

Project Name:	Land at Bayards, Eastergate (Miller Homes)
Document Reference:	091.5016/SVR/5
Document Name:	SuDS Verification Report – Area 5
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Revision Record				
Rev	Date	By	Summary of Changes	Aprvd
P01	08/05/2026	MDW	First issue.	JFS

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1. INTRODUCTION

- 1.1 This Sustainable urban Drainage Strategy (SuDS) Verification Report – Area 5, 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 5, comprising of 16 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.

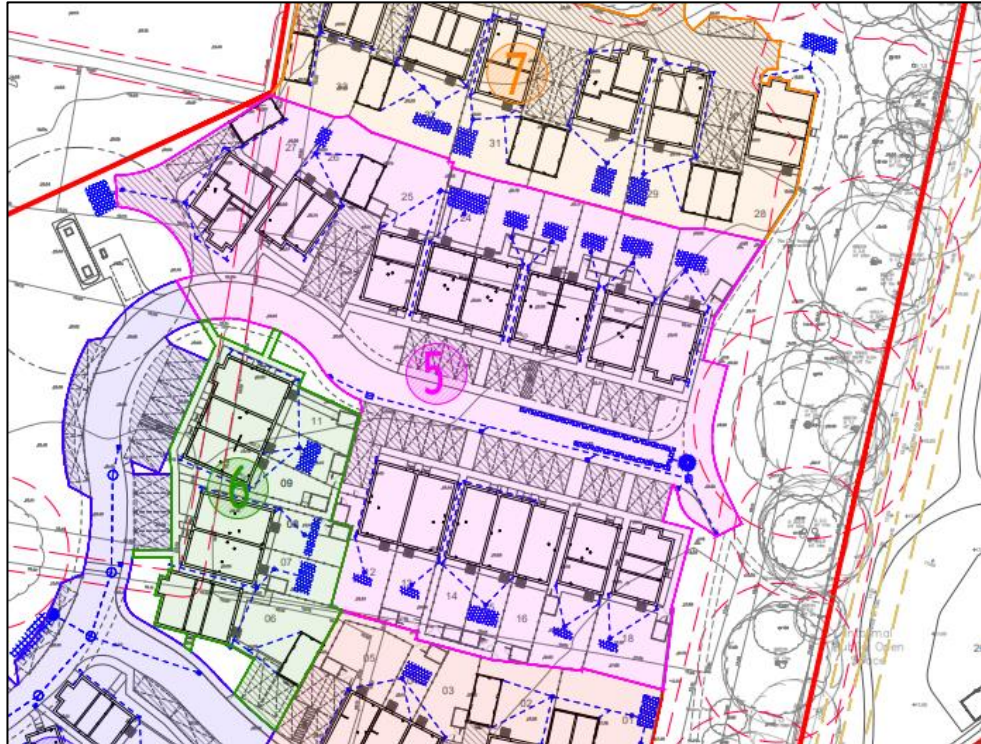


Figure 2- Site extent of Area 5

- 1.12 The relevant Drainage Layout drawings that cover the extent of Area 5 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 5 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 and the 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 5 is given below.

Area	Ref No	As-Built CL	Design IL	As-Built IL	Comments
5	RE303	18.38	18.125	18.14	
	PS303	18.35	17.991	17.99	
	RE319	18.38	17.95	17.96	
	PS319	18.36	17.809	17.81	
	RE321	18.25	17.90	17.94	
	PS322	18.37	17.777	17.90	
	PS323	18.35	17.640	17.65	
	PS326	18.10	17.66	17.70	
	PS317	18.10	17.654	17.70	
	PS308	18.10	17.63	17.62	
	PS5286	18.05	17.62	17.62	
	S2 (Design annotation)		17.118		No As-Built information provided
	RE5298	18.50	18.016	18.02	
	PS112	18.40	17.873	17.87	
	PS115	18.40	17.871	17.87	
	PS117	18.38	17.871	17.85	
	PS121	18.38	17.872	17.85	
	RE122	18.50	18.083	18.10	
	PS123	18.38	17.950	17.90	
	RE52971	18.50	18.153	18.18	
	PS127	18.50	18.020	18.00	
	RE131	18.50	18.164	18.18	
	PS132	18.50	18.030	18.00	
	RE5297	18.60	18.31	18.30	
	PS140	18.60	18.15	18.12	
	PS137	18.60	18.166	18.17	
	RE145 (Design annotation)		18.210		No As-Built information provided
	PS147 (Design annotation)		18.088		No As-Built information provided

