



Salt Box, Bognor Regis

Unit 2 and Access Road Operation and Maintenance Drainage

For LandLink Estates

Date: 20 May 2020

Doc ref: SAL-HYD-XX-ZZ-RP-C-0011

DOCUMENT CONTROL SHEET

Issued by	Hydrock Consultants Limited Merchants House North Wapping Road Bristol BS1 4RW United Kingdom	T +44 (0)117 9459225 E bristolcentral@hydrock.com www.hydrock.com
Client	LandLink Estates	
Project name	Salt Box, Bognor Regis	
Title	Unit 2 and Access Road Operation and Maintenance Drainage	
Doc ref	SAL-HYD-XX-ZZ-RP-C-0011	
Project no.	C-13319	
Status	S2	
Date	20/05/2020	

Document Production Record		
Issue Number	08	Name
Prepared by	Mike Griffin	
Checked by	Laurence Daly	
Approved by	Jason Walker	

Document Revision Record			
Issue Number	Status	Date	Revision Details
01	S2	11/10/2019	Issued for planning
02	S2	17/10/2019	Updated to incorporate Arun DC comments
03	S2	29/10/2019	Updated drawings appended
04	S2	06/11/2019	Updated to incorporate Arun DC comments
05	S2	15/11/2019	Updated to incorporate Arun DC comments
06	S2	20/11/2019	Updated to incorporate Arun DC comments

07	S2	25/02/20	Updated to incorporate Arun DC comments
08	S2	20/05/20	Updated to incorporate Arun DC comments

Hydrock Consultants Limited has prepared this report in accordance with the instructions of the above named client for their sole and specific use. Any third parties who may use the information contained herein do so at their own risk.

Introduction

The key elements of the surface water system will require periodic maintenance to prevent failure of the system and/or a reduction in capacity of the networks as a whole and the following matrix therefore sets out the various drainage items to be maintained, identifies whose is responsible and the frequency of maintenance.

The drainage within the development will be maintained privately by a management company appointed by the owner / occupier as follows:

Unit 2

The occupier (Warburtons) will have direct responsibility for the maintenance and repair of the foul and surface water drainage system within their site boundary including ensuring compliance with any regulatory requirement with regards to the quality of surface water discharge.

Site Wide Drainage (inc Estate Road)

Management of the site wide drainage is the overall responsibility of the Landlords. The overall estate will be owned & managed by a management company who will be funded by the landlord. The management Company will derive income from the service charge obligations placed on the tenants on a due proportion basis.

The intention is that the Estate Road will eventually become adopted by West Sussex Local Authority Highways and all maintenance responsibilities with regards to the associated Estate Road drainage system will be passed over to the Local Authority. Until then, maintenance of the Estate Road drainage will be the responsibility of the Landlords as noted above.

Drainage Strategy Summary

0.1 Surface Water

The surface water drainage for the wider development has been split into 3 no. networks. This Operation and Maintenance document relates to Surface Water Network 1 for Unit 2, and Surface Water Network 2 for the main estate roads.

Surface Water Network 1

Unit 2 surface water run-off is collected by way of drainage channels, gullies, Rain Water Pipes and Permeable Paving (Car Park). Surface water from the yard area is collected by a series of drainage channels which run the length of the yard discharging into a below ground gravity drainage system. Run-off from the yard is treated by a Full Retention Oil Interceptor OI-201. The roof of the building is collected by rain water pipes.

The car park is drained by way of porous paving located in the bays. Each 'strip' of porous paving has a filter drain along its length which collects run-off which permeates through the sub-base before it is discharged into the Unit 2 drainage system.

In order to achieve the permitted discharge rates, flows have been restricted by a HydroBrake flow control at FC-201 and attenuation provided in 2 no. cellular storage tanks, one located beneath the yard and the other beneath the car park.

Upstream of Unit 2, surface water run-off from Unit 3 and Units 4-8 connects into Surface Water Network 1 on the western side of each of their respective plots. A carrier drain then takes flows northwards within the estate road, across the top of Unit 2, before out falling into the existing watercourse via a headwall on the western boundary of the development. Unit 2 surface water connects into Surface Water Network 1 at a location upstream of the outfall.

Surface Water Network 2

Surface water run-off is collected from the estate roads and associated footpaths by way of gullies located within the road channel adjacent to the kerb. Run-off is then discharged into the below ground drainage system 'Surface Water Network 2' located within the road which runs east to west across the development before out falling into the existing watercourse via a headwall on the western boundary.

In order to achieve the permitted discharge rates, flows have been restricted by a HydroBrake flow control at FC-501 and attenuation provided in a concrete culvert which extends along the length of one of the estate roads. Prior to discharge into watercourse. Surface water run-off is treated by a Full Retention Oil Interceptor OI-501.

Drainage Strategy Performance Criteria (both networks)

The surface water drainage for both Unit 2 and the Estate Road has been designed to ensure that:

- No flooding will occur during the 1 in 100-year rainfall event in any part of the building, or in any utility plant susceptible to water.
- Surface water for the 100-year rainfall event is contained within each catchment boundary.
- An allowance for **40%** climate change is applied to the 100-year rainfall event and incorporated into the surface water drainage design in accordance with local and national planning policy.

The surface water drainage network has been modelled to take into consideration the effects surge should an extreme storm event occur at the same time as high flood levels from the adjacent water course.

The 100 year plus 45% climate change fluvial flood level of **1.85 mAOD** has specified at the outfall of each network and rainfall simulated for all storm events up to and including the 100 year plus 40% climate change.

Should rainfall exceed the 1 in 100-year storm event or the system failure through lack of maintenance, surface water run-off is to be directed via designated exceedance routes away buildings and/or critical infrastructure.

0.2 Foul Water

Foul water drainage from each unit plot will discharge into a new sewer located within the estate roads. Flows will be directed towards the north of the development where they will then be pumped from a new foul pumping station offsite via a rising main into the Southern Water Foul Sewer at Manhole ref 8801 to the north east in Shripney Road.

