## DRAINAGE STRATEGY
## FOUL & STORM WATER DESIGN -

GENERAL - The storm water drainage scheme shown is designed to conform with the those requirements as set out in SuDS manual CIRIA document 753, ensuring run off water is source controlled appropriately.

Foul water is shown as connecting to a public sewer but may connect via a nearer public or indirectly through a private system subject to further detailed survey. Note, NOT ALL PUBLIC SEWERS ARE INDICATED ON THE SEWERAGE AUTHORITY MAPS.

STORM WATER - The existing greenfield site measures some ha in area. It is located in flood zone 1 area for fluvial and tidal flooding. The proposed development adds offer the following areas:-

| | |
|---|---|
| Red line boundary area | 1233 sq.m |
| Predevelopment soft area | 1233 sq.m |
| | |
| House roof area | 260 sq.m |
| New car parking area | 75 sq.m |
| Paving at front of houses | 71 sq.m |
| Patios at rear of houses | 62 sq.m |
| Soft areas | 765 sq.m |

**Infiltration rates -** The design utilises infiltration which has been tested on site with a design figure of 1.95 m/s for the porosity rate. Infiltration indicates a drop in water level of 130mm in 1.15 hours. Groundwater monitoring has been carried out with levels recorded as shallow as 1.45m.

**Roof** - The roof downpipes from the front of the houses shall be drained through a system of pipes and catchpits into shallow geocrate soakways beneath the car parking areas.

The roof downpipes at the rear of the houses will drop to low level channels with a rain diverter to a 210 lit water butt. The channel will then drain to a raingarden of 150mm depth and area of 20% of the contrbuting roof of , to provide 20% of the roof area, as required in the UK Raingarden Design Guidance.

**Geocrate Soakaway** - The soakaways located beneath the parking areas will assist in draining the parking bays and front portion of the house roofs. They will be a max of 500mm in depth and constructed to detail no. 7.

**Raingardens** - The raingardens will be max 150mm in depth and planted with various species as listed below. The area of the garden will match the 20% of the contributing roof area of 5 sq.m as a minimum but must be 7.5 sq.m toofter the 100 year + 45% climate change event. See detail no. 11 also.

DESIGN EXCEEDANCE FLOWS - Where design storms and attenuation volumes are exceeded, such flows will run down the road towards the lowest part of the site and to the highway.