Area	Ref No	As-Built CL	Design IL	As-Built IL	Comments
	RE5283 (Design annotation)		18.415		No As-Built information provided
	PS149 (Design annotation)		18.351		No As-Built information provided
	PS150 (Design annotation)		18.240		No As-Built information provided
	RE5270 (Design annotation)		18.467		No As-Built information provided
	PS5269 (Design annotation)		18.381		No As-Built information provided
	PS5268 (Design annotation)		18.351		No As-Built information provided

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, however no As-Built information has been provided for a consistent number of manholes as listed in Table 1 above.
- 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 S2, RE145, PS147, RE5283, PS149, PS150, RE5270, PS5269, PS5268. The annotation for these manholes has been taken from the design drawings.

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:



Plots 14-15-16 (1)



Plots 14-15-16 (2)



Plot 17



Plot 18



Plot 23



Plot 24

- 4.4 The image for plots 14-15-16 (1) indicates that the drainage pipe has been incorrectly connected. The pipework should be installed in full accordance with the approved design drawings and the manufacturer's installation data sheet. The current arrangement does not reflect the approved specification and will require correction to ensure compliance with design intent and manufacturer requirements.
- 4.5 Image 14-15-16 (2) appears to show rows of five SDS GEOLight crates; however, they do not appear to be clipped together and are shown to be moving apart. As the image does not clearly confirm the installation depth or the total number of crates provided, it is not possible to verify whether the required storage capacity has been achieved in accordance with the approved design and specification.
- 4.6 For plot 23, the image does not show the connection between the drainage pipe and the infiltration crate. As the crate appears to have already been covered, it is not possible to confirm whether the connection has been installed correctly or in compliance with the approved design.
- 4.7 From the images it appears that the installation of the geotextile membranes are not installed and sealed in accordance with the manufacturer's specifications.

4.8 The soakaways have shown an arrangement that differs from the design outlined within the construction detail on sheet 091.5061.551 C01. Where the images do not show the crates systems uncovered, we were unable to determine if sufficient storage was included.

4.9 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.

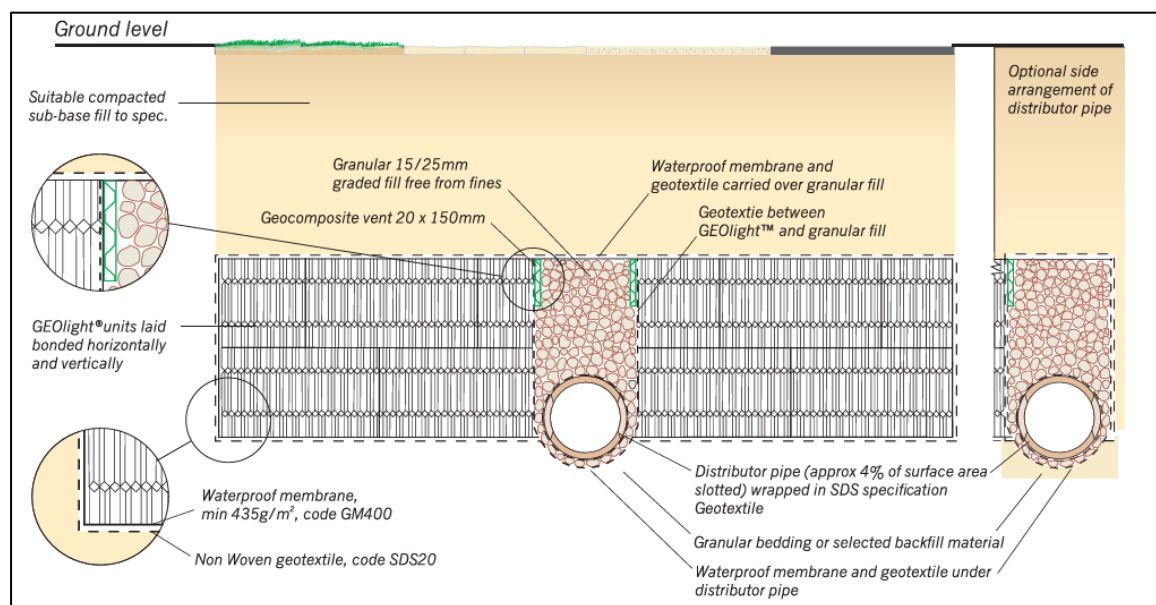


Figure 3: SDS GEOLight Cross Section

4.10 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**.

