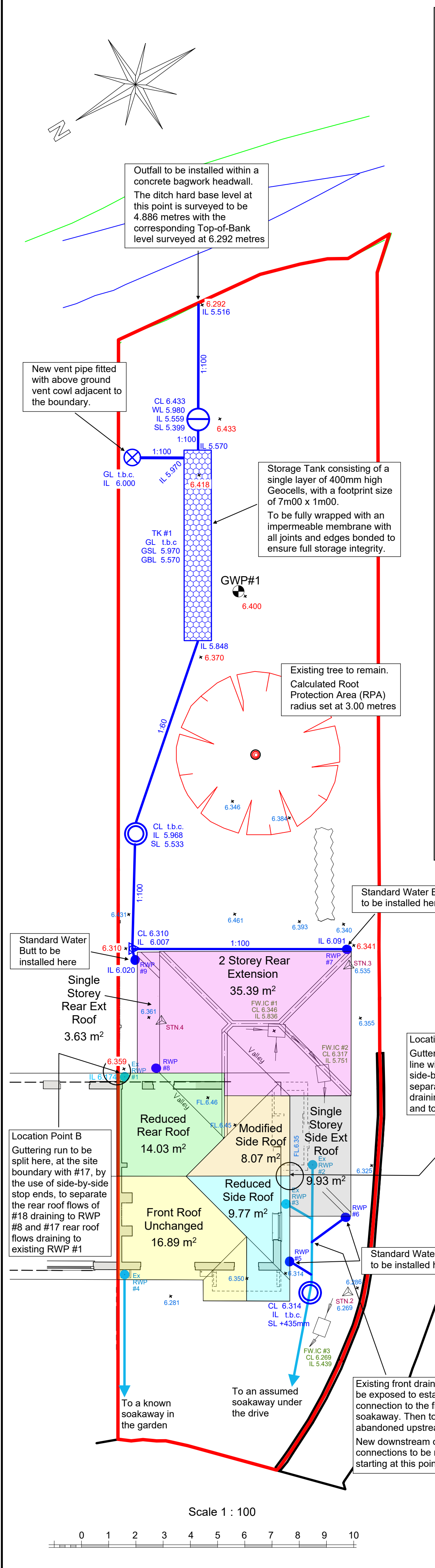




Surface Water Drainage Notes

Existing roof areas drainage:
The front roof (yellow) at 16.89 square metres drains to a known existing soakaway on the boundary with #17. This remains unchanged. It is noted that the identical roof area of #17 also drains via this same front rainwater down pipe (RWP) #4. There have been no reported drainage issues with this soakaway.
The side roof area (blue) at 16.98 square metres drains to an assumed soakaway under the driveway via RWP #3 . This pipe-work also picks up the small side lean-to roof area (blue) at 3.21 square metres draining via RWP #2. The combined roof flow area to this assumed soakaway is 20.16 square metres. There have been no reported drainage issues with this soakaway.
The rear roof area (green) at 16.80 square metres drains into the foul drain via RWP #1 at the head inspection chamber. It is proposed to remove this flow into the foul. It is noted that the identical roof area of #17 also drains via this same rear rainwater down pipe, however it is not practically possible to remove this neighbour's flow and it will be necessary to continue their discharge.

Proposed roof area drainage:
The front roof area (yellow) at 16.89 square metres remains unchanged in RWP #4.
A reduced side roof area (blue) at 9.77 square metres will drain via a new RWP #5 joining into the existing pipe-work to the assumed front soakaway.
The new single storey side extension (grey) at 9.93 square metres will drain via a new RWP #6 joining into the existing pipe-work to the assumed front soakaway. This combined new drainage flow of 19.70 square metres roof area provides a slight betterment to the assumed front soakaway.
The modified side roof area (orange) at 8.07 square metres is guttered to the main rear RWP #7 and drains to the storage tank via the silt trap.
The 2 storey rear extension (pink) at 35.39 square metres is guttered to RWP #7 for the southern half of the roof or is guttered to RWP #8 for the northern half of the roof. RWP #8 drops onto the roof of the very small single storey rear extension.
The reduced rear roof area (green) at 14.03 square metres is guttered to RWP #8.
The single storey part of the rear extension (pink) at 3.63 square metres, picking up RWP #8, drains via RWP #9 to the storage tank via the silt trap.
The total contributing roof areas draining to the storage tank is 61.12 square metres.
Standard Rainwater Butts are to be installed on all new RWPs #5, #6, #7 and #9, whilst they are also recommended to be installed on both existing RWPs #1 and #4 if possible, though not mandatory.