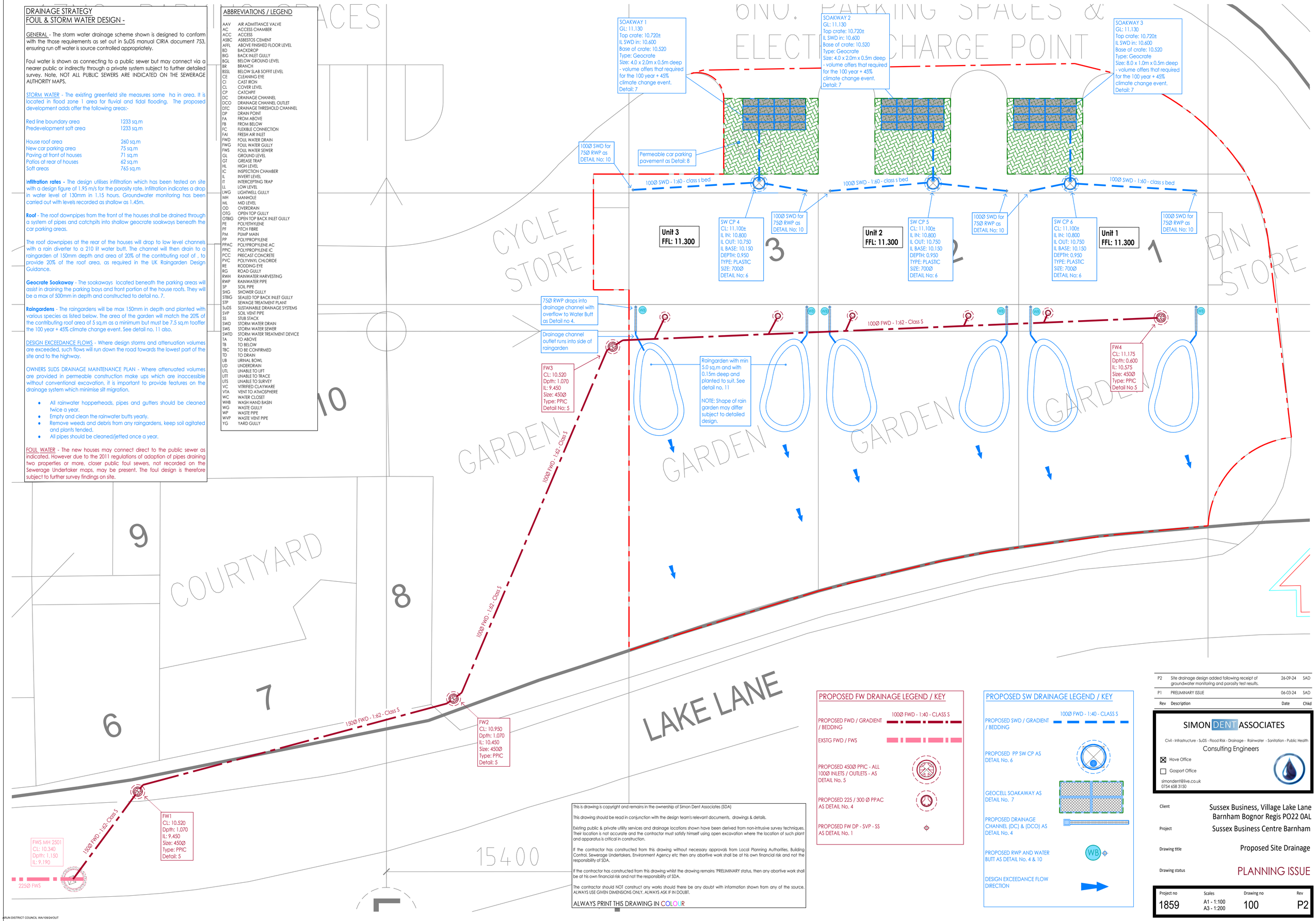
OWNERS SUDS DRAINAGE MAINTENANCE PLAN - Where attenuated volumes are provided in permeable construction make ups which are inaccessible without conventional excavation, it is important to provide features on the drainage system which minimise silt migration.

- All rainwater hopperheads, pipes and gutters should be cleaned twice a year.
- Empty and clean the rainwater butts yearly.
- Remove weeds and debris from any raingardens, keep soil agitated and plants tended.
- All pipes should be cleaned/jetted once a year.

FOUL WATER - The new houses may connect direct to the public sewer as indicated. However due to the 2011 regulations of adoption of pipes draining two properties or more, closer public foul sewers, not recorded on the Sewerage Undertaker maps, may be present. The foul design is therefore subject to further survey findings on site.