4.11 No images have been provided for any of the permeable paving within this area, 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 5 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**.

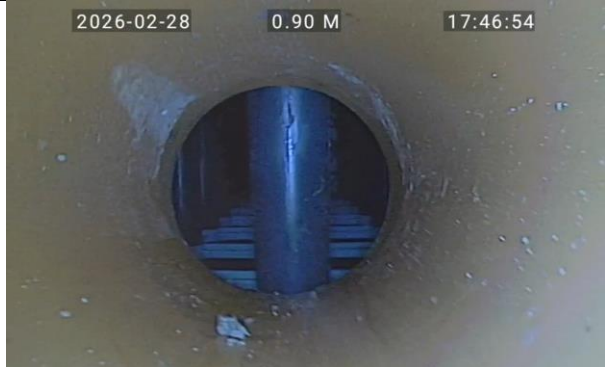
- PS303-PS304
- PS304-SA12
- PS319-PSCP13
- PSCP13-SA13
- PS323-PSCP324
- PSCP324-SA14-15
- PS317-PSCP316
- PSCP316-SA17
- PS5286-PSCP309
- PSCP309-SA18
- PS112-PSCP113
- PSCP113-SA19
- PS121-PSCP118
- PSCP118-SA20
- PS123-PSCP124
- PSCP124-SA21
- PS127-PSCP128
- PACP128-SA22
- PS5291-SA23
- PS140-PSCP141
- PSCP141-SA24-25
- PS137-PSCP138
- PSCP138-SA24-25

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
PS303-PS304		No visible major defects
PS304-SA12		Sediment in manhole after catchpit, would suggest that either the catchpit isn't being maintained or has been constructed incorrectly.
PS319-PSCP13		No visible major defects
PSCP13-SA13		Sediment in manhole after catchpit, would suggest that either the catchpit isn't being maintained or has been constructed incorrectly. Preformed knockout panel has not been removed, this could restrict flow into the crate.
PS323-PSCP324		No visible major defects
PSCP324-SA14-15		Geotextile membrane fibres frayed, visible damage to crates and non-standard connection into crates.
PS317-PSCP316		No visible major defects
PSCP316-SA17		No visible major defects
PS5286-PSCP309		No visible major defects
PSCP309-SA18		No visible major defects
PS112-PSCP113		No visible major defects

PSCP113-SA19		Sediment in manhole after catchpit, would suggest that either the catchpit isn't being maintained or has been constructed incorrectly. Preformed knockout panel has not been removed, this could restrict flow into the crate.
PS121-PSCP118		No visible major defects
PSCP118-SA20		Possible root ingress into attenuation crates
PS123-PSCP124		No visible major defects
PSCP124-SA21		No visible major defects
PS127-PSCP128		No visible major defects
PACP128-SA22		No visible major defects (footage only 4 seconds)

PS5291-SA23		Pipe appears to end with a bend that goes into the top of the crate, top appears to be the preformed knock out section. Suggesting crates have been laid incorrectly. Potential for structural stability to be undermined if this is the case.
PS140-PSCP141		No visible major defects
PSCP141-SA24-25		No visible major defects, however, this does not seem to reflect the photos provided of this soakaway. The CCTV indicates a side connection into the crate whilst the photos indicate the pipe is placed on top of the crate.
PS137-PSCP138		
PSCP138-SA24-25		Same pipe as PSCP141-SA24-25 was recorded in survey. Along with this, this does not seem to reflect the photos provided of this soakaway. The CCTV indicates a side connection into the crate whilst the photos indicate the pipe is placed on top of the crate.

