



LEGEND

- CL Invert level
- IL Sump level
- SL Soakaway
- S/A Reverse Action Interceptor
- RAI backdrop
- bd rodding eye
- re soil & vent pipe (rodable)
- wp waste and vent pipe (rodable)
- wp waste pipe (rodable)
- ss sub stack (rodable)
- sg shower gully (rodable)
- sp silt pit (rodable)
- ra rodding access
- ra 4500 x 900 deep precast concrete trapped, rodable, road gully with grating area greater than 900cm²
- fg floor gully (rodable)
- rwp rainwater downpipe (rodable)
- psdp primary siphonic downpipe
- ssdp secondary siphonic downpipe
- vp vent pipe (oil separator)
- av air admittance valve
- TOB Top of base level
- VC Cast Iron
- CI Vitreous Clay
- R Flexible 'Rock' joint
- PPIC Polypropylene inspection chamber

- Drainage Notes**
- All private drainage works are to be carried out in accordance with BS EN 752:2008 and Building Regulations Part H.
 - All drainage works within adoptable areas are to comply with the requirements of the Water UK/Water Research Centre publication 'Sewers for Adoption' (current edition).
 - All connections to existing public sewers to be in accordance with and to the satisfaction of the Local Authority.
 - Concrete protection (bedding class 'Z') to pipework to be provided as follows:
 - all pipework within soft areas with a cover less than 600mm.
 - all pipework beneath roads, car parks and all other trafficked hardstanding areas with a cover less than 1200mm.
 - all pipework adjacent to existing and proposed trees/vegetation in landscaped areas. An expansion joint shall be provided at all joint locations.
 - All below ground foul drainage from within building footprint to be 100mm dia. unless stated otherwise. Refer to separate note for recommended minimum gradients. All below ground surface water drainage from RWP locations to main carrier drains to match the diameter of the downpipe (to Architect's and specialist contractor's details) unless stated otherwise. All below ground drainage from road gullies to be 150mm dia. unless stated otherwise.
 - All pipework in manholes are to be laid soffit to soffit unless noted otherwise. All chamber invert levels, shown on the drawing, are for the outgoing pipe.
 - All internal drainage to be to the Architect's and M & E Engineer's drawings and details.
 - The position and invert levels of all existing drains, sewers and manholes to be confirmed by the contractor prior to the commencement of the proposed works and any discrepancies reported immediately to Capita Property and Infrastructure Ltd.
 - All pipes are to have a class 'S' bed and surround unless noted otherwise (see note 4 above).
 - All concrete pipes are to be high strength and to be in accordance with BS EN 1916 and BS 5911.
 - All vitrified clay pipes are to be in accordance with BS EN 295.
 - Refer to drawing nos. xxxxxx-CA-0-GF-DR-S-xxx and xxx for drainage construction details.
 - For setting out of foul and rainwater outlets refer to the Architect's drawings.
 - This drawing to be read in conjunction with all other relevant Engineer's and Architect's drawings, specifications and documentation.
 - The contractor is to allow for grease traps in the kitchen and other appropriate areas.
 - Drainage channels and silt pits to be designed by a specialist manufacturer for critical storms of 1:5 year return period, to suit site conditions and in accordance with load class requirements as shown on the plan. Design to be submitted for comment to Capita Property and Infrastructure Ltd. prior to ordering.
 - All external finished levels and manhole cover levels shown on this drawing are indicative and subject to adjustment on site to suit the finished ground levels. For final levels refer to the Architect's drawings.
 - All levels are in metres and all dimensions are in millimetres unless noted otherwise.
 - Any coordinates provided for manholes or inspection chambers are relevant to the main drainage run intersection and not the centre of the manhole.
 - Chalk and limestone are not to be used as bedding or backfilling material in soils with a pH value less than 7.
 - A CCTV drainage survey is to be carried out both at the pre-commencement of construction and at the completion of the contract to prove the integrity of the as-built drainage systems. At the completion of the contract this is to be carried out prior to the issue of the practical completion certificate.
 - Sewers, manholes, gullies, drainage channels and silt pits should be inspected at 6 monthly intervals and cleaned out at 12 monthly intervals. A full CCTV survey should also be carried out at 10 yearly intervals. Refer also to specialist drainage channel and petrol interceptor manufacturer's information and maintenance requirements. In all instances, inspection and clearing should be carried out only by a specialist contractor and in accordance with the guidelines given in 'Safe Working in Sewers and at Sewage Works' published by National Joint Health and Safety Committee for the Water Services.

Refer to the Architect's details for the internal, above ground, drainage layout. Recommended minimum gradients for below ground foul drainage connections: 100 dia. at 1:40, 150 dia. at 1:50 with min 15 no. wc connection, 150 dia. at 1:150 with min 5 no. wc connections. Final foul drainage connections to be coordinated with the Architect's internal drainage layout plans.

Important Note:
The Contractor is to exercise extreme care when excavating for drainage pipes and manholes and not to undermine existing or new column bases and/or strip footings already cast. Refer also to note 4 on this drawing and 'concreting of drains laid near foundations' detail on drawing xxxxxx-CA-0-GF-DR-S-xxx.

