

Project Name:	Land at Bayards, Eastergate (Miller Homes)
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Document Name:	SuDS Verification Report – Area 4
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Revision Record				
Rev	Date	By	Summary of Changes	Aprvd
1	30/04/2026	SF	First issue (Draft)	MDW
2	01/05/2026	MDW	Second Issue	JFS

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1. INTRODUCTION

- 1.1 This Sustainable urban Drainage Strategy (SuDS) Verification Report – Area 4, has been prepared by Paul Basham Associates on behalf of Miller Homes to support the 'As-Built' verification report to Arun District Council in relation to Land at Bayards, Eastergate.
- 1.2 This Verification Report has been prepared to support the discharge of Planning Condition 24. The report authors are Paul Basham Associates Ltd. Paul Basham Associates were established in 2009 and are a multi-disciplinary Transport Planning, Civil and Structural Engineering Consultancy, employing a team of Civil Engineers.
- 1.3 The development is located to the north of Fontwell Farm, west of Northfield Farmhouse. The nearest postcode to the site is PO20 3SA, Grid reference SU 94608 06305. The outline application number is AL/113/21/OUT and the reserved matters application is AL/122/22/DOC.
- 1.4 The total site development is approximately 2.31ha and development comprises of 67 dwellings with associated hardstanding and landscaping.
- 1.5 The Surface Water Management for the development comprises of a series of localised infiltration / soakaway systems which for the purposes of Verification have been divided into discrete local areas as work progresses throughout the site with each area being dealt with separately for the purposes of Verification of the Surface Water Management.

- 1.6 The development must comply with Condition 24 outlined by Arun district council: *“Immediately following implementation of the approved surface water drainage system and prior to occupation of any part of the development, the developer/applicant shall provide the local planning authority with as-built drawings of the implemented scheme together with a completion report prepared by an independent engineer that confirms that the scheme was built in accordance with the approved drawing/s and is fit for purpose. The scheme shall thereafter be maintained in perpetuity.”*
- 1.7 **Figure 1** outlines the total site area however, the site will be subdivided and assessed independently of each other due to each section being self-contained.



Figure 1- Total site Area

- 1.8 Submitting discrete independently assessed local areas allows the verification process to align with the plot construction and completion process for the site.
- 1.9 An independent company, OST Engineering has been appointed to conduct inspections of the surface water network design construction.
- 1.10 **Figure 2** shows the extent of Verification Area 4, comprising of 4 dwellings and associated roads.
- 1.11 See **Appendix A** for the location of all the discrete verification areas as show on drawing number 091.5016.0578.

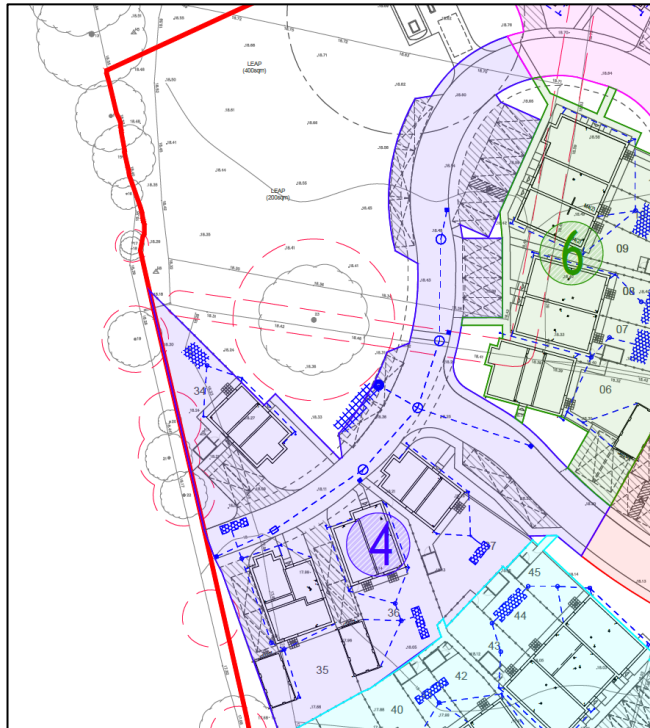


Figure 2- Site extent of Area 4

- 1.12 The relevant Drainage Layout drawings that cover the extent of Area 4 are included as **Appendix B**.

2. INSPECTIONS

- 2.1 Site staff and OST, see 1.8 above, have carried out inspection of the works although some sections of Area 4 have been inspected retroactively by exposing soakaways and pipelines.

3. AS-BUILT SURVEY

- 3.1 As-Built surveys of the site area and drainage systems have been carried out, these surveys are included as **Appendix C**.
- 3.1 These levels have been reviewed against the design levels shown in 091.5016.0501 C08, 091.5016.0502 C05 and 092.5016.0503 C06 the design drawings can be found in **Appendix B**
- 3.2 A tabulated summary of invert levels for chambers constructed within Area 4 is given below.

Area	Ref No	As-Built CL	Design IL	As-Built IL	Comments
4	RE5302	18.30	17.925	17.93	
4	PS291	18.39	17.803	17.84	
4	PSCP038	18.3	17.733	17.71	
4	PS295	18.35	17.800	17.83	
4	SA37	18.30	17.639	17.61	
4	RE287	18.25	17.90	17.94	
4	PS286	18.21	17.779	17.80	
4	RE39	18.22	17.90	17.92	
4	PS40	18.15	17.793	17.80	
4	PSCP284	18.35	17.718	17.80	Flat pipes between PS286-PSCP284 & PS40-PSCP284
4	PSCP339/PSCP5276	18.45	17.687	17.70	
4	SA36		17.669		No as-built levels given
4	RE283	17.93	17.595	17.40	
4	PS277	18.15	17.272	17.28	
4	PS276	18.12	17.250	17.25	
4	PSCP275	18.00	17.060	17.10	
4	SA35		17.067		No as-built information provided
4	PS66	18.32	17.877	17.89	
4	PS67	18.28	17.791	17.80	
4	PS301	18.32	17.878	17.90	
4	SA34	18.28	17.855	17.77	
4	S14	18.13	16.960	16.98	
4	S15	18.20	16.795	16.80	
4	S16	18.33	16.650	16.65	
4	S19	18.44	17.024	17.01	
4	S20	18.59	17.350	17.36	
4	S17 (DONSTREAM DEFENDER)	18.48	16.616	16.60	
4	SA ROAD 3	18.47	16.609	16.58	

Table 1: As Built levels against design levels

- 3.3 The comparison between the design and as built levels shown that the invert levels are generally within normal building site tolerances.
- 3.4 Based on the as-built levels as per Table 1 cross checks of raised invert levels appear to show that no backfalls have been created.
- 3.5 No levels were provided for SA36 and SA35, therefore we were unable to verify these soakaways have been constructed in accordance with the design.

