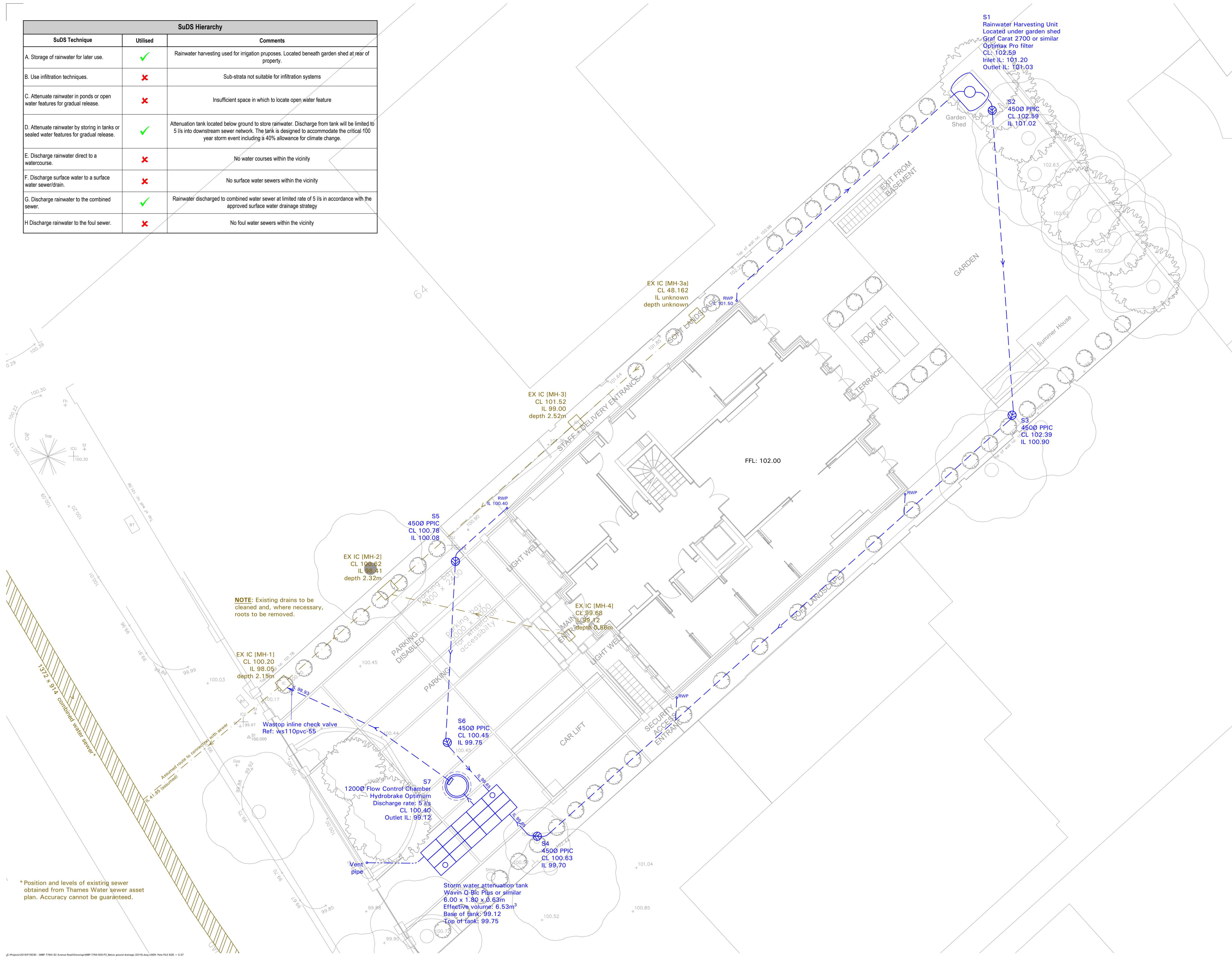


SuDS Hierarchy		
SuDS Technique	Utilised	Comments
A. Storage of rainwater for later use.	✓	Rainwater harvesting used for irrigation purposes. Located beneath garden shed at rear of property.
B. Use infiltration techniques.	✗	Sub-strata not suitable for infiltration systems
C. Attenuate rainwater in ponds or open water features for gradual release.	✗	Insufficient space in which to locate open water feature
D. Attenuate rainwater by storing in tanks or sealed water features for gradual release.	✓	Attenuation tank located below ground to store rainwater. Discharge from tank will be limited to 5 l/s into downstream sewer network. The tank is designed to accommodate the critical 100 year storm event including a 40% allowance for climate change.
E. Discharge rainwater direct to a watercourse.	✗	No water courses within the vicinity
F. Discharge surface water to a surface water sewer/drain.	✗	No surface water sewers within the vicinity
G. Discharge rainwater to the combined sewer.	✓	Rainwater discharged to combined water sewer at limited rate of 5 l/s in accordance with the approved surface water drainage strategy
H Discharge rainwater to the foul sewer.	✗	No foul water sewers within the vicinity



NOTE: Existing drains to be cleaned and, where necessary, roots to be removed.