Special guttering requirements will be required :
Location point A, in line with ridge, to separate the side roof areas to drain via RWP #5 into the existing assumed front soakaway and via RWP #7 into the proposed storage tank.
Location point B, at the boundary with #17 to ensure that all the reduced existing rear roof areas of #18 drain via RWP #8 to the storage tank, whilst maintaining the flow from the existing rear roof area of #17 to its existing at RWP #1.

Existing rainwater down pipes RWPs #2 and #3 are to be removed whilst maintaining flows into RWPs #1 and #4.
New rainwater down pipes RWPs #5 and #6 will drain into the assumed existing front soakaway, whilst new RWPs #7, #8 and #9 will drain into the proposed storage tank via a new silt trap.

It is not proposed to install a silt trap for RWP #4, the existing unchanged front roof area, for practical considerations.

It is proposed to install a new silt trap into the existing pipe-work, taking RWPs #5 and #6, draining to the assumed front soakaway. With a minimum sump depth of 435mm, its base level to be determined once the invert level of the pipe-work has been established. The cover and frame loading class to be to BS EN 124 B125.

For all the other surface water chambers, in the rear garden, the cover and frame loading class to be to BS EN 124 A15.

The attenuation chamber is of an orifice plate construction of 20mm diameter, designed for an agreed (Arun DC drainage engineers) 0.5 litres / second flow for all storm events, to account for extremely small catchments. It has an integral screen to protect the orifice and a weir-over set at 5.980 metres AOD, the storage tank soffit level plus 10mm.

The outfall is proposed to be a concrete bagwork structure, however, since the western bank along the boundary of the site is in a very poor condition, it is proposed to extend the bagwork northwards and southwards across the full extent of the site rear eastern boundary to stabilise the site western ditch bank.

The invert level at the existing RWP #1 is at 6.174 metres AOD and this is proposed to connect, as an existing flow, to a new foul inspection chamber within the side path at the southern corner. The invert level of this new IC will be very close to the invert level of IC #3 which it will replace, and which was surveyed at 5.754 metres AOD. This will have a fall of ~423mm over a distance of ~9.00 metres give an acceptable fall of 1 in 21. This new connecting pipe-work will have to cross the foundations of the rear extension and will have to have suitable lintels to provide structural support. This is to be subject to detailed design at Building Control stages by others.

KEY

Proposed Geocellular Attenuation Tank TK#1 (rear).
To be 7m00 x 1m00 x 400mm deep having a footprint area of 7.00 square metres.
PolyStorm-R PSM1A GeoCells each of 1000mm x 500mm x 400mm or similar approved.
Tank to be fully wrapped with Polypipe Permavoid 1.0mm PP polypropylene or Wrekin 0.6mm HDPE polyethylene impermeable membrane or similar approved and overlap sealed at the top and at the 100mm Pipe Connections.
All joints to be bonded by extrusion bead welding not taped to ensure water integrity.

Proposed 100mm diameter surface water vent cowl.
Osma S PVCU 110 type 4S310 or similar approved.

Proposed 250mm diameter surface water inspection chamber.
Osma shallow IC or similar approved.
Cover & Frame loading class A15 to BS EN 124

Proposed silt trap inspection chamber.
Polypipe Ridgistor Basic or similar approved.
Minimum Sump Depth to be 435mm.
Cover & Frame loading class to BS EN 124 A15 for rear garden soft landscaped area B125 for front driveway and parking area

Proposed Level Invert Flow Control Chamber
Sel Environmental SUDS02005
Controlflow 500 Series or similar approved.
Orifice size at 20mm diameter.
Fitted with integral weir baffle and filter.
Design Hydraulic Head at 350mm for a 1% AEP Event + Climate Change addition.
Sump depth 160mm with Cover & Frame loading class to BS EN 124 A15

GWP
Groundwater Monitoring Test Point.

Proposed surface water drainage.
100mm diameter PVC pipe.
Minimum fall of 1:100 or as detailed on the layout.

GL ##### Ground level at detailed items
CL ##### Cover level of surface water chambers
BL ##### Base level of surface water chambers
SL ##### Sump level surface water chambers
IL ##### Invert level of surface water drains
GSL ##### Soffit (top) level of Geocell storage tank structure
GBL ##### Base level of Geocell storage tank structure
WL ##### Overflow weir level at attenuation chamber

+ 6.325 Topographical Survey levels are to AOD unless otherwise stated
+ 6.400 MGS Surveyed levels are to AOD unless otherwise stated

Mate GeoTechnic Services

01	Original	RC	28-05-25
Rev.	Description	Drm.	Date

Project
Side and Rear Extension
#18 West View Drive
Yapton
BN18 0JR

Client
Mr & Mrs Roberts-Davies
Drawing Title
Surface Water
Drainage Layout

This drawing is copyright.
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Scale	As Shown	Drawing Original	A2
Drawing Number	MGS - Y/56/24 - rev01		

Existing Roof Areas #17 and #18 West View Drive