4. MATERIALS AND CONSTRUCTION RECORDS

- 4.1 The list of materials suppliers is contained within **Appendix D**.
- 4.2 The materials selected for inclusion in the works have Manufacturers confirmation that the materials selected meet the required national standards.
- 4.3 Photographic evidence of the materials used during construction works is given below:



Plot 37



Plot 37 base of crates



Plot 37 Crates wrapped in membrane



Plot 36



Plot 35



Plot 34

- 4.4 The images for plot 37 shows a different arrangement to what was proposed, this would suggest the wrong image has been supplied or the incorrect number of crates have been installed. The proposal was for 1m wide by 3m long and 1.6m deep which would total to 24 crates being used. The image shows 3 crates (1m x 1.5m area) used, it is unclear how deep the crates are from the image but looks to be 1 or two crates deep, for 2 crates deep with a total depth of 0.8m the volume will be 1.14m^3 whereas the design specified a total volume of 4.56m^3 this volume is significantly less than what was designed and could result in the property being at risk of flooding. The crates also appear to be Polystorm Modular Cell, which were not approved by Paul Basham Associates.

- 4.5 In the image for plot 36 it shows a similar case where the storage has been reduced from what was designed, this shows a total of 3 crates used within the soakaway. The total volume of the crates is 0.57m^3 which is wholly inadequate, the calculation submitted as part of the reserved matters application showed a required volume for a 1 in 10-year storm is 3.8m^3 and the proposed design storage is 6.08m^3 .
- 4.6 The image for Plot 36 indicates that a different membrane has been used to line the soakaway. The Contractor has confirmed that this membrane is the SDS Geomembrane – GSE UltraFlex Smooth Geomembrane. GSE UltraFlex is a smooth linear low-density polyethylene (LLDPE) geomembrane and is therefore impermeable. This will prevent the soakaway from infiltrating and, as such, is not in accordance with the approved design strategy and cannot be verified.
- 4.7 For the other plots it is unclear how many crates were installed but from the images the shape and sizes differ from the intended shape, this could be due to other factors on site.
- 4.8 From the images it appears that the installation of the geotextile membranes are not installed and sealed in accordance with the manufacturer's specifications.
- 4.9 The soakaways have shown an arrangement that differs from the design outlined within the construction detail on sheet 091.5061.551 C01.
- 4.10 The SDS GEOLight system appears to have been substituted and installed in this area. This product typically requires a specific arrangement, including a perforated pipe running centrally through the attenuation crates, as illustrated in **Figure 3** below.
- However, the contractor has instead installed an in-situ pipe that has been hand-cut with spiral slits to function as a perforated pipe, intended to feed water into the crates. This pipe appears to have been installed without appropriate bedding.
- Furthermore, the structural integrity of the pipe has likely been compromised due to the hand-cut slits, which is also evident from the CCTV footage. There also appears to be no restraint preventing the pipe from shifting or rotating. As a result, there is no assurance that the slits will remain correctly oriented (i.e. facing downward towards the crates).
- This may lead to ineffective interaction between the pipe and the attenuation system, potentially causing the drainage to perform in an unintended and unpredictable manner.

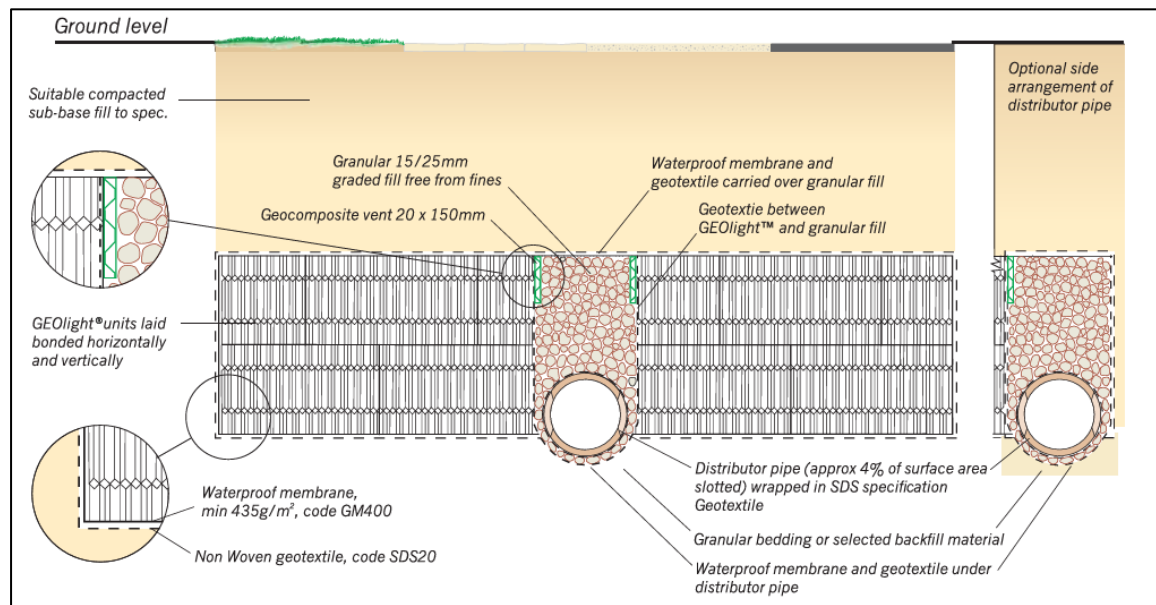


Figure 3: SDS GEOLight Cross Section

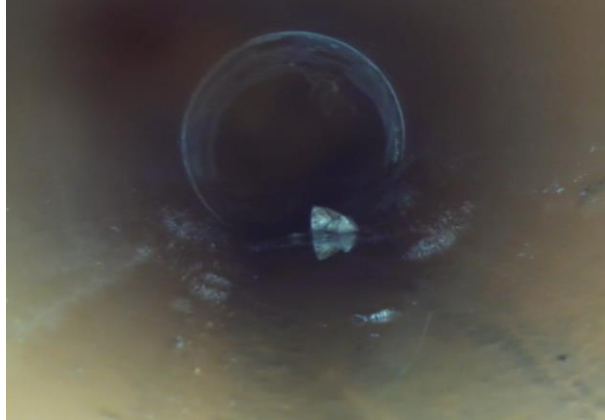
- 4.11 The images also suggest that vents have not been installed in line with the construction detail on sheet 091.5061.551 C01 and in accordance with manufactures specifications which can be found in **Appendix D**.
- 4.12 No images have been provided of SA Road 3 or any of the permeable paving within this area therefore, we are unable to verify this element on the absence of this evidence.