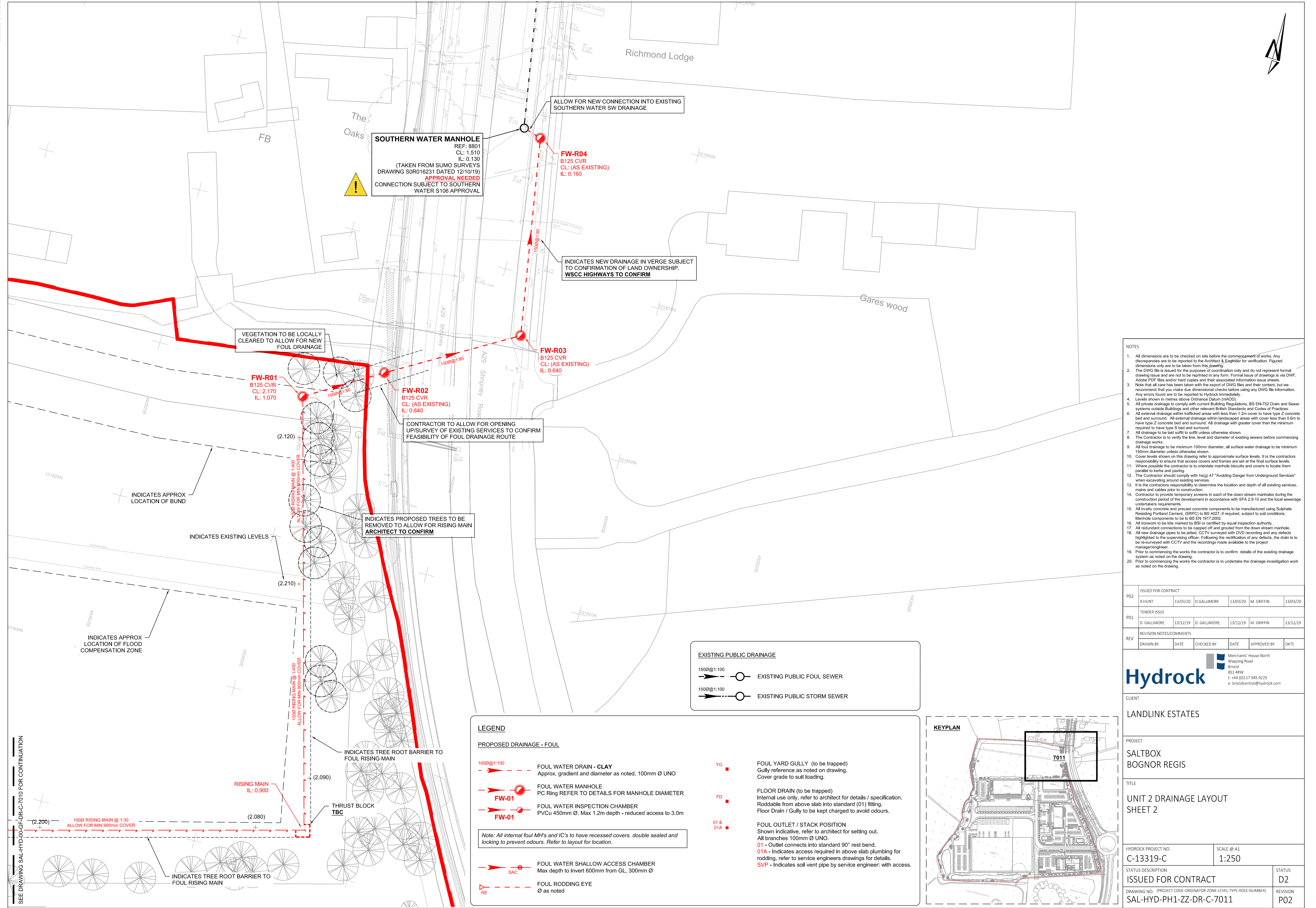
Ownership & Maintenance Responsibility Matrix

Responsibility	Feature	Maintenance	Frequency
Owner / Occupier Appointed Management Company	Private Drains	Inspection	CCTV survey every 5-10 years.
		Regular Maintenance	Jet clean system fully every 5-10 years. (Recommend prior to CCTV drainage survey is)
		Remedial / Occasional Maintenance	Carry out remedial works as identified in CCTV survey.
	Outfall pipes, non-return pipe flaps, and anti-scour mat flow channel	Inspection	Quarterly
		Regular Maintenance	Remove silt and debris as necessary to prevent build up.
		Remedial / Occasional Maintenance	Damage to pipes and headwall to be repaired as necessary
	Discharge orifice manholes/flow control devices	Inspection	Monthly
		Regular Maintenance	Remove silt and debris as necessary to prevent build up.
		Remedial / Occasional Maintenance	Damage to orifice manholes/flow control devices to be repaired as necessary
	Gullys / Drainage Channels	Inspection	Quarterly
		Regular Maintenance	Remove silt and debris as necessary to prevent build up.
		Remedial / Occasional Maintenance	Damage to Gullys / Drainage Channels to be repaired as necessary
	Permeable Paving (Refer to specialist)	Inspection	Within 3 months of installation then every 6 months
		Regular Maintenance	Sweep surface to remove debris and contamination 1-2 times a year, and typically after leaf fall in autumn.
		Occasional Maintenance	Removal of weeds. As required.
		Remedial Measures	Remediate areas of rutting and depressions. As required. Replace broken / damaged blocks. As required. Rehabilitate surface with sweeping and reapplication of clean gritstone. As required.
	Attenuation tank	Inspection	Annually
		Occasional Maintenance	Remove silt and debris as necessary to prevent build up.
		Remedial Measures	Damage to Attenuation tank to be repaired as necessary.
	Catchpits	Inspection	Every 6 months
		Occasional Maintenance	Remove silt and debris as necessary to prevent build up.
		Remedial Measures	Damage to catchpits to be repaired as necessary.

	Oil Interceptor	Inspection	Monthly
		Regular Maintenance	Jet clean system fully every 5-10 years. (Recommend prior to CCTV drainage survey)
		Remedial / Occasional Maintenance	Carry out remedial works as identified in CCTV survey.
	In addition to the above, the following is a list of tasks associated with the maintenance of an Interceptor. This should be read in conjunction with the manufacturers own specific maintenance requirements and only carried out by a fully trained operative. • Inspect the integrity of the separator and all mechanical parts. • Inspect all filters and replace or repair as required. • Assess the amount of collected contaminants (oil and fuel) and silt. • Service any electrical systems including volume alarms and any interceptor management systems. • Conduct safe silt/contaminant removal in accordance with waste transit and disposal regulations. • Maintain industry standard documentation. Maintain logs of inspections, maintenance, incidents, services and contaminant removal. <u>Interceptor Alarms:</u> Each interceptor will have a visual alarm indicator local to the interceptor as well as an alarm (visual or audible) linked either back to the adjacent building if maintenance responsibility resides with the tenant or to a remote supervisory point when maintenance responsibility resides with the estate management team. Alarm sounds to inform to take corrective action ensuring the safe and economic operation of separators preventing oil passing through the separator. When alarm sounds, empty tank as necessary. Factory trained engineers are available for site visits as part of a planned maintenance contract or on a one-off call out basis.		
	Reference should be made to the manufacturer recommendations where applicable		

