-DRAINAGE KEY-

- Existing Foul Water Drain/Sewer
- Storm Water (Private Drain/Public Sewer)
- Rodding Point (Below Ground)
- Proposed SW Manhole
- Proposed SW Flow Control Manhole
- Proposed SW Channel Drain
- Proposed Diffuser Unit
- Proposed SW Headwall
- Permeable Pavement (Infiltration/Tanked)
- Foul Water (Private Drain/Public Sewer)
- Proposed FW Manhole
- Root Protection Zone (Refer to Arb Report)
- Ordinary Watercourse
- Ordinary Watercourse 5m Buffer

Refer to Architects drawings for further information on plot internal detailing, service points and threshold drains. Refer to Drawing 004 for Service Corridor.

EXISTING DRAINAGE ON SITE UNKNOWN.

THE CONTRACTOR IS RESPONSIBLE FOR DEALING WITH THE EXISTING DRAINAGE INFRASTRUCTURE AND REPORTING CONNECTIVITY & CONDITION TO ENGINEER.

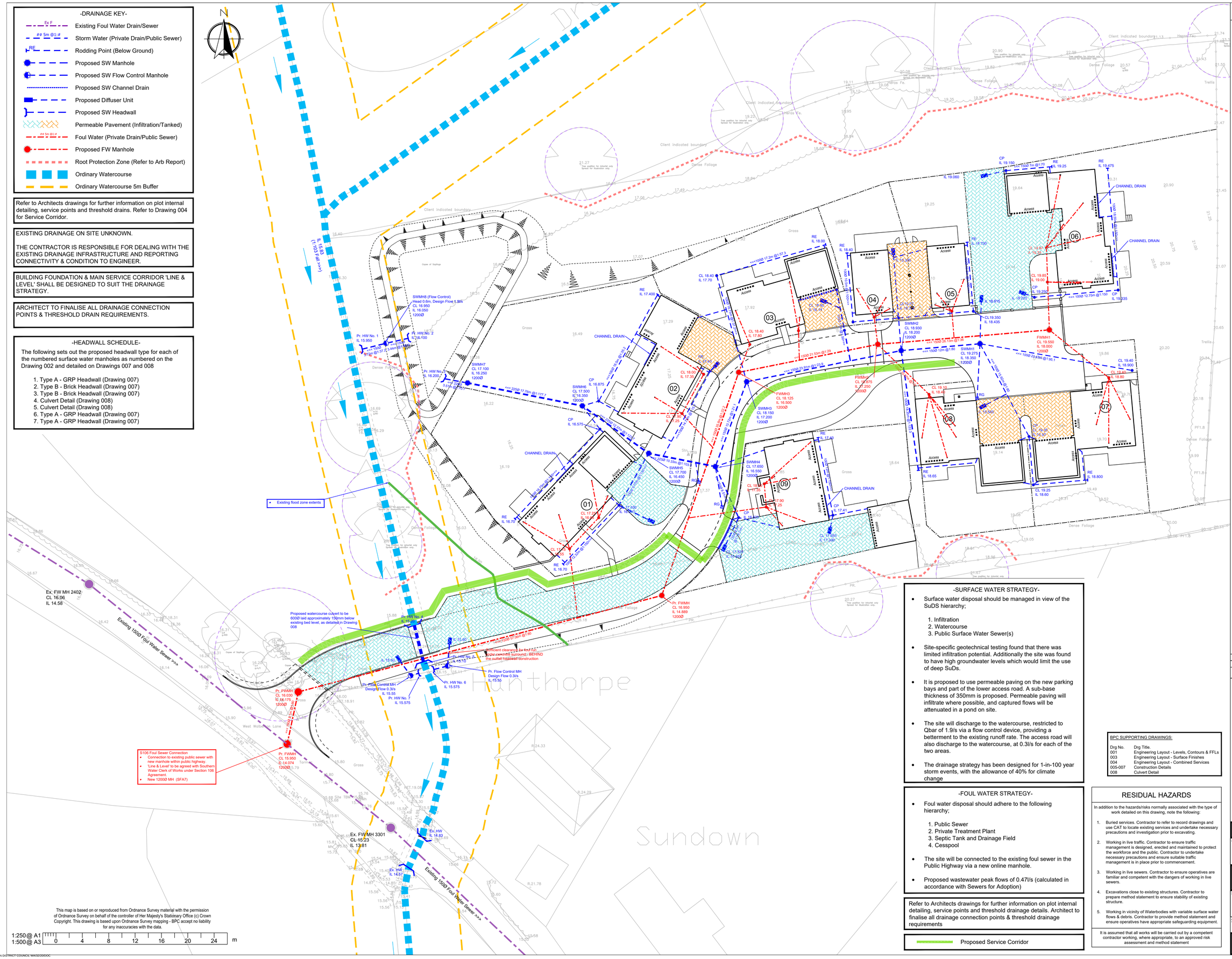
BUILDING FOUNDATION & MAIN SERVICE CORRIDOR 'LINE & LEVEL' SHALL BE DESIGNED TO SUIT THE DRAINAGE STRATEGY.

