## Notes:

1. This drawing is to be read in conjunction with all relevant drawings, specifications and documentation.
2. The position, size and levels of all drains are to be confirmed on site prior to the commencement of the works and any discrepancies reported immediately to the Engineer.
3. Do not scale from this drawing, work to dimensions or co-ordinates provided. All levels are in metres and all dimensions are in millimetres, unless otherwise noted.
4. The contractor shall allow for the protection, temporary and permanent support and diversion works as necessary, to all existing services to the satisfaction of the public utilities.
5. The contractor shall allow for dealing with surface water run-off into excavations and from groundwater by means of sumps, pumping and de-watering as appropriate, in order to keep the excavation as reasonably dry as possible during the construction of the works.
4. All private drainage within the site is to comply with the requirements of BSEN752 and Building Regulations Part H.
5. Concrete protection to pipework is to be provided as follows:
a) All pipework within pedestrian/soft areas with less than 600mm cover.
b) All pipework subject to vehicular overrun with less than 1.2m cover.
6. All pipework within manholes are to be laid soffit to soffit (U.N.O). All chamber invert levels are for the outgoing pipe levels. Backdrop pipework shall be connected at soffit to soffit with the rodding access level specified.
7. Any gradients of drains indicated are indicative only and the Contractor shall install the drains to the specified levels shown for each manhole (U.N.O). Catchpit invert levels are for the outgoing pipe with the sump level specified separately.
8. Co-ordinate setting out information for manholes is to the intersection the drains and not the centre of the manhole.
9. Cover levels of the manholes are provisional and subject to adjustment on site to suit the finished ground levels. All external works construction areas to be as located by the architect.
10. Manhole covers and frames are to be in accordance with BSEN124 and the following:
a) Vehicular Areas: Class D400 (E600 in service yard locations), double triangular, 150mm deep ductile iron cover and frame with three point cover seating, badged FW or SW for Foul or Surface Water drainage.
b) Pedestrian Areas: Class B125, 100mm deep, badged FW or SW for Foul or Surface Water drainage.
11. Double seal manhole covers and frames are to be used on internal foul water drainage chambers. Finish to be confirmed by Architect
12. Heavy duty cover slabs are to be used within vehicular trafficked areas.
13. Gully gratings and steel channel covers are to be in accordance with BSEN124 as follows:
a) Areas subject to vehicular overrun: Class D400 minimum. E600 in service yard locations.
b) Areas not subject to regular vehicle overrun (adjacent to kerbs etc): Class C250.
c) Gully grates adjacent to kerbs shall be hinged on the side of the traffic direction (left hand side).
14. Positions and sizes of above ground foul and surface water drainage connections are to be confirmed prior to construction with the Architect and M&E Engineer.
15. Drainage channels are to be ACO Qmax, ACO Multidrain as specified or similar approved. Type and size of channel is to be approved by the Engineer in writing prior to ordering.
16. All brickwork in connection with drainage is to be solid Class B Engineering Brick to BS3921.
17. All precast concrete pipes, chamber products and road gullies shall be to BS5911 and be Kitemarked.
18. Design chemical class for all insitu and precast concrete products shall be as stated in geotechnical report.`
19. All separators shall be in accordance with the Environment Agency document PPG3.
20. All below ground plastic/grp tanks shall be installed in accordance with the manufacturers instructions. They shall be provided with sufficient concrete surround to counter floatation and shall have a wall thickness adequate to resist the highest ground water level which could be encountered at their location.
21. All existing drainage/structures to be abandoned shall be broken out and removed from site, the excavation shall be backfilled with a suitable granular material to the required level. Alternatively, deep drains my be cleaned and grouted with a 1:10 cementitious grout, with structures broken down 1m below finished ground level and backfilled with a suitable granular material.
22. Where utility/land drainage trenches etc cross over drainage trenches , the contractor shall construct an impermeable barrier to prevent groundwater infiltrating into the drainage trench.
23. Upon completion of the works the contractor shall clean all drainage by jetting, removing all debris from site. no debris shall be permitted to enter the existing drainage system.
24. All works are assumed to be within public highway or within land owners lands & no works are required on third party land owners property.
25. All RWP, gully and channel connections to be 150mm dia U.N.O. and WPC to be 100mm dia. All are roddable at locations above ground level.
26. Design assumes that no water authority sewers or other drainage systems require modification, diversion or abandoning.
27. Backfill to all drainage trenches to be Class 6F1 material.
28. All works within the public highway to be reinstated to highway authority requirements.
29. Unless otherwise agreed all outfalls to ponds and watercourses to be propriatary PCC Units. Headwall details to be approved by local Internal Drainage Board where applicable.
30. Penstocks where indicated shall be electronically operated complete with power supply and connection (refer to service engineers drawings for cable and ducting etc.)
31. Syphonic break chambers (i.e. with SRWP entering) to be constructed with vented manhole covers. (waterway 2000 or similar approved)
32. No deep rooting trees/vegetation should be planted within 5.0m of any drainage works.
33. All WPC's, SRWP's and RWP's are shown indicatively. Locations shall be confirmed by others.
34. All manholes less than 1.5m deep are considered as none man entry and shall be maintained from ground level.
35. All sprinkler drain locations and flow rates to be confirmed by specialist. Potential local storage manholes for sprinkler discharge are to be confirmed following definition of system requirements.
36. Foul and surface water drainage will be laid using ESVC Hepseal, plastic Supersleve and plastic pipes to BS 65:1991. Drainage pipework internal to the building areas will be suspended from the ground floor slab with lightly reinforced concrete bed and surround as detailed on the standard details drawing.

### SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING

CONSTRUCTION

MAINTENANCE / CLEANING

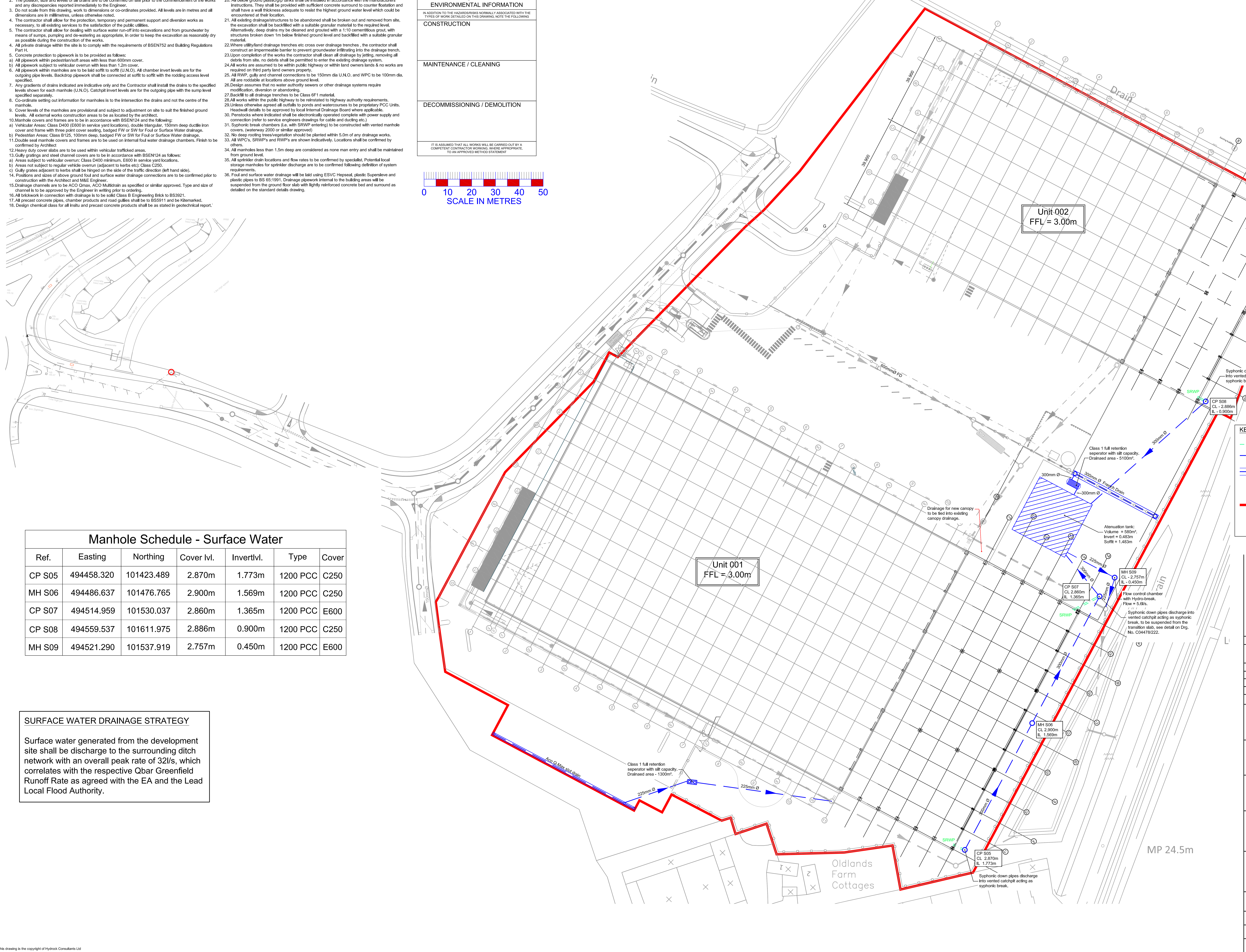
DECOMMISSIONING / DEMOLITION

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT

0 10 20 30 40 50
SCALE IN METRES

## Notes:

1. All dimensions are to be checked on site before the commencement of works. Any discrepancies are to be reported to the Architect & Engineer for verification. Figured dimensions only are to be taken from this drawing.
2. This drawing is to be read in conjunction with all relevant Engineers' and Service Engineers' drawings and specifications.