Appendix A Drainage Layouts

- SAL-HYD-00-ZZ-DR-C-7010 Unit 2 Drainage layout Sheet 1
- SAL-HYD-00-ZZ-DR-C-7011 Unit 2 Drainage layout Sheet 2
- SAL-HYD-00-ZZ-DR-C-7020 Access Road Drainage Layout Sheet 1
- SAL-HYD-00-ZZ-DR-C-7021 Access Road Drainage Layout Sheet 2
- SAL-HYD-00-ZZ-DR-C-7022 Access Road Drainage Layout Sheet 3



- NOTES
- 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.
 - The DWG file is issued for the purposes of coordination only and do not represent formal drawing issue and are not to be reprinted in any form. Formal issue of drawings is via DWF, Adobe PDF files and/or hard copies and their associated information issue sheets.
 - Note that all care has been taken with the export of DWG files and their content, but we recommend that you make due dimensional checks before using any DWG file information. Any errors found are to be reported to Hydrock immediately.
 - Levels shown in metres above Ordnance Datum (mAOD).
 - All private drainage to comply with current Building Regulations, BS EN-752 Drain and Sewer systems outside Buildings and other relevant British Standards and Codes of Practices.
 - All external drainage within trafficked areas with less than 1.2m cover to have type Z concrete bed and surround. All external drainage within landscaped areas with cover less than 0.6m to have type Z concrete bed and surround. All drainage with greater cover than the minimum required to have type S bed and surround.
 - All drainage to be laid sufficient to soffits unless otherwise shown.
 - The Contractor is to verify the line, level and diameter of existing sewers before commencing drainage works.
 - All foul drainage to be minimum 100mm diameter, all surface water drainage to be minimum 150mm diameter unless otherwise shown.
 - Cover levels shown on this drawing refer to approximate surface levels. It is the contractors responsibility to ensure that access covers and frames are set at the final surface levels.
 - Where possible the contractor is to orientate manhole biscuits and covers to locate them parallel to kerbs and paving.
 - The Contractor should comply with h&g 47 "Avoiding Danger from Underground Services" when excavating around existing services.
 - It is the contractors responsibility to determine the location and depth of all existing services, mains and cables prior to construction.
 - Contractor to provide temporary screens in each of the down stream manholes during the construction period of the development in accordance with SFA 2.9.10 and the local sewerage undertakers requirements.
 - All in-situ concrete and precast concrete components to be manufactured using Sulphate Resisting Portland Cement, (SRPC) to BS 4027, if required, subject to soil conditions.
 - Manhole components to be to BS EN 1917:2002.
 - All ironwork to be kile marked by BSI or certified by equal inspection authority.
 - All redundant connections to be capped off and grouted from the down stream manhole.
 - All new drainage pipes to be jetted, CCTV surveyed with DVD recording and any defects highlighted to the supervising officer. Following the rectification of any defects, the drain is to be re-surveyed with CCTV and the recordings made available to the project manager/engineer.
 - Prior to commencing the works the contractor is to confirm details of the existing drainage system as noted on the drawing.
 - Prior to commencing the works the contractor is to undertake the drainage investigation work as noted on the drawing.

ISSUED FOR CONTRACT					
P02	R.HUNT	13/03/20	D.GALLIMORE	13/03/20	M. GRIFFIN
TENDER ISSUE					
P01	D. GALLIMORE	13/12/19	D. GALLIMORE	13/12/19	M. GRIFFIN
REVISION NOTES/COMMENTS					
REV	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY

Merchants' House North
Wapping Road
Bristol
BS1 4RW
t: +44 (0)117 945 9225
e: bristolcentral@hydrock.com

CLIENT					
LANDLINK ESTATES					
PROJECT					
SALTBOX BOGNOR REGIS					
TITLE					
UNIT 2 DRAINAGE LAYOUT SHEET 2					
HYDROCK PROJECT NO.				SCALE @ A1	
C-13319-C				1:250	
STATUS DESCRIPTION					STATUS
ISSUED FOR CONTRACT					D2
DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER)					REVISION
SAL-HYD-PH1-ZZ-DR-C-7011					P02

EXISTING PUBLIC DRAINAGE

1500@1:100 EXISTING PUBLIC FOUL SEWER

1500@1:100 EXISTING PUBLIC STORM SEWER

LEGEND

PROPOSED DRAINAGE - FOUL

1000@1:100 FOUL WATER DRAIN - CLAY
Approx. gradient and diameter as noted, 100mm Ø UNO

FW-01 FW-01
FOUL WATER MANHOLE
PC Ring REFER TO DETAILS FOR MANHOLE DIAMETER
FOUL WATER INSPECTION CHAMBER
PVCu 450mm Ø. Max 1.2m depth - reduced access to 3.0m

Note: All internal foul MH's and IC's to have recessed covers, double sealed and locking to prevent odours. Refer to layout for location.

