

Key:

100mm dia Surface Water polyvinyl chloride (PVC) pipe @ 1:80 UNO

100mm dia Combined Water polyvinyl chloride (PVC) pipe @ 1:12 UNO

100mm dia Foul Water polyvinyl chloride (PVC) pipe @ 1:40 UNO

Existing 150mm dia Combined Water vitrified clay (VC) pipe @ 1:10 to be reused

Existing 150mm dia Combined Water vitrified clay (VC) pipe to be made redundant

Surface water 450mm dia Polypropylene Inspection Chamber with class A15 recessed min. 190mm dia cover

Foul water 450mm dia Polypropylene Inspection Chamber with class A15 recessed and sealed min. 430mm dia cover

RE

Rodding Eye

Permeable paving with 150mm Type 3 lined sub base 30% porosity.

Rainwater pipe with Green Roof connection

Drainage Channel (CH)/Slot Drain (SD)

G

Surface Water Gully with integrated interceptor trap

FG

ACO shower gully (REF: 405817) with built in foul trap and class A15 cover or equivalent

SVP/SS

Soil Vent Pipe/ Stub Stack

P

Permeable Paving Outlet

Existing Manhole to be made redundant

Surface Water 450mm dia polypropylene flow control chamber with 30mm orifice to limit flows to max. 1.4 l/s and class A15 recessed cover

Rainwater pipe

Combined Water Pumping Chamber designed by others

Rising Main by others

Vent pipe by others

Electrical duct by others

Interceptor trap

Combined Water 1200mm dia Polypropylene Inspection Chamber with class A15 recessed and sealed 600mm cover

Design Notes:

1. Existing areas

a. Impermeable

- Roof = 48m²
- External paving 61.3m²

b. Permeable

- Grass = 59.3m²

2. Existing Runoff = 3.22l/s
Rational Method
Q=2.78x106.3x0.0109 = 3.22l/s
intensity calculated for 1 in 100 15min storm

3. Proposed areas

a. Impermeable

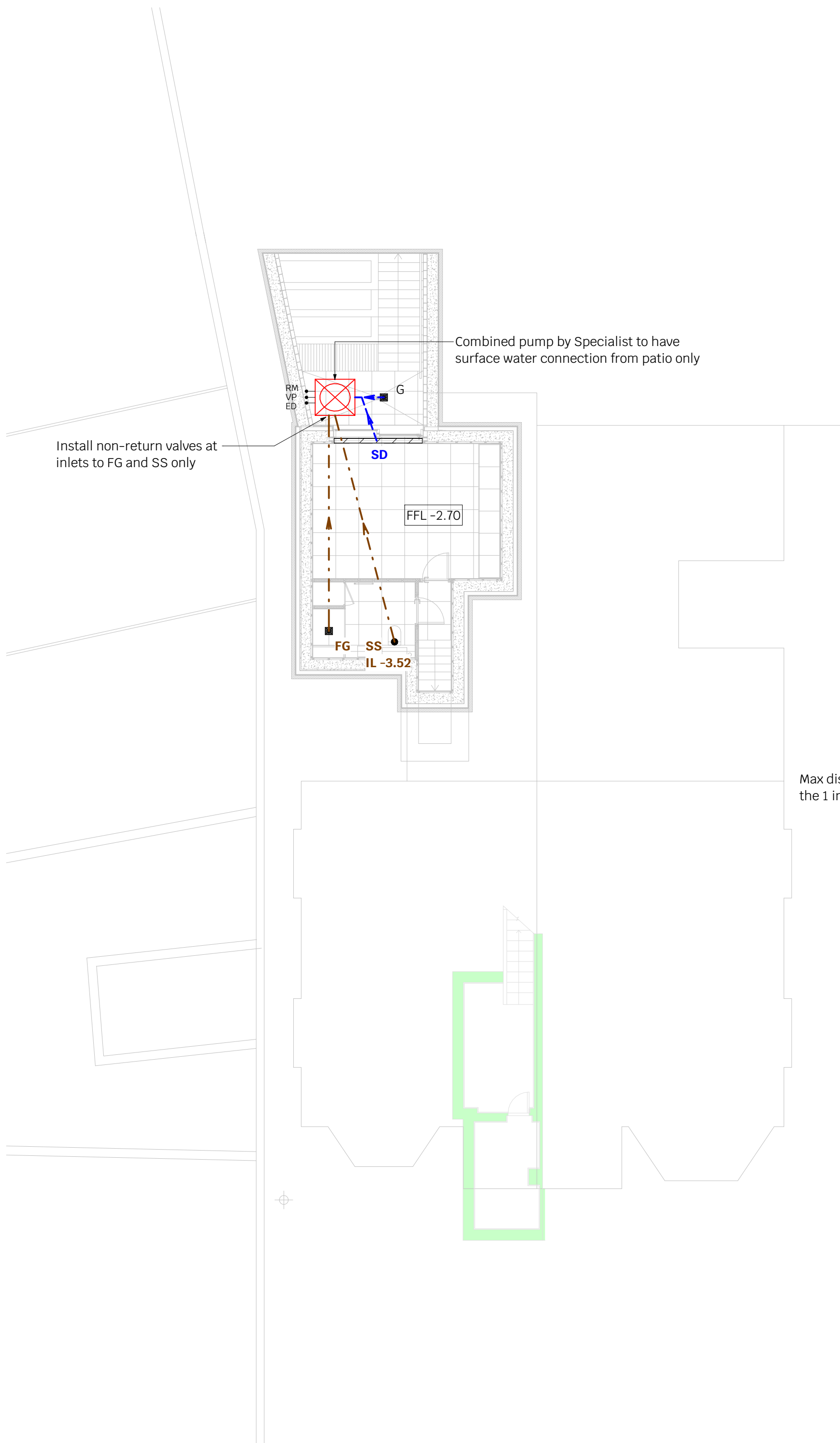
- Roof = 30m²

b. Permeable

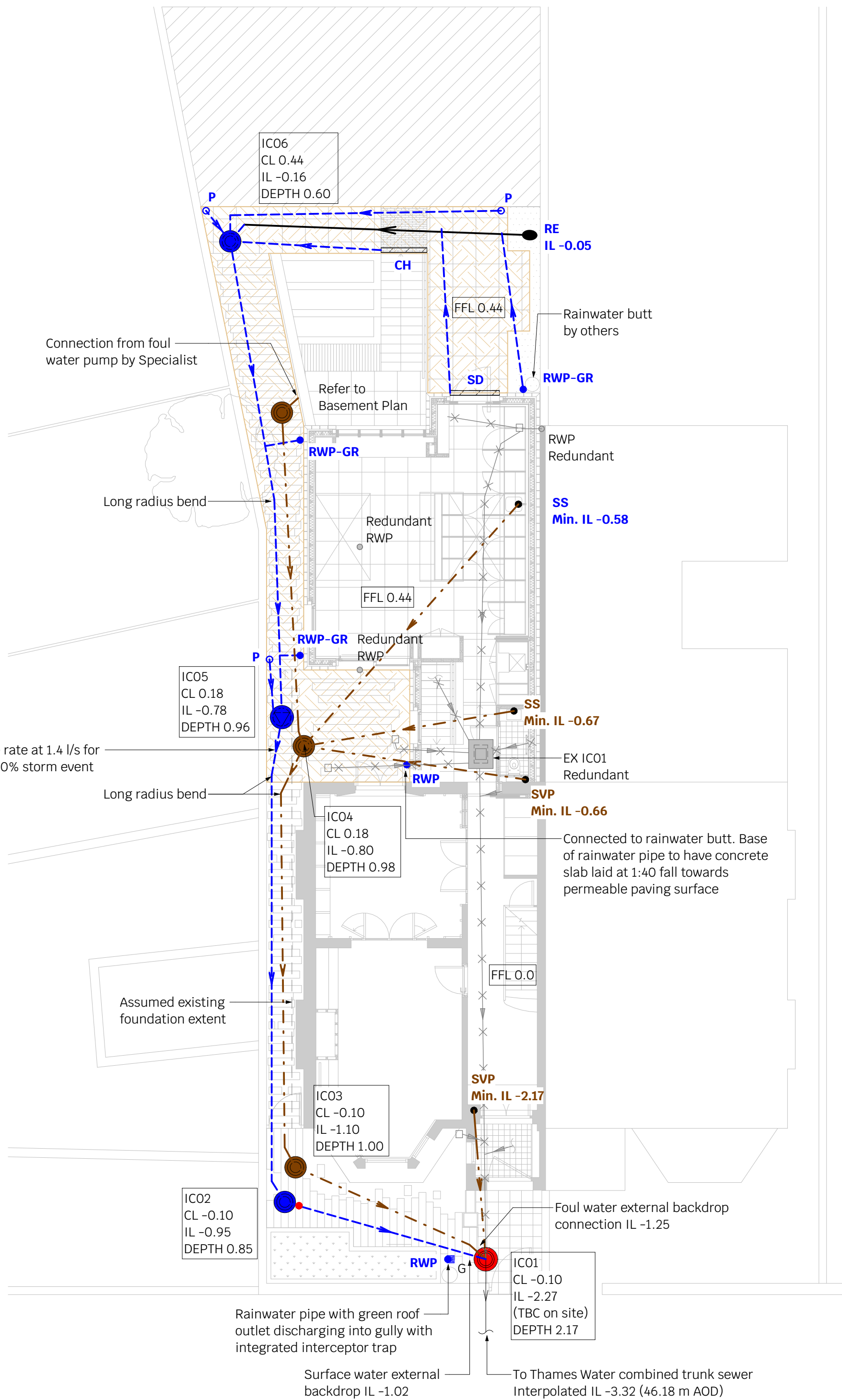
- Greenroof = 26m²
- Permeable paving 50m²