5. CCTV SURVEY OF PIPELINES

- 5.1 CCTV Surveys of most pipelines in Area 4 have been carried out to confirm the as-built conditions. The video files have been examined in detail with pipe conditions and a report assessing the condition of the pipe produced is included in **Appendix E**. Copies of the CCTV media files are listed below and are appended to this report as **Appendix E**.

- PS299X_804d54b5-8789-4640-bb8d-9f185bcfa4c5
- plot 34 ps66-pscp67
- Plot 37 ps291-pscp038
- s14-gully
- cp038-sa37
- ps276-cp275
- ps291-pscp038
- pscp67-sa34
- pscp284-pscp5276
- p35 ps275-sa35
- plot 36 pscp5276-sa36

- 5.2 Each video has been reviewed and comments relating to specific pipes are listed below.
- 5.3 The general quality of the CCTV surveys is incomplete, the videos do not start looking up at the chamber at the head of the run, so there is no way to guarantee the position in the pipe, equally they do not finish looking up at the downstream chamber. There are also several videos where the footage is blocked due to obstructions in the pipe.

Ref	Defect Images	Comments
PS219-PSCP038		No visible major defects
PSCP038-SA37		The full length of the pipe has not been surveyed and the pipe at the end appears to change direction significantly suggesting a bend into the top of the crates
PS219-PSCP038		No visible major defects.
PSCP284-PSCP5276		Full length of sewer has not been surveyed. No visible major defects on length of sewer that was surveyed.
PSCP5276-SA36		Spiral cut visible on the pipe, the pipe does not appear to have deformed as a result.
PS276-PSCP275		Sediment build up and standing water at the pipe joint. Suggest that the downstream pipe has not been laid at a sufficient gradient and there may be a slight back fall.
PSCP275-SA35		No visible major defects
PS66-PSCP67		No visible major defects

PSCP67-SA34		Video suggest footage goes into different type of pipe, Images show PVC all the way through resting on top of the crates. Appears to be wrong footage
Gully -S14		Build up shown on the side of the pipe
S14-S17	Survey not provided	
S17-SA Road 3	Survey not provided	

6. VARIATIONS TO THE APPROVED DESIGN

- 6.1 The design levels have in certain areas been subject to minor amendments, these are shown in 3.2 (Table 1) above.
- 6.2 For the most part the level changes to the Surface Water Drainage Systems within Area 4 are not likely to prevent the systems from performing adequately. However the CCTV footage suggests there is potentially back falling pipes in the networks, this would need to be further investigated. Along with this the CCTV footage indicates general workmanship issues.
- 6.3 The air vents to all the Soakaways appear to have been missing. This needs to be investigated.
- 6.4 The pipe connections to the plot soakaways within Area 4 may restrict the flow of surface water into the soakaway. The hand cut PVC pipes compromise the pipes structural integrity and do not have the correct bedding which has caused the pipe to deform, along with this the rate of infiltration into the soakaways cannot be guaranteed.
- 6.5 The soakaways have been constructed with other types of infiltration crates opposed to the previously specified Aquacell Core-R, and as such the shape and size of the crates has been changed. In some cases this has resulted in a reduction of storage capacity and infiltration surface area.
- 6.6 The image for Plot 36 soakaway indicates that a different membrane has been used to line the soakaway. The Contractor has confirmed that this membrane is the SDS Geomembrane – GSE UltraFlex Smooth Geomembrane. GSE UltraFlex is a smooth linear low-density polyethylene

(LLDPE) geomembrane and is therefore impermeable. This will prevent the soakaway from infiltrating and, as such, is not in accordance with the approved design strategy and cannot be verified.

- 6.7 Given the number of crates used is not clear from the images, the Contractor will need to confirm the amount of crates for each soakaway to ensure compliance was achieved.

7. REMEDIAL WORKS TO BE UNDERTAKEN AND PLANNED

- 7.1 The air vent to the Soakaways requires investigation and resolution.
- 7.2 Investigate the cases where the pipes may be back falling and remediate if necessary.
- 7.3 The remedial works required within Area 4 is as listed below:
- The Contractor shall obtain written approval from crate supplier that the constructed soakaways comply with their specification. Notwithstanding this requirement, it is recommended that all damaged or deformed pipes be removed and replaced.
 - Install additional infiltration crates where the storage volume is less than what was specified in the approved design or provide supporting hydraulic modelling to support the as-built storage.
 - Impermeable geomembranes used within soakaways are to be replaced with permeable membranes to ensure infiltration occurs in accordance with the design. Upon completion of the remedial works, photographic evidence is to be provided.
 - Once remedial works have been carried out the system will need to be re CCTV surveyed.

8. CONCLUSION

- 8.1 The records and details contained within this report reference 091.5016/SVR4 "SuDS Verification Report Area 4 and Appendices" show that the Surface Water Systems within Area 4 have not been constructed completely to the design and that the surface water network cannot be signed off without remedial actions.

Appendix A Verification Areas (Dwg 091.5016.0578)



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- 1. Existing services present
- 2.
- 3.

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- STORM WATER SEWER, Ø AS NOTED
- SURFACE WATER MANHOLE (CUL/SILT/TYPE AS SHOWN)
- SURFACE WATER INSPECTION CHAMBER/CATCHPIT
- SURFACE WATER RODDING EYE
- ROAD GULLY
- DOWNSTREAM DEFENDER VORTEX PLUS
- GRAVEL INFILTRATION TRENCH (SEE 091.5016.551 FOR FULL DETAILS)
- INFILTRATION CRATES (SEE 091.5016.551 FOR FULL DETAILS)
- PERMEABLE PAVING

FOR CONSTRUCTION

C02	UPDATED TO SUIT CLIENT COMMENT	03.08.2023	OJT	JM
C01	FIRST ISSUE	31.07.2023	OJT	JM
Rev	Description	Date	By	Chkd