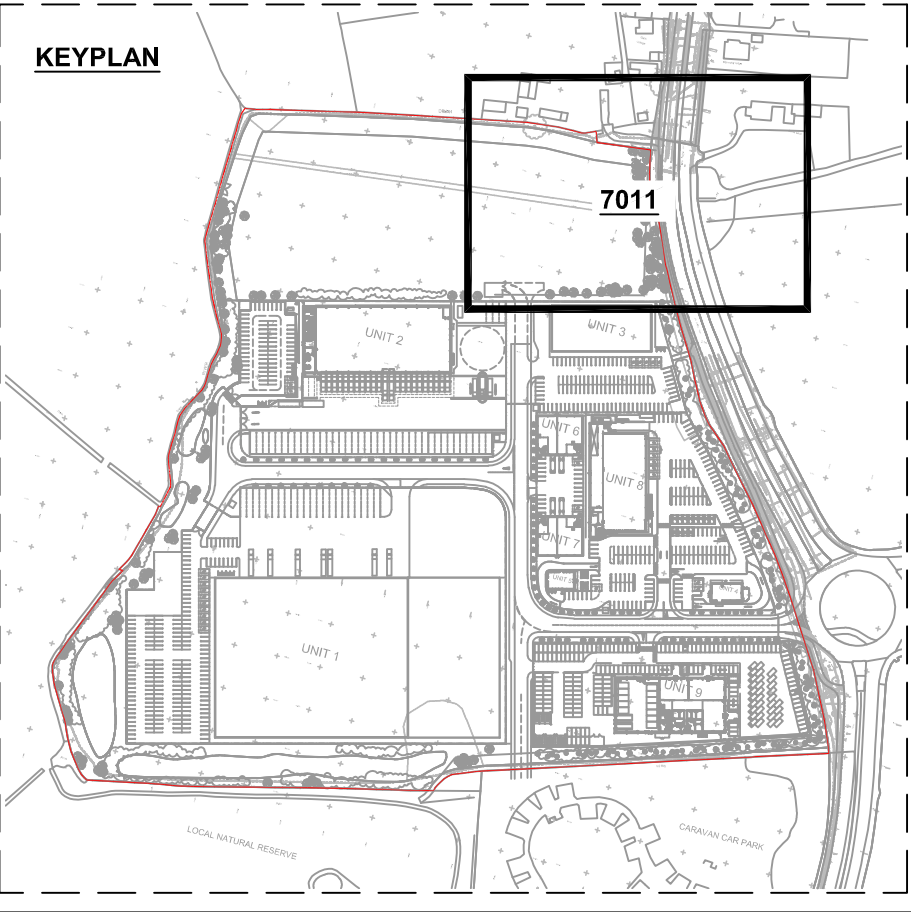
FOUL WATER SHALLOW ACCESS CHAMBER
Max depth to invert 600mm from GL, 300mm Ø

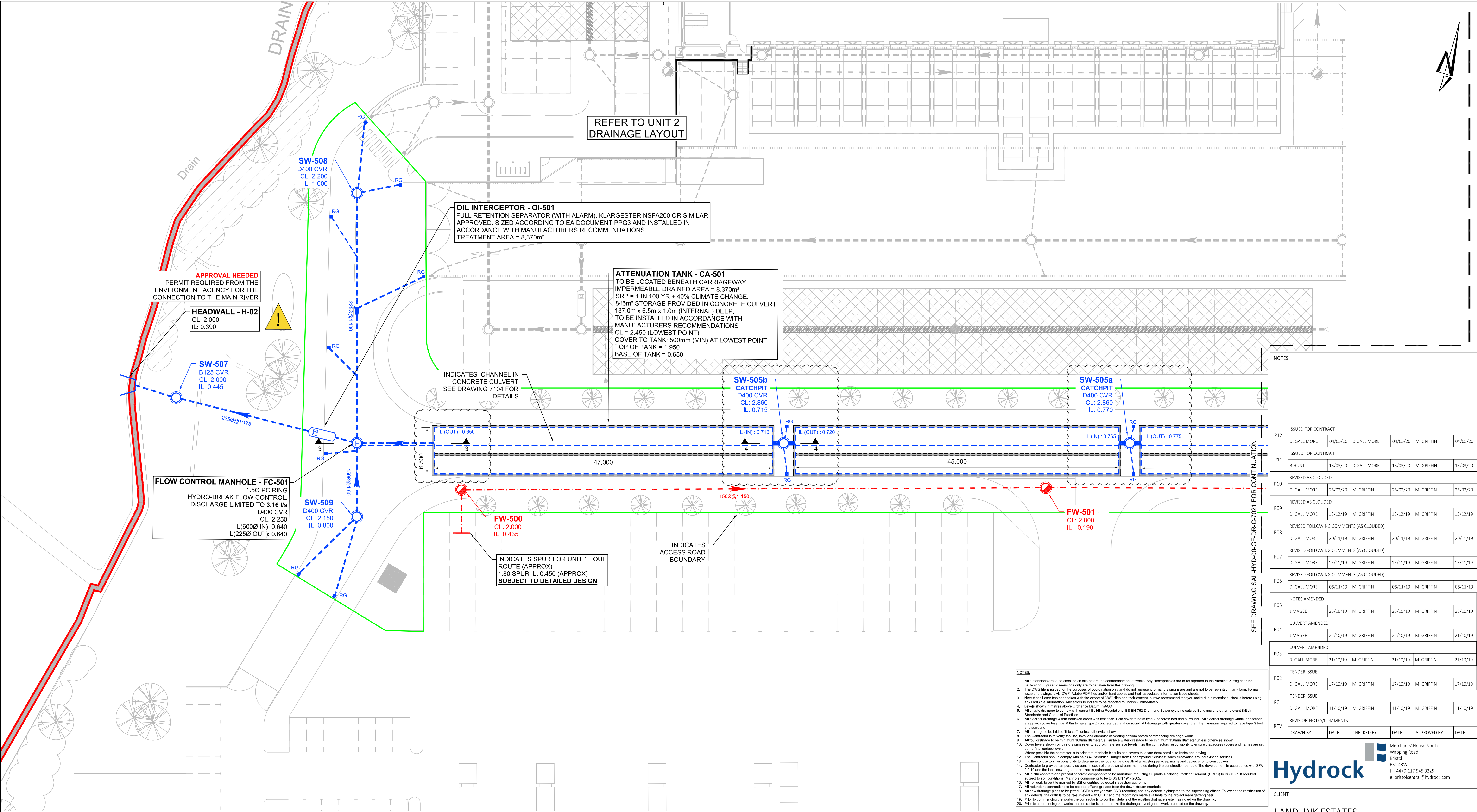
FOUL RODDING EYE
Ø as noted

YG FOUL YARD GULLY (to be trapped)
Gully reference as noted on drawing.
Cover grade to suit loading.

FD FLOOR DRAIN (to be trapped)
Internal use only, refer to architect for details / specification.
Roddable from above slab into standard (01) fitting.
Floor Drain / Gully to be kept charged to avoid odours.

01 & 01A FOUL OUTLET / STACK POSITION
Shown indicative, refer to architect for setting out.
All branches 100mm Ø UNO.
01 - Outlet connects into standard 90° rest bend.
01A - Indicates access required in above slab plumbing for rodding, refer to service engineers drawings for details.
SVP - Indicates soil vent pipe by service engineer: with access.





LEGEND

PROPOSED DRAINAGE - FOUL

1000@1:100 Foul Water Drain - CLAY
Approx. gradient and diameter as noted, 100mm Ø UNO

FW-01 Foul Water Manhole
PC Ring REFER TO DETAILS FOR MANHOLE DIAMETER

FW-01 Foul Water Inspection Chamber
PVCu 450mm Ø. Max 1.2m depth - reduced access to 3.0m

Note: All internal foul MH's and IC's to have recessed covers. double sealed and locking to prevent odours. Refer to layout for location.