4. Proposed tunoff 1.4l/s for 1 in 100 +40% which equates to a 56% reduction of existing rates

5. Impermeable areas are reduced by 35%



Basement
Scale 1 : 100



Ground
Scale 1 : 100

3. Above Ordnance Datum levels obtained from environment.data.gov.uk/survey website available under the Open Government Licence v3.0. Measured Survey datum 0.00 inferred to be 49.5m AOD
4. This layout is based on the Measured Survey by GeoTop Surveys, Job no. S104-22, dated November 2022.
5. This layout is based on the Architectural Layout dwg titled NH110_Stage 4_GA_Plans_Sections, received by Symmetrys on 02/02/2024.
6. This drawing is to be read in conjunction with all relevant Architects & Engineers drawings and specifications.
7. All dimensions and levels shown are in metres unless indicated otherwise.
8. Above ground drainage points are shown indicatively only. Refer to Architect's and MEP's drawings.
9. All private drainage design and installation outside buildings to be carried out in accordance to BS EN 752.
10. All adoptable drainage design and installation to be carried out in accordance to Design and Construction Guidance (The Code).
11. All drainage design and installation inside buildings to be carried in accordance to BS EN 12056.
12. All drainage design and installation to comply to Building Regulations Part H.
13. Before starting work, the contractor is to check invert levels and positions of all existing drains, sewers, inspection chambers and manholes against drawings and report any discrepancies to the engineer.
14. All connection levels to existing sewers to be checked by contractor prior to commencement of pipe-laying, any discrepancies to be reported to the engineer.
15. The gradients indicated against the drain runs are approximate only. The contractor shall install drains to the invert levels shown for each manhole or other indicated position.
16. Manhole cover to be class A15 inside buildings and pedestrian only areas and B125 in trafficked areas, to BS EN 124:2015.
17. All drainage to be constructed in accordance with BS EN 1610 pipe bedding type:

a. Where cover to crown of pipe is less than 900mm in roads and less than 600mm in footways, bed & surround type Z

b. Where cover to crown of pipe is greater than 900mm in roads and greater than 600mm in footways, bed & surround type S

c. Where cover to crown of pipe is less than 300mm, bed & surround type Y
18. All private surface water and foul water pipes to be 100mm diameter uPVC, unless noted otherwise, in accordance with BS EN 1452.
19. Rodding eyes are to be laid to manufacturers minimum cover and depth to allow adequate fall from adjoining unit.
20. All foul pipe connections from gullies, SS and SVP to be 100mm dia. unless noted otherwise.
21. All RWPs to be installed with above ground access.
22. Drain and sewer systems shall be constructed in accordance with the design and with particular consideration of the following :

a. Health, safety and welfare of construction personnel and other people

b. Method of dealing with existing flows in part completed systems or when carry out works in existing sewers

c. Protection of the environment
23. The construction and testing of drains and sewers shall be carried out in accordance with BS EN 1610.
24. All waste arising from the maintenance of the drains and sewers shall be handled, stored and disposed of correctly to avoid pollution. Waste may be designated as hazardous/special waste and as such, the end user shall ensure that they comply with the Hazardous waste (England and Wales) regulation 2005. The end user shall follow the 'Waste management, the duty of care, a code of practice (Revised 1996)'. The end user shall ensure their waste does not escape from their control and/or is transferred only to a registered waste carrier to be sent for recycling.

Notes

1. This drawing is to be read in conjunction with all relevant architects & engineers drawings and specifications
2. Do not scale from this drawing

T1	15.02.24	MJY	SR	Tender Issue	
Rev	Date	Drwn	Chkd	Amendments	

Drawing status Tender

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Job Title
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Drawing Title

Drainage Plan

Project	Company	Zones	Level	Type	Role	Number
22276	- SYM	- XX	- B1	- DR	- C	0300
Scale: 1 : 100 @ A1		Drawn by: MJY		Revision :		
Date: Feb 2024		Checked: SR		T1		