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Client

millershomes

Project Name
LAND AT BAYARDS,
EASTERGATE

Title
SURFACE WATER
VERIFICATION AREAS

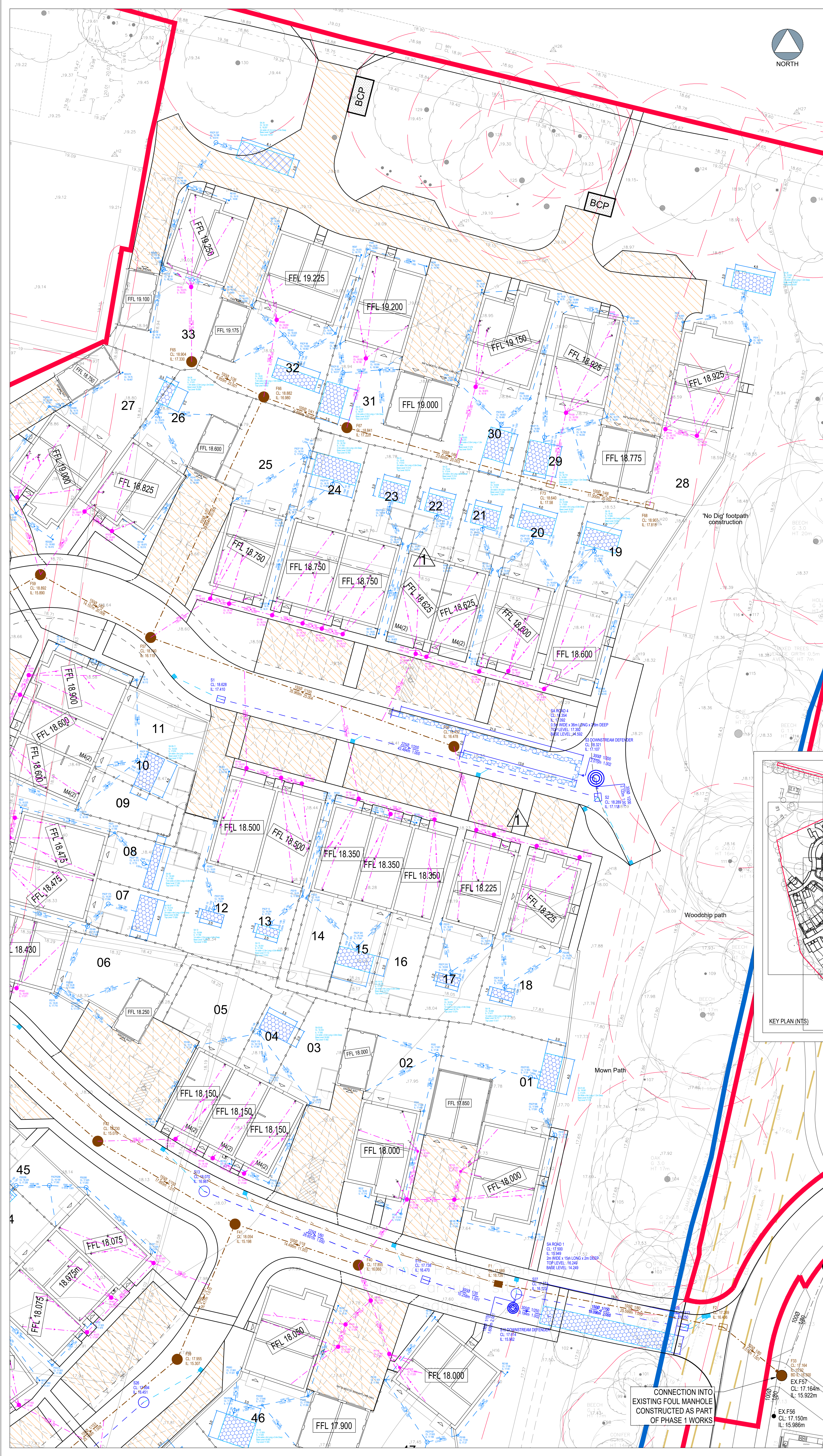
Project Phase

FOR CONSTRUCTION

Checked By	Checked Date	Drawn By	Drawn Date
JM	31.07.2023	OJT	31.07.2023
Client Drawing No.	Scale	(AT A1 SIZE)	
-	1:500		

PBA Drawing No.	Revision
091.5016.0578	C02

Appendix B Relevant Drainage Layout Drawings



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3	

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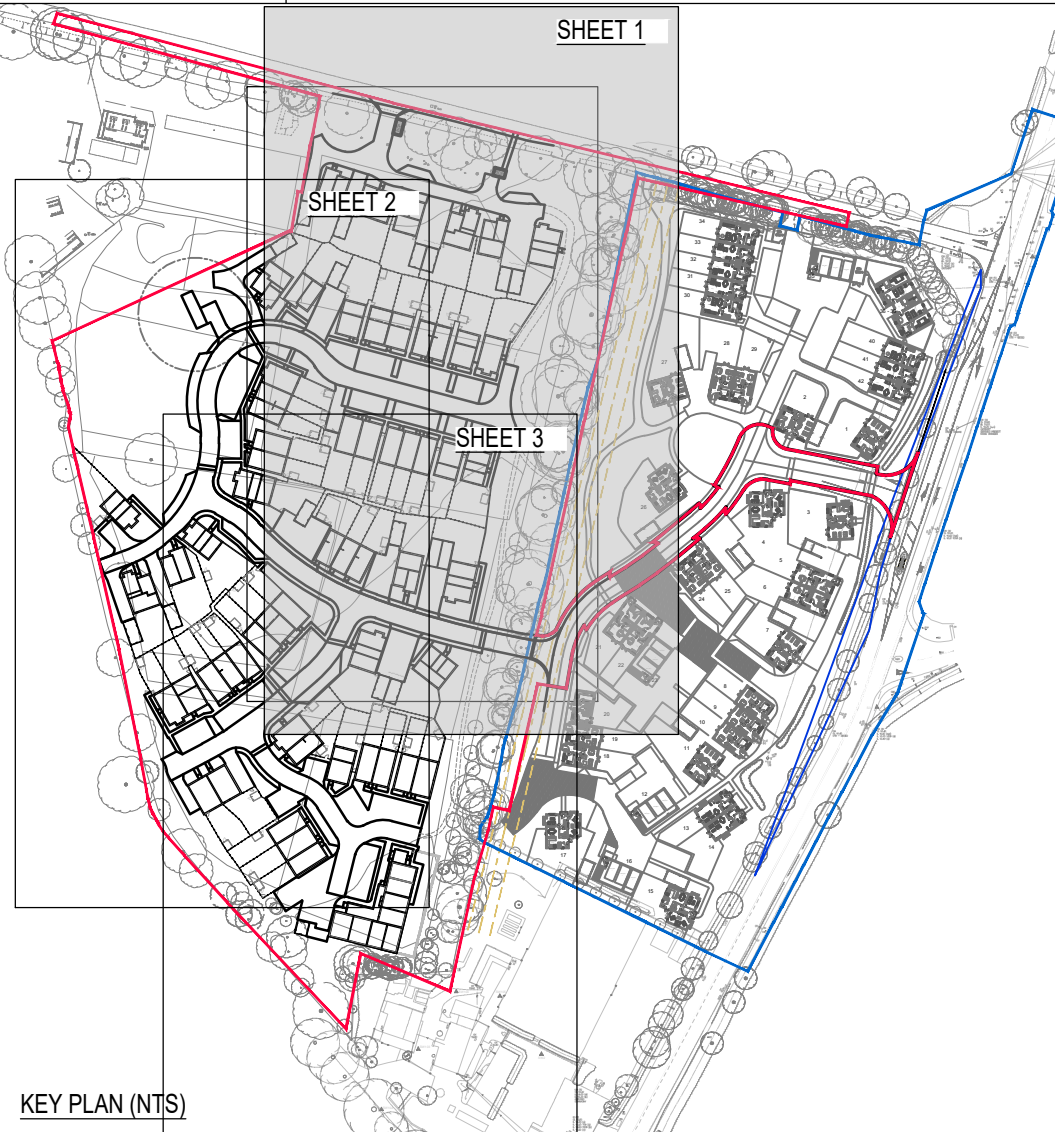
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- MAXIMUM OUTFLOW RATE FOR FOUL PUMP STATION TO BE 4.0 l/s