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 5 are not likely to prevent the systems from performing adequately. However the CCTV footage indicates general workmanship issues, this would need to be further investigated.
- 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 5 may restrict the flow of surface water into the soakaway. The hand cut PVC pipes compromise the pipe's structural integrity and do not have the correct bedding which has caused the pipe to deform, along with this, the rate on 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 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

- 7.1 The air vent to the Soakaways requires investigation and resolution.
- 7.2 The remedial works carried out within Area 5 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.
 - 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/SVR5 “SuDS Verification Report Area 5 and Appendices” show that the Surface Water Systems within Area 5 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

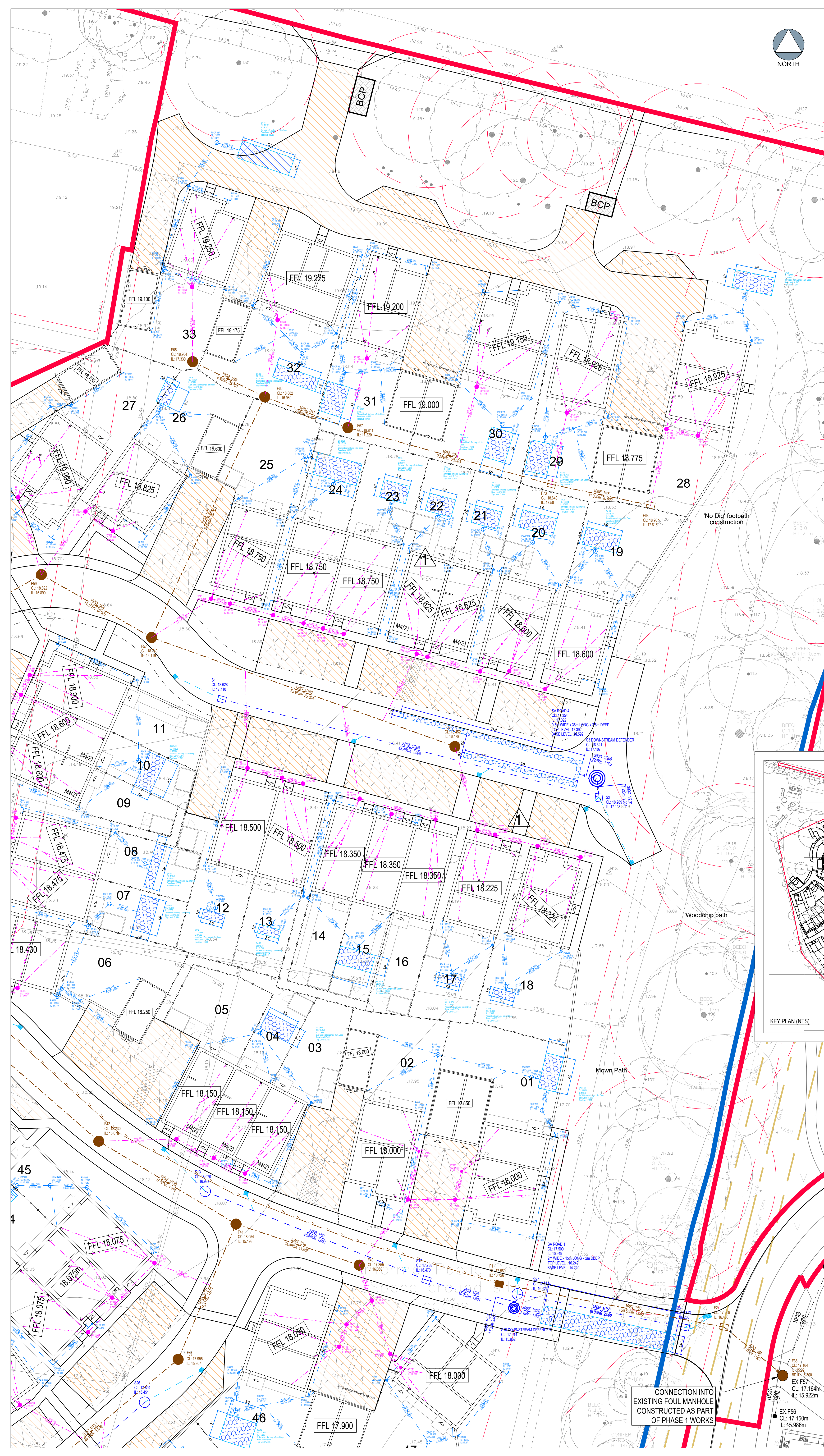
Project Phase

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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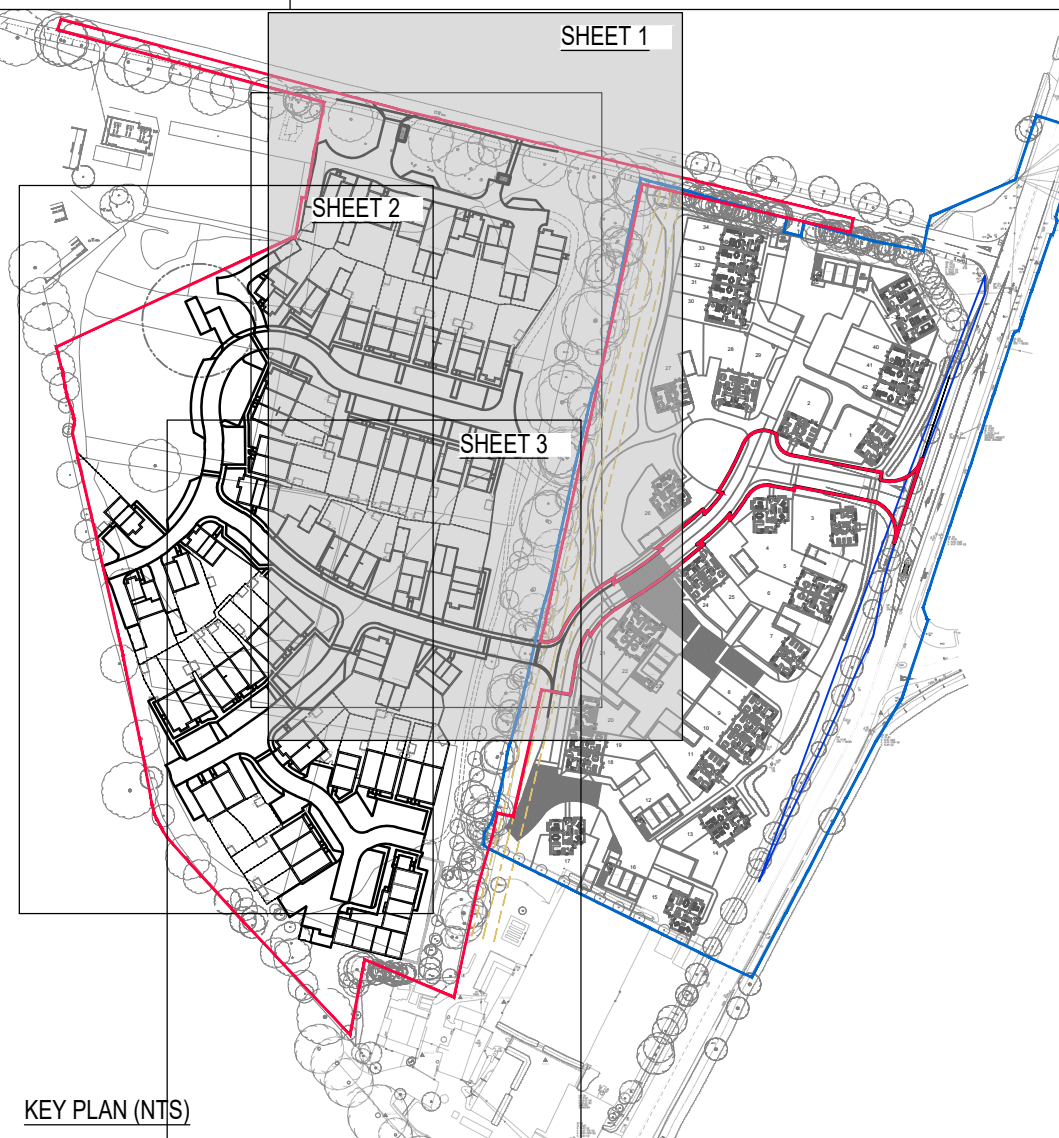
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- ALL LEVELS ARE TO ORDNANCE DATUM
- ALL DRAINAGE TO BE IN ACCORDANCE WITH BUILDING REGULATIONS PART H. SEWERS NOTED AS ADOPTABLE SHALL BE TO SEWERS FOR ADOPTION 7th EDITION.
- THE LOCATION OF EXISTING UNDERGROUND UTILITY SERVICES IS AS PROVIDED BY 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 (CUL/S/L/TYPE AS SHOWN)
- SURFACE WATER MANHOLE (CUL/S/L/TYPE AS SHOWN)
- FOUL WATER CATCHPIT/INSPECTION CHAMBER
- SURFACE WATER INSPECTION CHAMBER/CATCHPIT
- SURFACE WATER ROOFING 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 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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Project Name
LAND AT BAYARDS, EASTERGATE