Unit 001
FFL = 3.00m
Unit 002
FFL = 3.00m
39.900
150mmØ
600mmØ FD
Drain
Aco Q-Max slot drain
Class 1 full retention seperator with silt capacity. Drainaed area - 1300m².
225mm Ø
225mm Ø
Drainage for new canopy to be tied into existing canopy drainage.
Class 1 full retention seperator with silt capacity. Drainaed area - 5100m².
300mm Ø
300mm Ø French Drain
300mm Ø
300mm Ø
Atenuation tank:
Volume = 580m³.
Invert = 0.483m
Soffit = 1.483m
SRWP
CP S08
CL - 2.886m
IL - 0.900m
Syphonic down pipes discharge into vented cathcpit acting as syphonic break.
225mm Ø
300mm Ø
225mm Ø
MH S09
CL - 2.757m
IL - 0.450m
CP S07
CL 2.860m
IL 1.365m
Flow control chamber with Hydro-break. Flow = 5.6l/s.
Syphonic down pipes discharge into vented catchpit acting as syphonic break, to be suspended from the transition slab, see detail on Drg. No. C04478/222.
SRWP
300mm Ø
MH S06
CL 2.900m
IL 1.569m
300mm Ø
SRWP
CP S05
CL 2.870m
IL 1.773m
Syphonic down pipes discharge into vented catchpit acting as syphonic break.
Oldlands Farm Cottages
MP 24.5m

**KEY:**

- Proposed syphonic pipe (designed by specialist)
- 300mmØ — Proposed SW Drainage
- Aco Qmax — Proposed channel Drain
- Proprietary sumped catchpit
- Site Boundary

## Manhole Schedule - Surface Water

| Ref. | Easting | Northing | Cover lvl. | Invertlvl. | Type | Cover |
|---|---|---|---|---|---|---|
| CP S05 | 494458.320 | 101423.489 | 2.870m | 1.773m | 1200 PCC | C250 |
| MH S06 | 494486.637 | 101476.765 | 2.900m | 1.569m | 1200 PCC | C250 |
| CP S07 | 494514.959 | 101530.037 | 2.860m | 1.365m | 1200 PCC | E600 |
| CP S08 | 494559.537 | 101611.975 | 2.886m | 0.900m | 1200 PCC | C250 |
| MH S09 | 494521.290 | 101537.919 | 2.757m | 0.450m | 1200 PCC | E600 |

### SURFACE WATER DRAINAGE STRATEGY

Surface water generated from the development site shall be discharge to the surrounding ditch network with an overall peak rate of 32l/s, which correlates with the respective Qbar Greenfield Runoff Rate as agreed with the EA and the Lead Local Flood Authority.

| Rev | Date | Description | By | Ckd |
|---|---|---|---|---|
| C2 | 04.10.17 | Final construction issue | RB | ME |
| C1 | 28.04.16 | Issued for Construction - Full retention seperator in Southern yard repositioned at the request of the contractor. | RB | ME |
| P2 | 24.04.16 | Revised as indicated by clouding | RB | ME |
| P1 | 29.03.16 | Issued as Preliminary | RB | ME |
| T1 | 16.12.16 | Issued for Tender | RB | ME |
| P1 | 09.12.16 | Issued for Planning | RB | ME |

Architect :
MICHAEL SPARKS ASSOCIATES

Hydrock
Hydrock Consultants Ltd
St Baldred's Hall
239 Ashley Road
Hale, Cheshire
WA15 9NE
T +44 (0)161 233 0746
manchester@hydrock.com
www.hydrock.com

Client :
BERICOTE

Project Title:
RRMC EXTENSION,
BOGNOR REGIS.

Drawing Title:
PROPOSED DRAINAGE
LAYOUT

Drawing Status:
FINAL CONSTRUCTION

Hydrock Job No: C04478

| Drawn | Checked | Scale @ A0 | Date | Issue Date |
|---|---|---|---|---|
| RMB | ME | 1:500 | 01.12.16 | 01.12.16 |

Drawing Number: 215
Revision: C2

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