LEGEND:

- ADOPTABLE/PRIVATE FOUL WATER SEWER, Ø AS NOTED
- PRIVATE FOUL WATER DRAIN, 100mm Ø U.N.O
- PRIVATE/ADOPTABLE STORM WATER SEWER, Ø AS NOTED
- PRIVATE STORM WATER DOMESTIC DRAIN, 100mm Ø, U.N.O.
- FOUL RISING MAIN
- FOUL WATER MANHOLE (CL/USL/TYPE AS SHOWN)
- SURFACE WATER MANHOLE (CL/USL/TYPE AS SHOWN)
- FOUL WATER CATCHPIT/INSPECTION CHAMBER
- SURFACE WATER INSPECTION CHAMBER/CATCHPIT
- SURFACE WATER ROOFING EYE
- FOUL GULLY
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- DOWNSTREAM DEFENDER
- VORTEX PLUS
- INFILTRATION CRATES (SEE 091.5016.551 FOR FULL DETAILS)
- GRAVEL INFILTRATION TRENCH (SEE 091.5016.551 FOR FULL DETAILS)
- PERMEABLE PAVING
- SITE BOUNDARY
- EXISTING FOUL WATER SEWER
- TREE ROOT PROTECTION AREAS
- TREE ROOT PROTECTION AREAS CALCULATED AND SPECIFIED IN ACCORDANCE WITH BS 5827:2012 - 'TREES IN RELATION TO DESIGN, DEMOLITION AND CONSTRUCTION - RECOMMENDATIONS'



FOR CONSTRUCTION

Rev	Description	Date	By	Chkd
C08	LEGEND REVERTED TO REV. C05	16.02.2024	RL	RW
C07	COVER LEVELS UPDATED TO SUIT V.E. / PART M REVISIONS	08.08.2023	RL	RW
C06	SITE LAYOUT UPDATED	21.04.2023	RL	RW
C05	PLOT 19: PS115 LOCALLY RELOCATED	24.02.2023	RL	RW
C04	FW: Mh's F1, F2 & F33 AMENDED	08.02.2023	RL	RW
C03	ROAD 4 SOAKAWAY SIZED AMD.	07.02.2023	RL	RW
C02	ROAD 1/4 SOAKAWAY INFORMATION ADDED	02.02.2023	RL	RW
C01	ISSUED FOR CONSTRUCTION	20.01.2023	RL	RW

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miller homes

Project Name
LAND AT BAYARDS, EASTERGATE

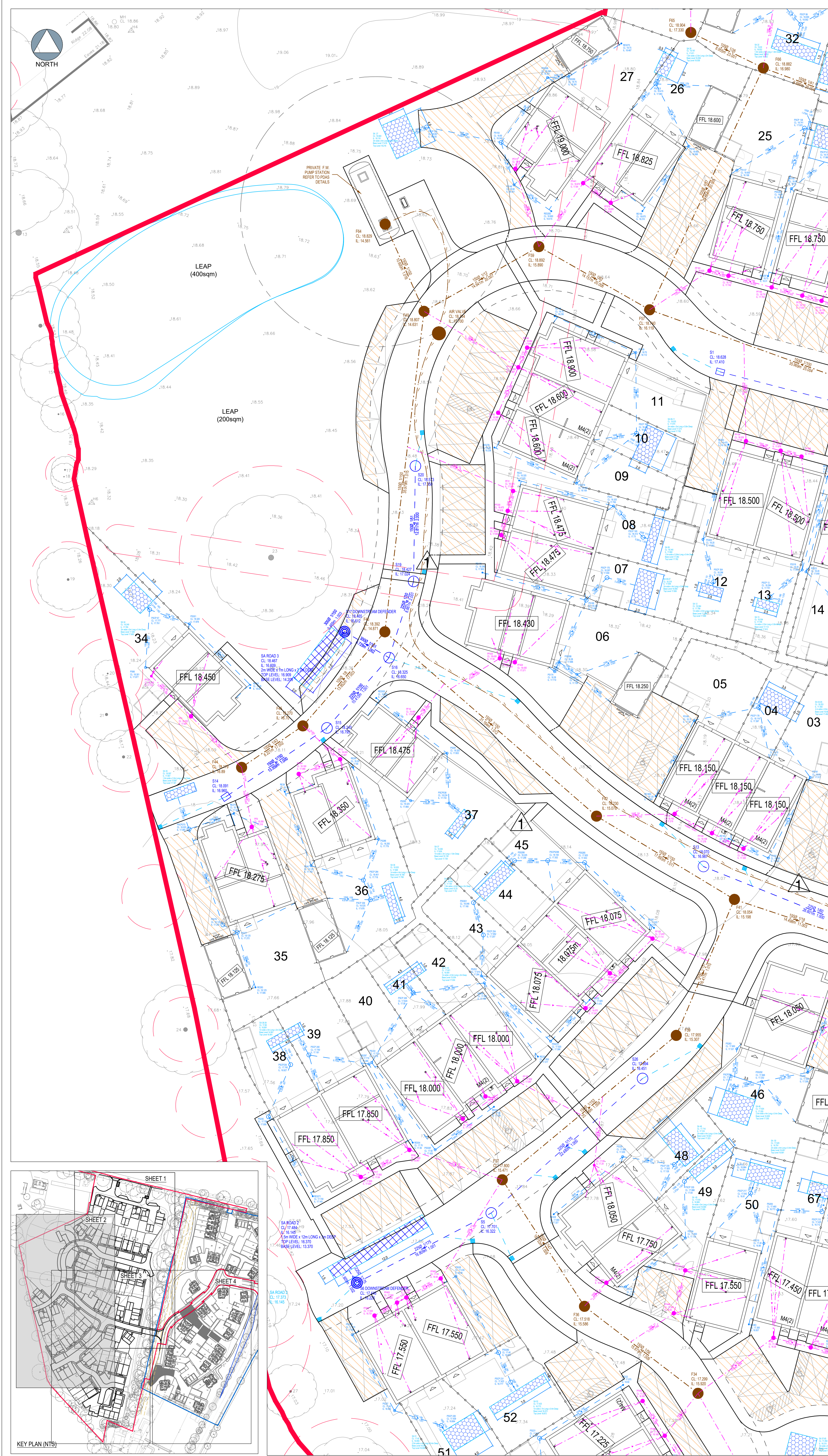
From
ENGINEERING LAYOUT DRAINAGE SHEET 1