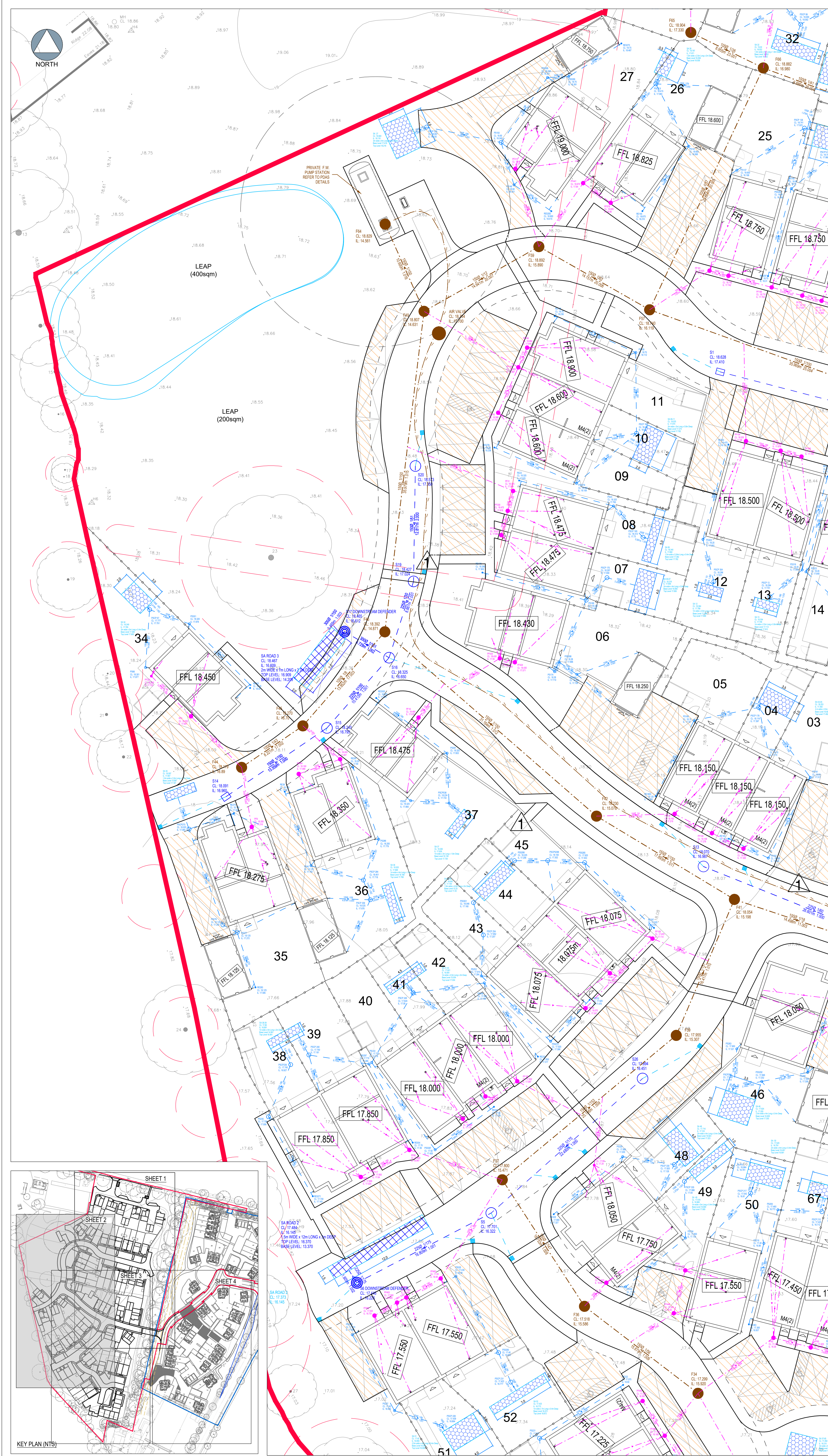
From
ENGINEERING LAYOUT DRAINAGE SHEET 1