## ABBREVIATIONS / LEGEND

| | |
|---|---|
| AAV | AIR ADMITTANCE VALVE |
| AC | ACCESS CHAMBER |
| ACC | ACCESS |
| ASBC | ASBESTOS CEMENT |
| AFFL | ABOVE FINISHED FLOOR LEVEL |
| BD | BACKDROP |
| BIG | BACK INLET GULLY |
| BGL | BELOW GROUND LEVEL |
| BR | BRANCH |
| BSSL | BELOW SLAB SOFFIT LEVEL |
| CE | CLEANING EYE |
| CI | CAST IRON |
| CL | COVER LEVEL |
| CP | CATCHPIT |
| DC | DRAINAGE CHANNEL |
| DCO | DRAINAGE CHANNEL OUTLET |
| DTC | DRAINAGE THRESHOLD CHANNEL |
| DP | DRAIN POINT |
| FA | FROM ABOVE |
| FB | FROM BELOW |
| FC | FLEXIBLE CONNECTION |
| FAI | FRESH AIR INLET |
| FWD | FOUL WATER DRAIN |
| FWG | FOUL WATER GULLY |
| FWS | FOUL WATER SEWER |
| GL | GROUND LEVEL |
| GT | GREASE TRAP |
| HL | HIGH LEVEL |
| IC | INSPECTION CHAMBER |
| IL | INVERT LEVEL |
| IT | INTERCEPTING TRAP |
| LL | LOW LEVEL |
| LWG | LIGHTWELL GULLY |
| MH | MANHOLE |
| ML | MID LEVEL |
| OD | OVERDRAIN |
| OTG | OPEN TOP GULLY |
| OTBIG | OPEN TOP BACK INLET GULLY |
| PE | POLYETHYLENE |
| PF | PITCH FIBRE |
| PM | PUMP MAIN |
| PP | POLYPROPYLENE |
| PPAC | POLYPROPYLENE AC |
| PPIC | POLYPROPYLENE IC |
| PCC | PRECAST CONCRETE |
| PVC | POLYVINYL CHLORIDE |
| RE | RODDING EYE |
| RG | ROAD GULLY |
| RWH | RAINWATER HARVESTING |
| RWP | RAINWATER PIPE |
| SP | SOIL PIPE |
| SHG | SHOWER GULLY |
| STBIG | SEALED TOP BACK INLET GULLY |
| STP | SEWAGE TREATMENT PLANT |
| SuDS | SUSTAINABLE DRAINAGE SYSTEMS |
| SVP | SOIL VENT PIPE |
| SS | STUB STACK |
| SWD | STORM WATER DRAIN |
| SWS | STORM WATER SEWER |
| SWTD | STORM WATER TREATMENT DEVICE |
| TA | TO ABOVE |
| TB | TO BELOW |
| TBC | TO BE CONFIRMED |
| TD | TO DRAIN |
| UB | URINAL BOWL |
| UD | UNDERDRAIN |
| UTL | UNABLE TO LIFT |
| UTT | UNABLE TO TRACE |
| UTS | UNABLE TO SURVEY |
| VC | VITRIFIED CLAYWARE |
| VTA | VENT TO ATMOSPHERE |
| WC | WATER CLOSET |
| WHB | WASH HAND BASIN |
| WG | WASTE GULLY |
| WP | WASTE PIPE |
| WVP | WASTE VENT PIPE |
| YG | YARD GULLY |




### PROPOSED FW DRAINAGE LEGEND / KEY

- PROPOSED FWD / GRADIENT / BEDDING — 100Ø FWD - 1:40 - CLASS S
- EXSTG FWD / FWS
- PROPOSED 450Ø PPIC - ALL 100Ø INLETS / OUTLETS - AS DETAIL No. 5
- PROPOSED 225 / 300 Ø PPAC AS DETAIL No. 4
- PROPOSED FW DP - SVP - SS AS DETAIL No. 1

### PROPOSED SW DRAINAGE LEGEND / KEY

- PROPOSED SWD / GRADIENT / BEDDING — 100Ø FWD - 1:40 - CLASS S
- PROPOSED PP SW CP AS DETAIL No. 6
- GEOCELL SOAKAWAY AS DETAIL No. 7
- PROPOSED DRAINAGE CHANNEL (DC) & (DCO) AS DETAIL No. 4
- PROPOSED RWP AND WATER BUTT AS DETAIL No. 4 & 10
- DESIGN EXCEEDANCE FLOW DIRECTION

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This drawing should be read in conjunction with the design team's relevant documents, drawings & details.

Existing public & private utility services and drainage locations shown have been derived from non-intrusive survey techniques. Their location is not accurate and the contractor must satisfy himself using open excavation where the location of such plant and apparatus is critical in construction.

If the contractor has constructed from this drawing without necessary approvals from Local Planning Authorities, Building Control, Sewerage Undertakers, Environment Agency etc then any abortive work shall be at his own financial risk and not the responsibility of SDA.

If the contractor has constructed from this drawing whilst the drawing remains 'PRELIMINARY status, then any abortive work shall be at his own financial risk and not the responsibility of SDA.

The contractor should NOT construct any works should there be any doubt with information shown from any of the source. ALWAYS USE GIVEN DIMENSIONS ONLY. ALWAYS ASK IF IN DOUBT.

ALWAYS PRINT THIS DRAWING IN COLOUR

| Rev | Description | Date | Chkd |
|---|---|---|---|
| P2 | Site drainage design added following receipt of groundwater monitoring and porosity test results. | 26-09-24 | SAD |
| P1 | PRELIMINARY ISSUE | 06-03-24 | SAD |

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| | |
|---|---|
| Client | Sussex Business, Village Lake Lane Barnham Bognor Regis PO22 0AL |
| Project | Sussex Business Centre Barnham |
| Drawing title | Proposed Site Drainage |
| Drawing status | PLANNING ISSUE |

| Project no | Scales | Drawing no | Rev |
|---|---|---|---|
| 1859 | A1 - 1:100<br>A3 - 1:200 | 100 | P2 |