Project Phase
CONSTRUCTION

Checked By	Checked Date	Drawn By	Drawn Date
RW	21.03.2022	CP	21.03.2022

Client Drawing No. - Scale 1:200 (AT A1 SIZE)

PBA Drawing No. 091.5016.0501 Revision C08



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	ADOPTABLE/PRIVATE FOUL WATER SEWER, Ø AS NOTED
	PRIVATE FOUL WATER DRAIN, 100mm Ø U.N.O
	PRIVATE/ADOPTABLE STORM WATER SEWER, Ø AS NOTED
	PRIVATE STORM WATER DOMESTIC DRAIN, 100mm Ø, U.N.O.
	FOUL RISING MAIN
	FOUL WATER MANHOLE (CUL/SL/TYPE AS SHOWN)
	SURFACE WATER MANHOLE (CUL/SL/TYPE AS SHOWN)
	FOUL WATER CATCHPIT/INSPECTION CHAMBER
	SURFACE WATER INSPECTION CHAMBER/CATCHPIT
	SURFACE WATER ROOSTING EYE
	FOUL GULLY
	ROAD GULLY
	FINISHED FLOOR LEVELS
	DOWNSTREAM DEFENDER
	VORTEX PLUS
	INFILTRATION CRATES (SEE 091.5016.551 FOR FULL DETAILS)
	GRAVEL INFILTRATION TRENCH (SEE 091.5016.551 FOR FULL DETAILS)
	PERMEABLE PAVING
	SITE BOUNDARY
	EXISTING FOUL WATER SEWER
	TREE ROOT PROTECTION AREAS
	TREE ROOT PROTECTION AREAS CALCULATED AND SPECIFIED IN ACCORDANCE WITH BS 5837:2012 - 'TREES IN RELATION TO DESIGN, DEMOLITION AND CONSTRUCTION - RECOMMENDATIONS'

FOR CONSTRUCTION

C05	LEGEND REVERTED TO REV. C02	16.02.2024	RL	RW
C04	COVER LEVELS UPDATED TO SUIT V.E./PART M REVISIONS	08.08.2023	RL	RW
C03	SITE LAYOUT UPDATED	21.04.2023	RL	RW
C02	ROAD 2/3 SOAKAWAY INFORMATION ADDED	02.02.2023	RL	RW
C01	ISSUED FOR CONSTRUCTION	20.01.2023	RL	RW
Rev	Description	Date	By	Chkd

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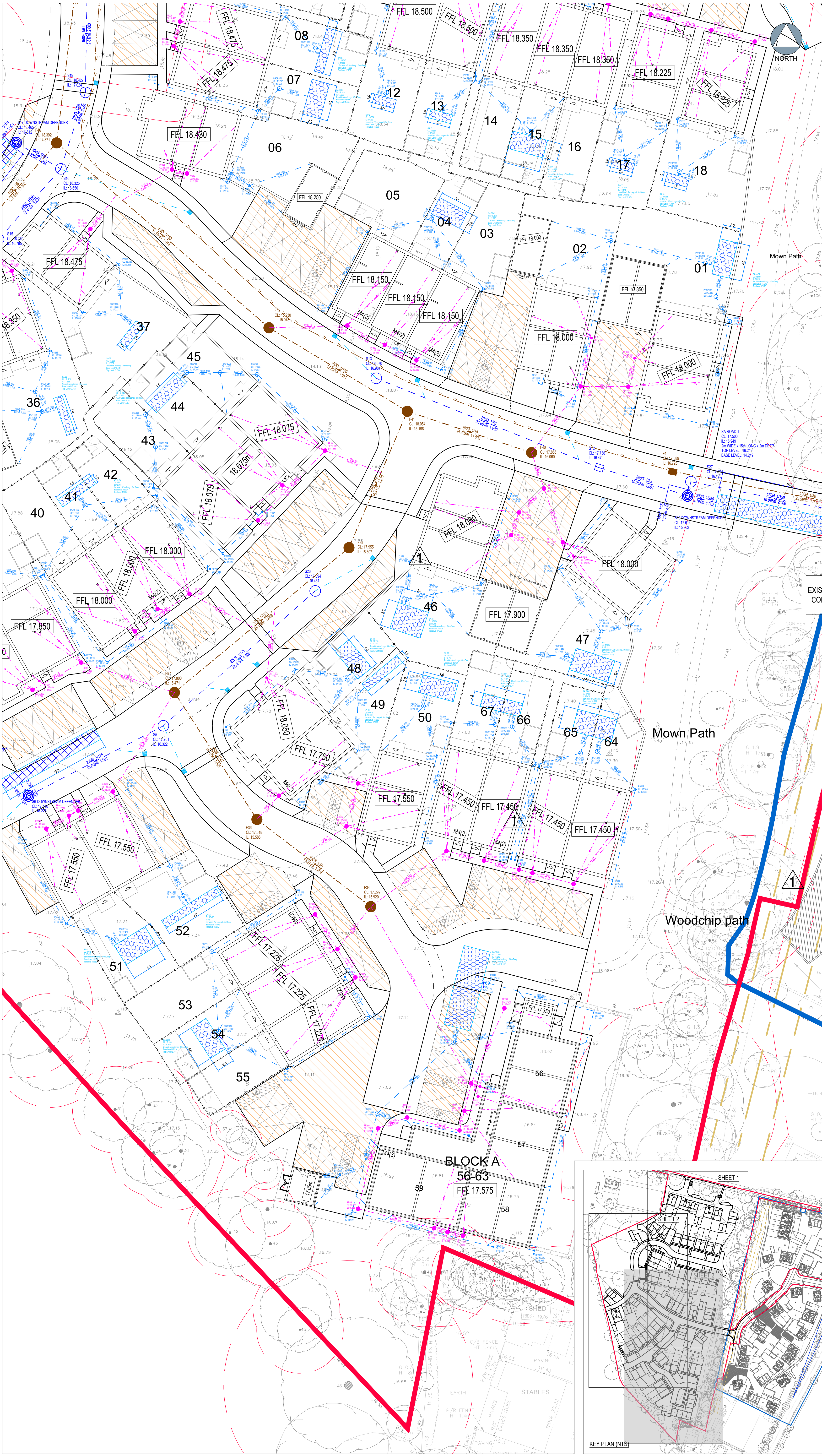
Project Name
LAND AT BAYARDS, EASTERGATE