For new construction, column foundations/strip footings must be taken down to below invert level of any nearby, adjacent services (drainage, gas, water, etc.).

Use of Thermoplastic Pipes
If thermoplastic pipes are to be used they are to be of the structured wall type and shall comply with BS 4-35-01 and BS EN 13476 and must be BS1 Kitemarked (e.g. Polysewer/Rigidsewer by Polypipe Civils, Ultrafib by Wavin or similar). Pipes are to be installed strictly in accordance with the manufacturer's requirements and recommendations. Note: all installation must be in accordance with Building Regulations Part H, BS EN 752:2008, Specification for Highway Works and all relevant British and European Codes of Practice.

28.050m x 12.050m x 0.800m deep 'VersaVoid' modular geocoid system, by Environmental Sustainable Solutions Ltd. (ESS) or similar approved, wrapped in an inner non-woven type geotextile membrane, wrapped in a waterproof butyl membrane and protected by a heavyweight, needle punched, nonwoven type geotextile membrane all to the manufacturer's recommendations. The membrane is to be sealed at all edges and where the pipe enters and exits the membrane. (Cellular blocks 500mm x 500mm in plan x 250mm increments (+50mm) deep). To be installed strictly in accordance with the manufacturer's requirements and recommendations. Estimated storage volume = 250m³ based on 39 l/sec allowable off-site discharge. Cellular storage to be bedded on min. 100mm thick coarse sand blinding and covered with a 100mm thick coarse sand protection layer. Compacted backfill in accordance with Capita's specification. Manufacturer to provide layout and detail drawings for construction which should include details of venting and suitable access points for inspection and maintenance. Manufacturer to provide calculations proving structural suitability taking cognisance of the applied construction loads (temporary and permanent) and the prevailing ground conditions as detailed in the Site Investigation Report. Design based on 1:100 year return period +30%CC. Top of cellular storage = 722. Bottom of cellular storage = ??? All proposed alternative products to satisfy the following:
1. To be in accordance with the recommendations stated in CIRIA C680 - Structural design of modular geocoid drainage tanks.
2. Material partial safety factor of 2.75 to be used in design calculations.
3. Independent load testing certification to be provided including compressive strength, lateral strength and long term creep testing.
4. Design and product PI required.
5. CA details to ensure compliance with the above.

Class 1 bypass separator (pipe no. xxx) with high level audible alarm systems for oil and silt levels, bedded and surrounded in concrete to manufacturer's details. Type 'NSB4' - 225 dia. pipework. Where appropriate, in hardstanding areas, allowance to be made for R.C. cover slabs over unit with 1000mm min. bearing either side.
CL = xxxxxx
IL in = xxxxxx
IL out = xxxxxx

Drainage layout and pipe sizes are all preliminary and not for construction. Adjustments may follow final design calculations.

This drawing is copyright and owned by Capita, and is for use on this site only unless contractually stated otherwise.
DO NOT SCALE this drawing (printed or electronic versions). Contractors must check all dimensions from file.
All other design team elements, where indicated, have been imported from the consultant's drawings and reference should be made to the individual consultant drawings for exact settings out, size and type of equipment.
Discrepancies and/or ambiguities within this drawing, between it and information given elsewhere, must be reported immediately to the architect for clarification before proceeding.
All works are to be carried out in accordance with the latest British Standards and Codes of Practice unless specifically directed otherwise in the specification.
All settings out to be in accordance with the Architect's details, the Architect's drawings to take precedence over any settings out shown on this drawing.
SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION
Refer to the relevant Construction (Design and Management) documentation where applicable.
It is assumed that all works on this drawing will be carried out by a competent contractor, working where appropriate to an approved method statement.

Rev	Date	By	Description	Rev check
01	08.02.18	GM	Filter drain in soccer and running track areas relocated. Filter drain adjacent to the fire tender route realigned at building end. Load class of drainage channels upgraded from B125 to B400. Drainage channel added at hard court emergency access. Filter drain added around hard court area on 3 no. sides. Foul outlets and RWP locations updated in line with the Architect's latest contract. 2 no. RWP/CA added (F3 and F4) and remaining manholes renumbered. Surface water run 24-02 relocated outside of soft areas at Architect's request. Manhole S8 added and renumbering manholes renumbered. Client and HCC logos added.	SG

Drawing status: PRELIMINARY

Client: **INTERSERVE CONSTRUCTION LIMITED**
 INTERSERVE HOUSE - AIRFIELD WAY
 CHRISTCHURCH BH23 3TF
 Project: **BOURLEY PARK PRIMARY SCHOOL**

Drawing: **FOUL AND SURFACE WATER DRAINAGE STRATEGY**

Scale at A0: 1:250
 Project No: CS/094035
 Drawing ID: 094035 - CA - 0 - GF - DR - S - 001 - P01

Hampshire County Council
 Date: Feb 2018
 Drawn: G. Males
 Checked: NRB

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