OF THE SOAKAWAY SHOULD BE STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION REQUIREMENTS.
11. THE CURRENT DESIGN OF THE SOAKAWAY IS BASED ON USE OF POLYPIPE POLYSTORM 1 UNITS, TO ALLOW AN ASSUMPTION OF UNIT SIZES WITHIN THE OVERALL DESIGN. HOWEVER, WHERE AN ALTERNATIVE SYSTEM IS PROPOSED, THE DIMENSIONS OF THE UNITS WILL NEED TO BE CHECKED WITHIN THE DESIGN AND MAY RESULT IN A REDESIGN.
12. THE CONTRACTOR SHALL PROHIBIT THE MOVEMENT OF CONSTRUCTION PLANT ACROSS THE STORAGE SOAKAWAY AND WHERE NECESSARY PROVIDE ADDITIONAL SUPPORT AND PROTECTION TO THE STRUCTURE. PARTICULARLY POST CONSTRUCTION, TEMPORARY FENCING CAN BE USED TO PROHIBIT TRADE STOCKS, PILLING MATERIALS, HEAVY PLANTS ETC.

19.02.25	ISSUED FOR COMMENTS	M.A	P01
DATE	REVISION DETAILS	INITIALS	REV

MAKΣ

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STATUS: PRELIMINARY				
PROJECT: 3 SUNNINGALE AVE				
DRAWING TITLE: SUDS DETAILS				
SIZE:	DATE:	DRAWN:	DESIGNED:	CHECKED:
A1	19.02.25	MJ	MJ	MA
SCALE:	1:100			
PROJECT NO:	ORIGINATOR:	ZONE:	LEVEL:	TYPE:
DISCIPLINE:	CATEGORY/NUMBER:	REVISION:		
240304 - MAK - 00 - ZZ - DR - C - 92-001 - P01				

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