Project Phase
CONSTRUCTION

Checked By	Checked Date	Drawn By	Drawn Date
RW	21.03.2022	CP	21.03.2022

Client Drawing No. - Scale: 1:250 (AT A1 SIZE)

PBA Drawing No.	Revision
091.5016.0502	C05



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CDM Regulations 2015 - Reg. 9			
None of the below is deemed to relieve any contractor of his obligations under all applicable health and safety legislation.			
In preparing the design shown on this and related drawings Paul Basham Associates has considered and, where reasonably practicable, eliminated foreseeable risks. Any further abnormal or unusual risks, which remain, are numbered below and identified thus (X), and should be given particular attention by all those carrying out construction or of future maintenance works.			
1.	Existing services present		
2.			
3.			

- GENERAL NOTES**
- THIS DRAWING IS INTENDED TO BE VIEWED IN COMBINATION WITH ALL RELEVANT ARCHITECTS, ENGINEERS, SERVICES AND SPECIALIST DRAWINGS AND SPECIFICATION.
 - ANY VARIATIONS OR DISCREPANCIES BETWEEN THESE DRAWINGS IN TERMS OF DIMENSIONS OR DETAILS SHOULD BE DRAWN TO THE ATTENTION OF THE ARCHITECT AND/OR THE ENGINEER FOR CLARIFICATION.
 - PAUL BASHAM ASSOCIATES ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF BACKGROUND INFORMATION PRODUCED BY THIRD PARTIES - THIS MUST BE TREATED AS INDICATIVE ONLY.
 - ALL DIMENSIONS AND LEVELS ARE IN METRES. DO NOT SCALE THIS DRAWING, PRINT, PLOT OR DISK.
 - THIS DRAWING SHOULD ONLY BE USED FOR CONSTRUCTION IF THE PROJECT PHASE IN THE TITLE FRAME BELOW IS SHOWN AS "CONSTRUCTION". PAUL BASHAM ASSOCIATES TAKE NO RESPONSIBILITY FOR CONSTRUCTION WORKS UNDERTAKEN TO DRAWINGS WHICH ARE NOT MARKED UNDER THIS PHASE.

- DRAINAGE NOTES**
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS, SERVICES AND SPECIALIST DRAWINGS AND SPECIFICATION.
 - THE LEVEL OF THE EXISTING FOUL AND STORM SEWERS ON SITE HAS BEEN EXTRAPOLATED FROM THE LEVELS OF ADJACENT MANHOLES THE EXACT LEVEL AT THE POINT OF CONNECTION SHALL BE CHECKED PRIOR TO THE COMMENCEMENT OF THE WORKS AND ANY VARIANCE REPORTED TO THE ENGINEER IMMEDIATELY.
 - ALL LEVELS ARE TO ORDNANCE DATUM
 - ALL DRAINAGE TO BE IN ACCORDANCE WITH BUILDING REGULATIONS PART H. SEWERS NOTED AS ADOPTABLE SHALL BE TO SEWERS FOR ADOPTION 7th EDITION.
 - THE LOCATION OF EXISTING UNDERGROUND UTILITY SERVICES IS AS PROVIDED BY THE RELEVANT STATUTORY UNDERTAKERS THE CONTRACTOR IS TO ASCERTAIN THE EXACT LOCATION PRIOR TO COMMENCEMENT OF WORKS.
 - UNLESS NOTED OTHERWISE ALL DRAINAGE PIPES ARE TO BE 100mm DIA. AND ALL GULLY LEADS ARE TO BE 150mm DIA. MINIMUM ADOPTABLE SEWER 100mm DIA.
 - MAXIMUM OUTFLOW RATE FOR FOUL PUMP STATION TO BE 4.0 l/s

- LEGEND:**
- ADOPTABLE/PRIVATE FOUL WATER SEWER, Ø AS NOTED
 - PRIVATE FOUL WATER DRAIN, 100mm Ø U.N.O
 - PRIVATE/ADOPTABLE STORM WATER SEWER, Ø AS NOTED
 - PRIVATE STORM WATER DOMESTIC DRAIN, 100mm Ø, U.N.O.
 - FOUL RISING MAIN
 - FOUL WATER MANHOLE (CL/ULS/TYPE AS SHOWN)
 - SURFACE WATER MANHOLE (CL/ULS/TYPE AS SHOWN)
 - FOUL WATER CATCHPIT/INSPECTION CHAMBER
 - SURFACE WATER INSPECTION CHAMBER/CATCHPIT
 - SURFACE WATER ROOING EYE
 - FOUL GULLY
 - ROAD GULLY
 - FINISHED FLOOR LEVELS
 - DOWNSIDE DEFENDER
 - VORTEX PLUS
 - INFILTRATION CRATES (SEE 091.5016.551 FOR FULL DETAILS)
 - GRAVEL INFILTRATION TRENCH (SEE 091.5016.551 FOR FULL DETAILS)
 - PERMEABLE PAVING
 - SITE BOUNDARY
 - EXISTING FOUL WATER SEWER
 - TREE ROOT PROTECTION AREAS
 - TREE ROOT PROTECTION AREAS CALCULATED AND SPECIFIED IN ACCORDANCE WITH BS 5837:2012 - 'TREES IN RELATION TO DESIGN, DEMOLITION AND CONSTRUCTION - RECOMMENDATIONS'

FOR CONSTRUCTION

C06	LEGEND REVERTED TO REV. C03	16.02.2024	RL	RW
C05	COVER LEVELS UPDATED TO SUIT V.E. / PART M REVISIONS	08.08.2023	RL	RW
C04	SITE LAYOUT UPDATED	21.04.2023	RL	RW
C03	FW Mths F1, F2 & F33 AMENDED	08.02.2023	RL	RW
C02	ROAD 1 SOAKAWAY INFORMATION ADDED	02.02.2023	RL	RW
C01	ISSUED FOR CONSTRUCTION	20.01.2023	RL	RW
Rev	Description	Date	By	Chkd