Wastop inline check valve
Ref: ws110pvc-55

12000 Flow Control Chamber
Hydrobrake Optimum
Discharge rate: 5 l/s
CL 100.40
Outlet IL: 99.12

Storm water attenuation tank
Wavin Q-Bic Plus or similar
6.00 x 1.80 x 0.63m
Effective volume: 6.53m³
Base of tank: 99.12
Top of tank: 99.75

* Position and levels of existing sewer obtained from Thames Water sewer asset plan. Accuracy cannot be guaranteed.

NOTES:

- THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
- All drainage works to be carried out in accordance with the requirements of the Local Authority, the Environment Agency and in conjunction with all relevant British Standards, Codes of Practice and any addendums as appropriate.
- Invert levels and positions of existing drains / chambers / sewers where new connections are to be made must be checked and confirmed to the Engineer prior to the commencement of any works.
- All drainage shall comply with the requirements of BS EN 752 and Part H of the Building Regulations.
- Any part of the existing drainage system to be retained as part of the new scheme shall be cleaned and inspected. Any structural defects shall be repaired using appropriate and approved means.
- For setting-out dimensions of SVPs, RVPs etc, refer to the Architect's or Mechanical Engineer's drawings. Positions shown are indicative only.
- All pipework shall be 100mm diameter unless otherwise noted.
- All precast concrete units used in the drainage works shall be manufactured using sulphate resisting cement.
- Manhole covers and frames shall be to BS EN 124 and shall be Kitemarked. Covers and frames shall be heavy duty (D400) in carriageways and vehicular areas and medium duty (B125) in footways and soft landscaping. In blocked / concrete paved areas, covers shall be recessed fabricated steel. All recessed covers shall be in accordance with the FACTA association gradings.
- Cover levels shown are approximate only and are to be adjusted to suit finished ground levels.
- At least one soil pipe at the head of each foul run shall vent to the atmosphere.
- Existing drainage to be removed is to be broken out to bed level and void backfilled with granular material, compacted in layers not exceeding 225mm.
- All drain runs from SVPs, stub stacks, or FW gullies to be laid at 1:40 gradient unless otherwise noted. All RVPs to be laid at minimum 1:60 gradient unless otherwise stated.
- Access panels are to be provided to all rainwater pipes, max 60mm above finished ground level.
- All manholes / inspection chambers in block paved areas to have recessed covers. MH covers in paved areas to have cover and frame orientated 'square' with paving to minimise cut slabs or blocks.
- All gradients on drainage runs are indicative. Runs to be laid soffit to soffit.
- Generally pipes to have granular bed and surround in accordance with the manufacturer's recommendations, ensuring adequate protection with respect to depth and location.
- All private drainage to be laid to levels shown using flexible jointed pipes, either uPVC to BS 4660 and BS 5481 or vitrified clayware to BS EN 295.
- Rodding eyes are to be laid to manufacturers minimum cover and depth to allow adequate fall from adjoining unit.
- Where new sewers are to be constructed within 5m of a new or existing tree, the sewer shall be encased in concrete against root intrusion.
- All new drainage to be jetted and CCTV surveyed on completion. Contractor to ensure that the drainage is fully operational.
- All runs connecting into public drainage network to be extra strength clayware to BS EN 295 or BS65 with plain sleeved or socketed flexible joints.
- Before commencing any sewer or drainage works, the groundworker is to satisfy himself, the Client and the Local Authority of actual levels and conditions of existing sewers/drains.
- HEALTH AND SAFETY:** The works shall be carried out by specialist competent and experienced contractors who are members of a recognised national organisation. Operatives shall have received full and appropriate training for the operations they are to undertake. All work shall be carried out in accordance with all pertinent Health and Safety Regulations.

P3	28/05/19	Pumping station removed; drainage amended to suit; CCTV survey details added.	JG
P2	21/05/19	Rainwater harvesting tank relocated under garden shed; pipe work amended to suit.	JG
P1	07/05/19	PRELIMINARY ISSUE	JG

Rev	Date	Description	By

Drawing Status

PRELIMINARY

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Title
**BELOW GROUND DRAINAGE
GROUND FLOOR LEVEL**

Scale	Date	By	Checked
1:100 @ A1	MAY '19	PTW	MB/JG
Drawing Number	Revision		
MBP / 7764 / 500			P3

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