SAC Foul Water Shallow Access Chamber
Max depth to invert 600mm from GL, 300mm Ø

RE Foul Rodding Eye
Ø as noted

YG Foul Yard Gully (to be trapped)
Gully reference as noted on drawing.
Cover grade to suit loading.

FD Floor Drain (to be trapped)
Internal use only, refer to architect for details / specification.
Roddable from above slab into standard (Ø1) fitting.
Floor Drain / Gully to be kept charged to avoid odours.

FOUL OUTLET / STACK POSITION
Shown indicative, refer to architect for setting out.
All branches 100mm Ø UNO.
Ø1 - Outlet connects into standard 90° rest bend.
Ø1A - Indicates access required in above slab plumbing for rodding, refer to service engineers drawings for details.
SVP - Indicates soil vent pipe by service engineer: with access.

PROPOSED DRAINAGE - STORM

1500@1:100 Storm Water Drain - CLAY
Approx. gradient and diameter as noted, 150mm Ø UNO

SW-01 Storm Water Manhole
PC Ring REFER TO DETAILS FOR MANHOLE DIAMETER

SW-01 Storm Water Inspection Chamber
PVCu 450mm Ø. Max 1.2m depth - reduced access to 3.0m

RE Storm Rodding Eye
Ø as noted

ST Storm Trap

Concrete Encasement to Pipe
Refer to limits of cover table drawing 7101

RAIN WATER OUTLET
Shown indicative, refer to architect for setting out.
All branches 100mm Ø UNO.
Ø1 - Outlet connects into standard 90° rest bend.
Ø1A - Indicates access required in above slab plumbing for rodding, refer to service engineers drawings for details.

AG Rain Water Outlet Access Gully
AG - Outlet connects to gully.

RG Road Gully (to be trapped)

YG Yard Gully (to be trapped)

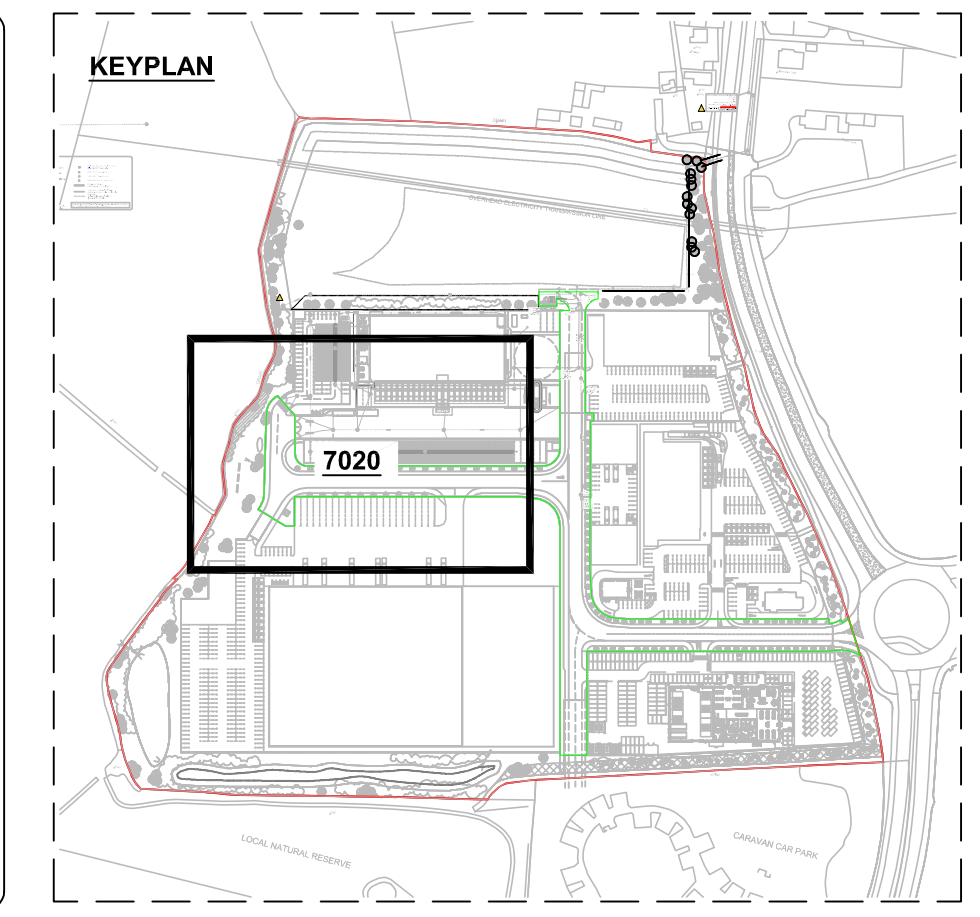
PG Paved Area Gully (to be trapped)

DC Drainage Channel
(Refer to layout for specification)

TH Threshold Drainage Channel
(Refer to architect for details / specification)

Note: All internal SW MH's and IC's to have recessed covers. double sealed and locking to prevent odours. Refer to layout for location.

Note: All connections not made to manholes to be connected via oblique 45 degree junctions with the incoming connecting pipe positioned at 10 or 2 o'clock in section



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. The DWG file is issued for the purpose of coordination only and do not represent formal drawing issue and are not to be reprinted in any form. Formal issue of drawings is via DWG, Adobe PDF files and/or hard copies and their associated information issue sheets.

3. Note that all work has been taken with the support of DWG files and their content, but we recommend that you make due dimensional checks before using any DWG file information. Any errors found are to be reported to Hydrock immediately.

4. Levels shown in brackets above drainage (inverted).

5. All private drainage to comply with current Building Regulations, BS EN-752 Drain and Sewer systems outside Buildings and other relevant British Standards and Codes of Practice.

6. All external drainage within landscaped areas with cover less than 0.2m to have type Z concrete bed and surround. All external drainage within landscaped areas with cover less than 0.2m to have type Z concrete bed and surround.

7. All drainage to be laid with a fall to the street or to the sewer.

8. The Contractor is to verify the line, level and diameter of existing sewers before commencing drainage works.

9. All foul drainage to be minimum 100mm diameter. All surface water drainage to be minimum 150mm diameter unless otherwise shown.

10. Cover levels shown on this drawing refer to approximate surface levels. It is the contractor's responsibility to ensure that access covers and frames are set at the final surface levels.