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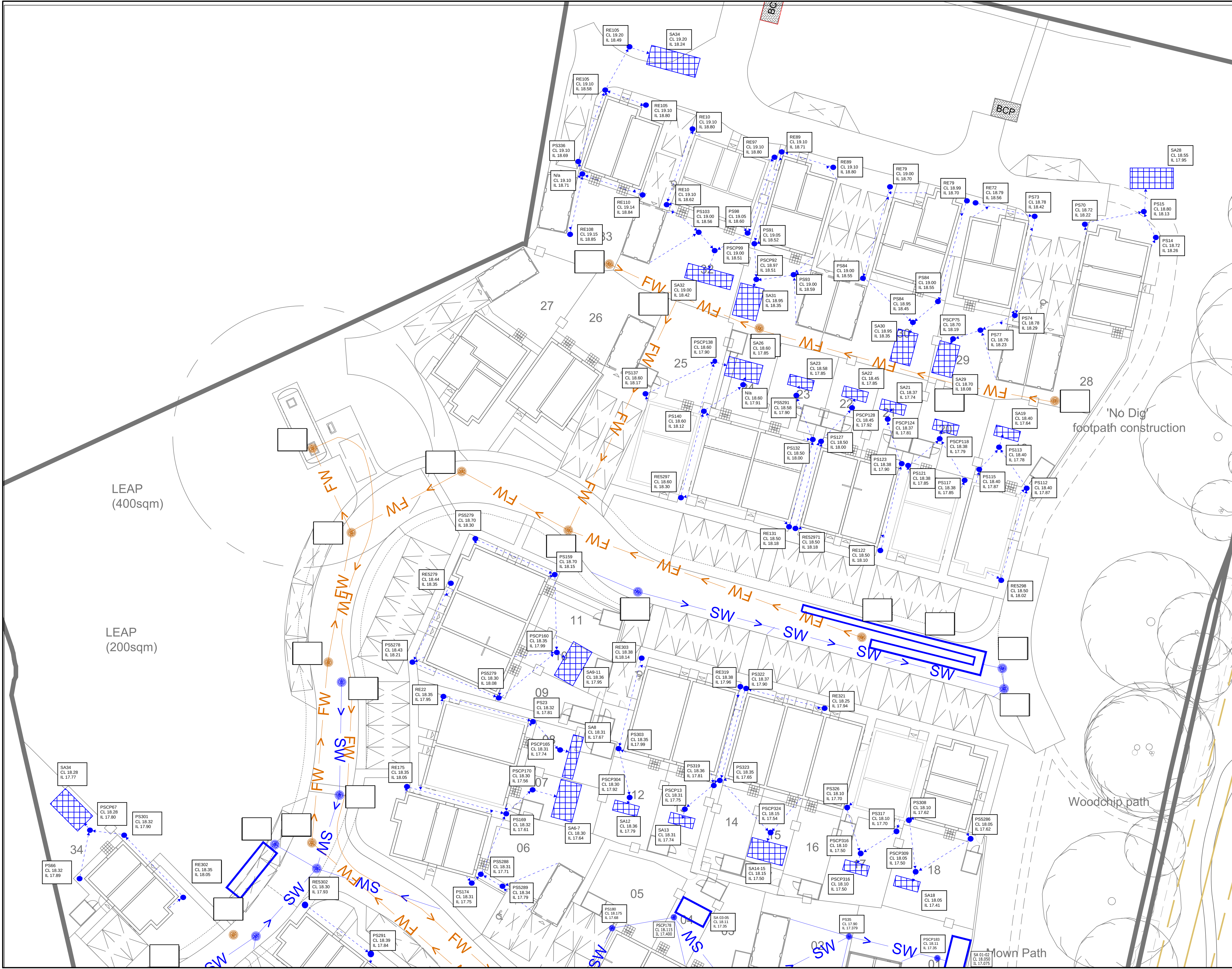
Project Name
LAND AT BAYARDS, EASTERGATE

Rev
ENGINEERING LAYOUT DRAINAGE SHEET 3

Project Phase
CONSTRUCTION

Checked By RW	Checked Date 21.03.2022	Drawn By CP	Drawn Date 21.03.2022
Client Drawing No. -		Scale 1:250	(AT A1 SIZE)
PBA Drawing No. 091.5016.0503		Revision C06	

Appendix C As Built Survey



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Notes

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- ALL DIMENSIONS ARE IN METRES UNLESS SHOWN OTHERWISE.
- ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM UNLESS SHOWN OTHERWISE.

— SW — SURFACE WATER

— FW — FOUL WATER

MANHOLE/INSPECTION CHAMBER/RODDING EYE

FOUL WATER MANHOLE

101	FOR INFORMATION	22/08	RU	RU
Rev	Description	Date	By	App
			CHK	

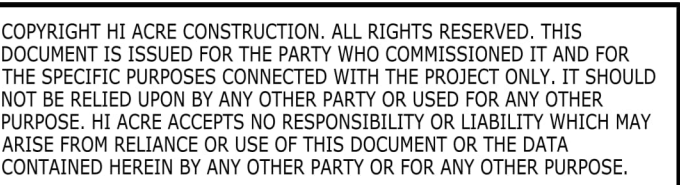
FOR INFORMATION

BAYARDS LANE
EASTERGATE

HI-ACRE CONSTRUCTION

AS BUILT DRAINAGE
LAYOUT PLAN
SHEET 1 OF 2

Project No:	Scale (BA1):	BT	Date:
EASTERGATE	1:200	-----	AUG 23
Drawing No:			Rev:
EASTERGATE-HA-XX-DR-C-00001			101



1. DO NOT SCALE FROM THIS DRAWING.
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3. ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM UNLESS SHOWN OTHERWISE.

— SW — SURFACE WATER

— FW — FOUL WATER

SURFACE WATER
MANHOLE/INSPECTION
CHAMBER/RODDING EYE

FOUL WATER MANHOLE

01	FOR INFORMATION	22/08 2023	RU RU	RU
Rev	Description	Date	By Chk	App

FOR INFORMATION

BAYARDS LANE
EASTERGATE

AS BUILT DRAINAGE
LAYOUT PLAN
SHEET 2 OF 2

Project No: EASTERGATE	Scale (@A1): 1:200	Drawn: BT	Date: AUG 23
Drawing No: EASTERGATE-HA-XX-DR-C-00002			Rev: I01

Appendix D Materials

Appendix E CCTV Survey of Pipelines and CCTV Video Files