ARCHITECT TO FINALISE ALL DRAINAGE CONNECTION POINTS & THRESHOLD DRAIN REQUIREMENTS.

-HEADWALL SCHEDULE-

The following sets out the proposed headwall type for each of the numbered surface water manholes as numbered on the Drawing 002 and detailed on Drawings 007 and 008

1. Type A - GRP Headwall (Drawing 007)
2. Type B - Brick Headwall (Drawing 007)
3. Type B - Brick Headwall (Drawing 007)
4. Culvert Detail (Drawing 008)
5. Culvert Detail (Drawing 008)
6. Type A - GRP Headwall (Drawing 007)
7. Type A - GRP Headwall (Drawing 007)



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1:250 @ A1
1:500 @ A3
0 4 8 12 16 20 24 m

-SURFACE WATER STRATEGY-

- Surface water disposal should be managed in view of the SuDS hierarchy;
  1. Infiltration
  2. Watercourse
  3. Public Surface Water Sewer(s)
- Site-specific geotechnical testing found that there was limited infiltration potential. Additionally the site was found to have high groundwater levels which would limit the use of deep SuDs.
- It is proposed to use permeable paving on the new parking bays and part of the lower access road. A sub-base thickness of 350mm is proposed. Permeable paving will infiltrate where possible, and captured flows will be attenuated in a pond on site.
- The site will discharge to the watercourse, restricted to Qbar of 1.9/s via a flow control device, providing a betterment to the existing runoff rate. The access road will also discharge to the watercourse, at 0.3l/s for each of the two areas.
- The drainage strategy has been designed for 1-in-100 year storm events, with the allowance of 40% for climate change

-FOUL WATER STRATEGY-

- Foul water disposal should adhere to the following hierarchy;
  1. Public Sewer
  2. Private Treatment Plant
  3. Septic Tank and Drainage Field
  4. Cesspool
- The site will be connected to the existing foul sewer in the Public Highway via a new online manhole.
- Proposed wastewater peak flows of 0.47l/s (calculated in accordance with Sewers for Adoption)

Refer to Architects drawings for further information on plot internal detailing, service points and threshold drainage details. Architect to finalise all drainage connection points & threshold drainage requirements

Proposed Service Corridor

BPC SUPPORTING DRAWINGS:

Drg No.	Drg Title.
001	Engineering Layout - Levels, Contours & FFLs
003	Engineering Layout - Surface Finishes
004	Engineering Layout - Combined Services
005-007	Construction Details
008	Culvert Detail

RESIDUAL HAZARDS

In addition to the hazards/risks normally associated with the type of work detailed on this drawing, note the following:

1. Buried services. Contractor to refer to record drawings and use CAT to locate existing services and undertake necessary precautions and investigation prior to excavating.
2. Working in live traffic. Contractor to ensure traffic management is designed, erected and maintained to protect the workforce and the public. Contractor to undertake necessary precautions and ensure suitable traffic management is in place prior to commencement.
3. Working in live sewers. Contractor to ensure operatives are familiar and competent with the dangers of working in live sewers.
4. Excavations close to existing structures. Contractor to prepare method statement to ensure stability of existing structure.
5. Working in vicinity of Waterbodies with variable surface water flows & debris. Contractor to provide method statement and ensure operatives have appropriate safeguarding equipment.