11. Where possible the contractor is to orientate manhole basins and covers to locate them parallel to kerbs and paving.

12. The Contractor should comply with HSE 47 'Avoiding Danger from Underground Services' when excavating around existing services.

13. It is the contractor's responsibility to determine the location and depth of all existing services, mains and cables prior to construction.

14. Contractor to provide temporary screens in each of the down stream manholes during the construction period of the development in accordance with BFA 2.5.10 and the local licensing authorities requirements.

15. All in situ concrete and precast concrete components to be manufactured using Sulphate Resisting Portland Cement (SRPC) to BS 4027, if required, subject to soil conditions. Manhole components to be to BS EN 1912002.

16. All in situ concrete and precast concrete components to be marked by BSI or certified by equal inspection authority.

17. All independent connections to be supported off and grouted from the down stream manhole.

18. All new drainage pipes to be jetted, CCTV surveyed with DVD recording and any defects highlighted to the supervising officer. Following the rectification of any defects, the drain is to be surveyed with CCTV and the recordings made available to the project manager/engineer.

19. Prior to commencing the works the contractor is to confirm details of the existing drainage system as noted on the drawing.

20. Prior to commencing the works the contractor is to undertake the drainage investigation work as noted on the drawing.

P12	ISSUED FOR CONTRACT	D. GALLIMORE	04/05/20	D. GALLIMORE	04/05/20	M. GRIFFIN	04/05/20
P11	ISSUED FOR CONTRACT	R. HUNT	13/03/20	D. GALLIMORE	13/03/20	M. GRIFFIN	13/03/20
P10	REVISED AS CLOUDED	D. GALLIMORE	25/02/20	M. GRIFFIN	25/02/20	M. GRIFFIN	25/02/20
P09	REVISED AS CLOUDED	D. GALLIMORE	13/12/19	M. GRIFFIN	13/12/19	M. GRIFFIN	13/12/19
P08	REVISED FOLLOWING COMMENTS (AS CLOUDED)	D. GALLIMORE	20/11/19	M. GRIFFIN	20/11/19	M. GRIFFIN	20/11/19
P07	REVISED FOLLOWING COMMENTS (AS CLOUDED)	D. GALLIMORE	15/11/19	M. GRIFFIN	15/11/19	M. GRIFFIN	15/11/19
P06	REVISED FOLLOWING COMMENTS (AS CLOUDED)	D. GALLIMORE	06/11/19	M. GRIFFIN	06/11/19	M. GRIFFIN	06/11/19
P05	NOTES AMENDED	J. MAGEE	23/10/19	M. GRIFFIN	23/10/19	M. GRIFFIN	23/10/19
P04	CULVERT AMENDED	J. MAGEE	22/10/19	M. GRIFFIN	22/10/19	M. GRIFFIN	21/10/19
P03	CULVERT AMENDED	D. GALLIMORE	21/10/19	M. GRIFFIN	21/10/19	M. GRIFFIN	21/10/19
P02	TENDER ISSUE	D. GALLIMORE	17/10/19	M. GRIFFIN	17/10/19	M. GRIFFIN	17/10/19
P01	TENDER ISSUE	D. GALLIMORE	11/10/19	M. GRIFFIN	11/10/19	M. GRIFFIN	11/10/19
REV	REVISION NOTES/COMMENTS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE

Hydrock

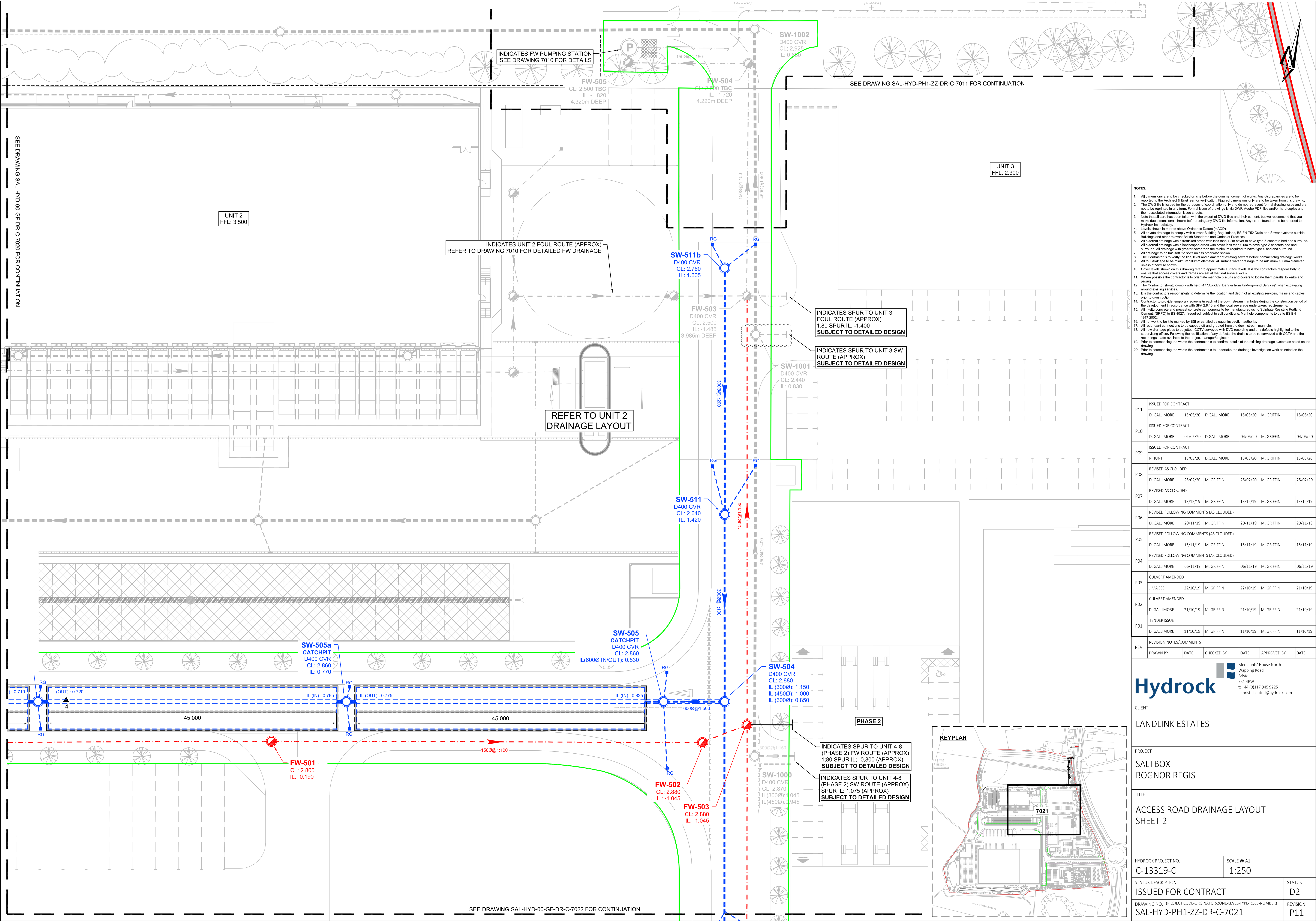
Merchants' House North
Wapping Road
Bristol
BS1 4RW
T: +44 (0)117 945 9225
e: bristolcentral@hydrock.com

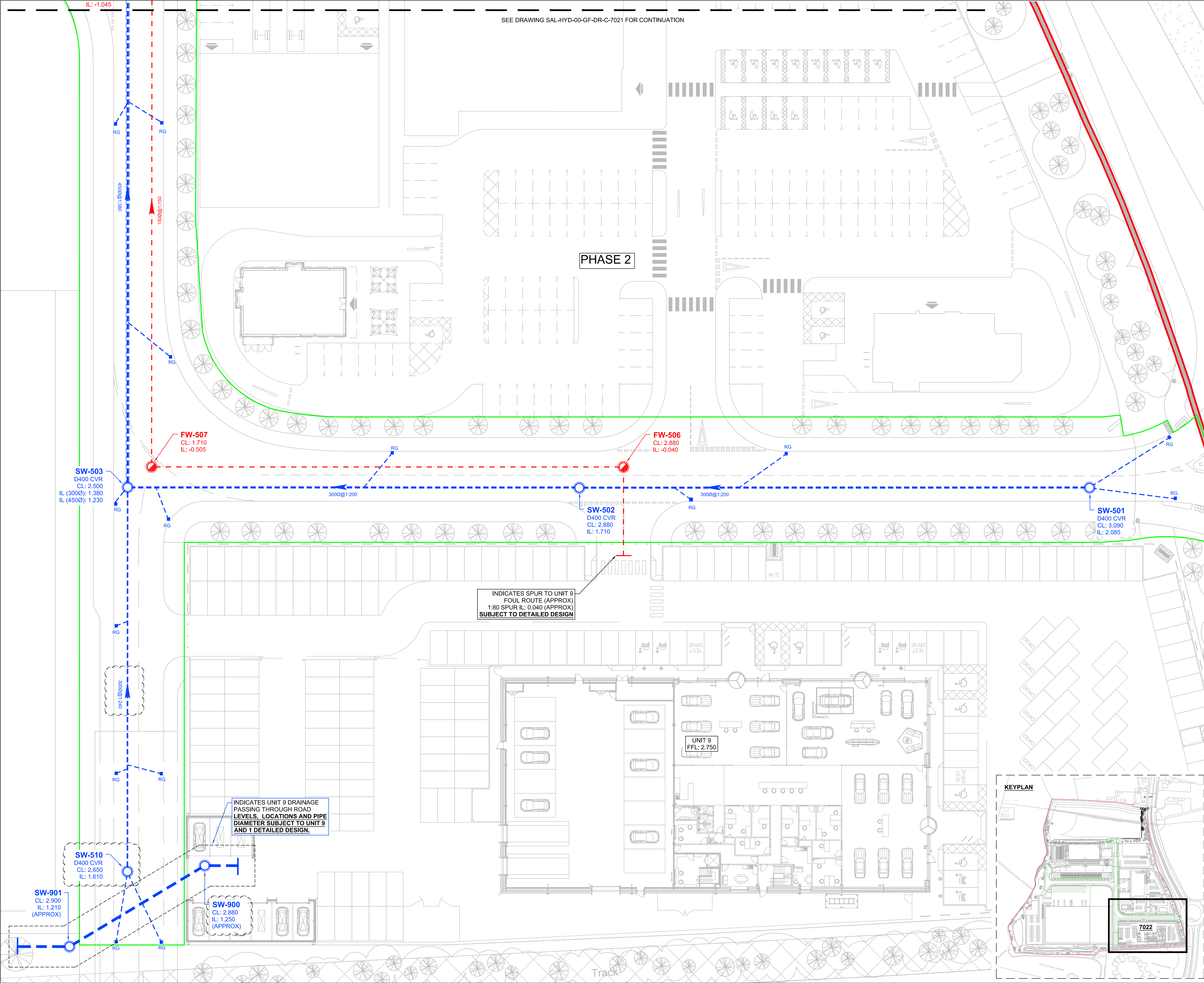
LANDLINK ESTATES

PROJECT
SALTBOX
BOGNOR REGIS

TITLE
ACCESS ROAD DRAINAGE LAYOUT
SHEET 1

HYDROCK PROJECT NO. C-13319-C	SCALE @ A1 1:250
STATUS DESCRIPTION ISSUED FOR CONTRACT	STATUS D2
DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER) SAL-HYD-PH1-ZZ-DR-C-7020	REVISION P12