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved risk assessment and method statement

A1

NOTES

1. This drawing is to be read in conjunction with all other Bright Plan drawings, and with all relevant Architect's and Engineer's drawings and specification. Any discrepancies found are to be reported immediately to the Engineer.
2. Bright Plan accepts no responsibility for inaccuracies in data provided by third parties such as topographic surveys or Ordnance Survey mapping.
3. Do not scale, work to figured dimensions only. All dimensions are in millimeters unless noted otherwise and all levels are in metres from the topographic survey datum.
4. Any information given regarding existing underground services is given in good faith after consultation with the relevant authority, however accuracy is not certain.
5. All dimensions to be checked on site. All details and dimensions relating to sub-contractors work must be checked and agreed between the sub-contractor or supplier and the general contractor.
6. The electronic information from this drawing can not be guaranteed as dimensionally drawn exact. Figured dimensions must be used for setting out and detailing. Brightplan logos and company information must be removed from copies if information is re-used.
7. The main contractor is responsible for the design of all temporary works, and is also responsible for the safe maintenance and stability of existing buildings at all times.
8. The main contractor is responsible for dealing with all occurrences of ground water during the construction period.
9. The contractor must comply with all current legislation relating to health & safety.
10. All products specified shall be installed in strict accordance with the manufacturers recommendations and instructions. If there are discrepancies between that information and the details on any RGP drawings, the manufacturers instructions must be used.
11. Contractor to confirm all invert levels where connections are proposed prior to commencing any drainage works. Contractor to commence drainage works at the point of discharge.

DRAINAGE NOTES:

12. All drainage works to be constructed in strict accordance with specification of the local authority, building regulations, sewers for adoption, BS8301 & BSEN.752-1.
13. For location and setting out of building drainage points refer to architects drawings.
14. All pipe runs near buildings to comply with the Building Regulations Part H1. Where a pipe is within 1m of a foundation the trench shall be filled with class GEN3 concrete up to the lowest level of the foundation. Where the trench is further than 1m from the foundation, the trench shall be filled with class GEN3 concrete to a level below the lowest level for the foundation equal to the distance from the foundation less 150mm. In both cases the pipe shall be bedded and surrounded in 150mm thick class GEN3 concrete.
15. Where pipes, external to the structures, have a depth to soffit from ground level of less than 450mm they shall have a class GEN3 concrete encasement (150mm thick).
16. Where a pipe, under a carriageway, has a depth of cover of less than 1.2m the pipe shall be laid with a concrete bed and surround.
17. In any circumstances where pipes are bedded and surrounded in concrete flexible joints should be provided. Compressible boards (fibreboard or polystyrene) shall be provided at a maximum of 8m centres (coinciding with pipe joints). The boards shall be pre-cut to pipe diameter and to a height and width equal to the concrete cross section. A board thickness of 18mm for pipes up to 450mm nominal diameter and 36mm for pipes over 450mm nominal diameter.
18. All private building drainage shall be constructed in strict accordance with BSEN.752-1. unless otherwise specified building drainage shall be 100mm diameter and shall be laid at a minimum gradient of (<1l/s = 1 in 40>1l/s = 1 in 80) for foul drains and 1 in 100 for surface water drains.
19. All pipes, bends and junction for private building drainage shall be UPVC conforming to BS4660 and BSS481 as appropriate and shall be laid in accordance with the manufacturer's specification.
20. All gully connections other than at manholes to be 'Y' junctions. All road gully connections to be 150mm diameter.
21. All stub stacks to be fitted with air admittance valves where branch drain exceeds 12m except at the head of the run. Soil vent pipes located at the head of a run to terminate to fresh air.
22. All connections to be soffit to soffit unless otherwise noted.
23. All concrete and concrete products to be in accordance with BRE 363 for sulphates.
24. The locations and sizes of all svps and rwps shall be cross referenced against the architects drawings during setting out.
25. The precise depth and location and size of existing pipes or manholes where connections or diversion are proposed must be confirmed and reported to the engineer prior to commencement.

FOR APPROVAL

NOT FOR CONSTRUCTION

Rev.	Amendments	Date
A	Revised Issue	13/03/2020
-	Original Issue	27/02/2020

BRIGHT PLAN CIVILS
Transport Planning and Infrastructure Design Consultants
2 West Barn, Norton Lane, Chichester, West Sussex PO20 3AF
Tel: 01243 210418 Fax: 01483 861682
www.brightplancivils.co.uk

Drawing Status: FOR APPROVAL

Client: Driftstone Developments Ltd.

Project: Sunny Corner, Walberton West Sussex BN18 0QS

Drawing Title: Engineering Layout - Below Ground Drainage

Scale	Date	Drawn By	Checked By
1:250	Mar 2020	DJL	MJA

Drawing No.	Rev.
D1833-002	A