SEE DRAWING SAL-HYD-00-GF-DR-C-7021 FOR CONTINUATION

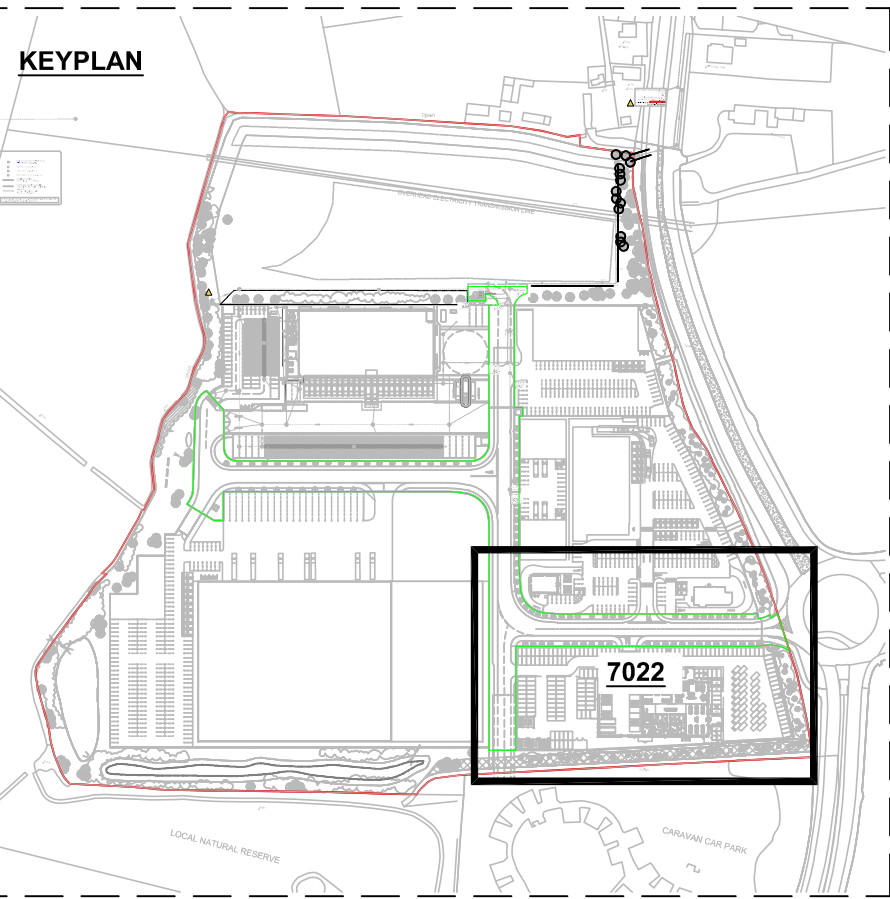
PHASE 2

INDICATES SPUR TO UNIT 9
FOUL ROUTE (APPROX)
1:80 SPUR IL: 0.040 (APPROX)
SUBJECT TO DETAILED DESIGN

INDICATES UNIT 9 DRAINAGE
PASSING THROUGH ROAD
LEVELS, LOCATIONS AND PIPE
DIAMETER SUBJECT TO UNIT 9
AND 1 DETAILED DESIGN.

UNIT 9
FFL: 2.750

KEYPLAN



- 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. Figure dimensions only are to be taken from this drawing.
 2. The DWG file is issued for the purpose of coordination only and does not represent formal drawing issue and are not to be reprinted in any form. Formal issue of drawings is the DWG, Adobe PDF files and/or hard copies and their associated information issue sheets.
 3. Note that all care has been taken with the export of DWG files and their content, but we recommend that you make due diligence checks before using any DWG file information. Any errors found are to be reported to Hydrock immediately.
 4. Levels shown in metres above Ordnance Datum (mAOD).
 5. All private drainage to comply with current Building Regulations, BS EN752 Drain and Sewer systems outside Buildings and other relevant British Standards and Codes of Practice.
 6. All external drainage within tarmac areas with less than 1.2m cover to have type 2 concrete bed and surround. All external drainage within landscaped areas with cover less than 0.6m to have type 2 concrete bed and surround. All drainage with greater cover than the minimum required to have type 2 bed and surround.
 7. All drainage to be able to cope with 100mm diameter, 100mm cover and diameter of existing sewers before commencing drainage works.
 8. The Contractor is to verify the line, level and diameter of existing sewers before commencing drainage works.
 9. All drainage to be within 100mm diameter, all surface water drainage to be within 150mm diameter unless otherwise shown.
 10. Cover levels shown on this drawing refer to appropriate surface levels. It is the contractor responsibility to ensure that access covers and frames are set at the final surface levels.
 11. Where possible the contractor is to relocate manhole locals, and covers to locate them parallel to kerbs and parking. The Contractor should comply with high 47 "Avoiding Danger from Underground Services" when excavating around existing services.
 12. It is the contractor responsibility to determine the location and depth of all existing services, marks and cables prior to construction.
 13. Contractor to provide temporary access to each of the down stream manholes during the construction period of the development in accordance with SFA 2.2.10 and the local coverage undertakers requirements.
 14. All in-situ concrete and precast concrete components to be manufactured using Substrate Readable Portland Cement (SRPC) to BS 4027, if required, subject to soil conditions. Manhole components to be to BS EN 1917:2002.
 15. All in-situ concrete components to be certified by BS EN 1917:2002.
 16. All in-situ concrete components to be certified by BS EN 1917:2002.
 17. All redundant connections to be capped off and grouted from the down stream manhole.
 18. All new drainage plans to be tested, CCTV surveyed with DVI recording and any defects highlighted to the supervising officer. Following the rectification of any defects, the drain is to be re-surveyed with CCTV and the recordings made available to the project management team.
 19. Prior to commencing the works the contractor is to confirm details of the existing drainage system as noted on the drawing.
 20. Prior to commencing the works the contractor is to undertake the drainage investigation work as noted on the drawing.

P08	ISSUED FOR CONTRACT	D. GALLIMORE	04/05/20	D. GALLIMORE	04/05/20	M. GRIFFIN	04/05/20
P07	ISSUED FOR CONTRACT	R. HUNT	13/03/20	D. GALLIMORE	13/03/20	M. GRIFFIN	13/03/20
P06	REVISED AS CLOUDED	D. GALLIMORE	25/02/20	M. GRIFFIN	25/02/20	M. GRIFFIN	25/02/20
P05	REVISED AS CLOUDED	D. GALLIMORE	13/12/19	M. GRIFFIN	13/12/19	M. GRIFFIN	13/12/19
P04	REVISED FOLLOWING COMMENTS (AS CLOUDED)	D. GALLIMORE	15/11/19	M. GRIFFIN	15/11/19	M. GRIFFIN	15/11/19
P03	REVISED FOLLOWING COMMENTS (AS CLOUDED)	D. GALLIMORE	06/11/19	M. GRIFFIN	06/11/19	M. GRIFFIN	06/11/19
P02	CULVERT AMENDED	D. GALLIMORE	21/10/19	M. GRIFFIN	21/10/19	M. GRIFFIN	21/10/19
P01	TENDER ISSUE	D. GALLIMORE	11/10/19	J. MAGEE	11/10/19	M. GRIFFIN	11/10/19
REV	REVISION NOTES/COMMENTS						

Hydrock

Merchants' House North
Wapping Road
Bristol
BS1 4RW
t: +44 (0)117 945 9225
e: bristolcentral@hydrock.com

CLIENT				LANDLINK ESTATES			
PROJECT						SALTBOX BOGNOR REGIS	
TITLE						ACCESS ROAD DRAINAGE LAYOUT SHEET 3	
HYDROCK PROJECT NO. C-13319-C			SCALE @ A1 1:250				
STATUS DESCRIPTION ISSUED FOR CONTRACT					STATUS D2		
DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER) SAL-HYD-PH1-ZZ-DR-C-7022					REVISION P08		