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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 - 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 (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'

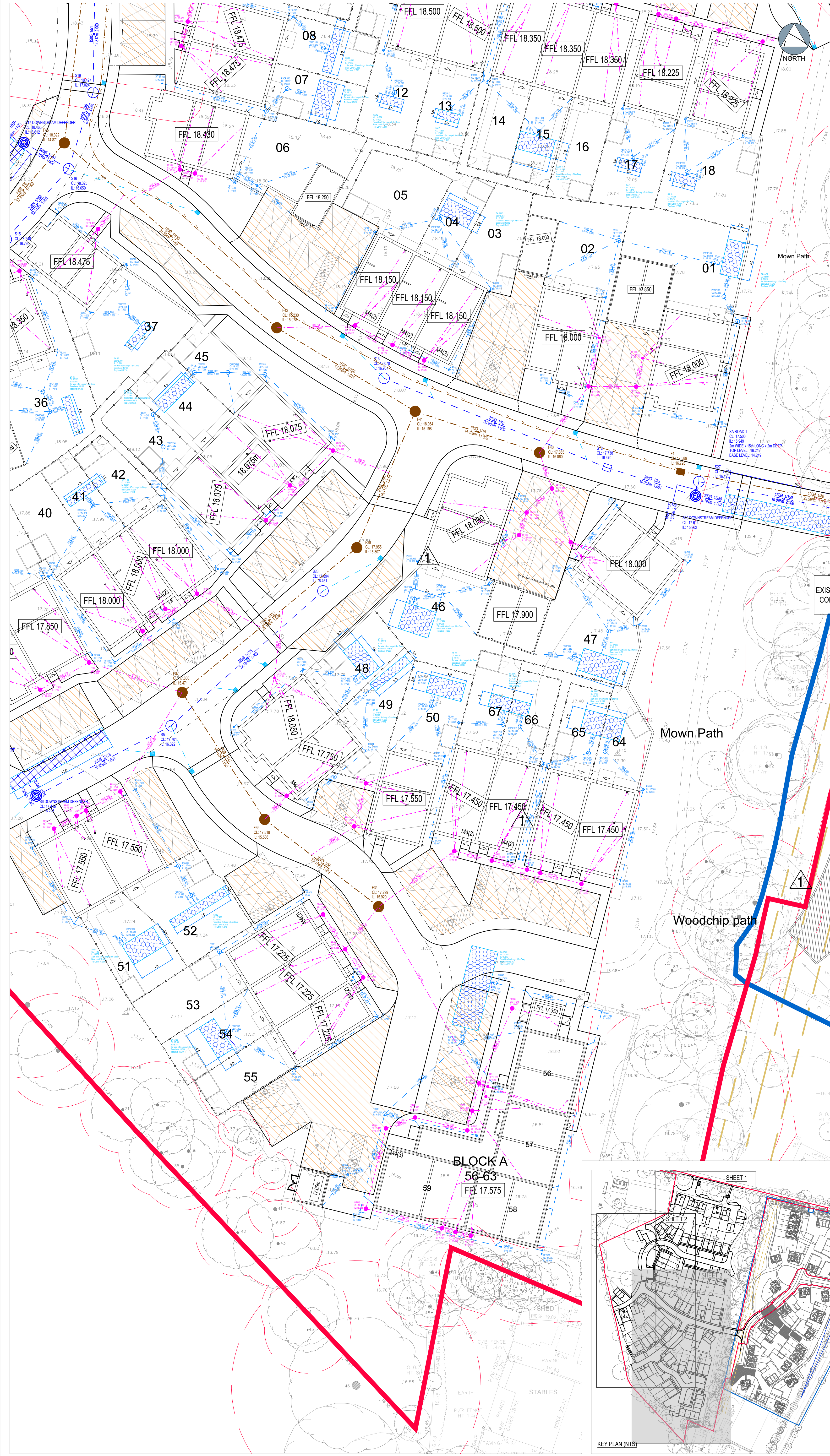
FOR CONSTRUCTION

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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Client			
millerhomes			
Project Name LAND AT BAYARDS, EASTERGATE			
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.	091.5016.0502	Revision	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.
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- 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.
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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/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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Client



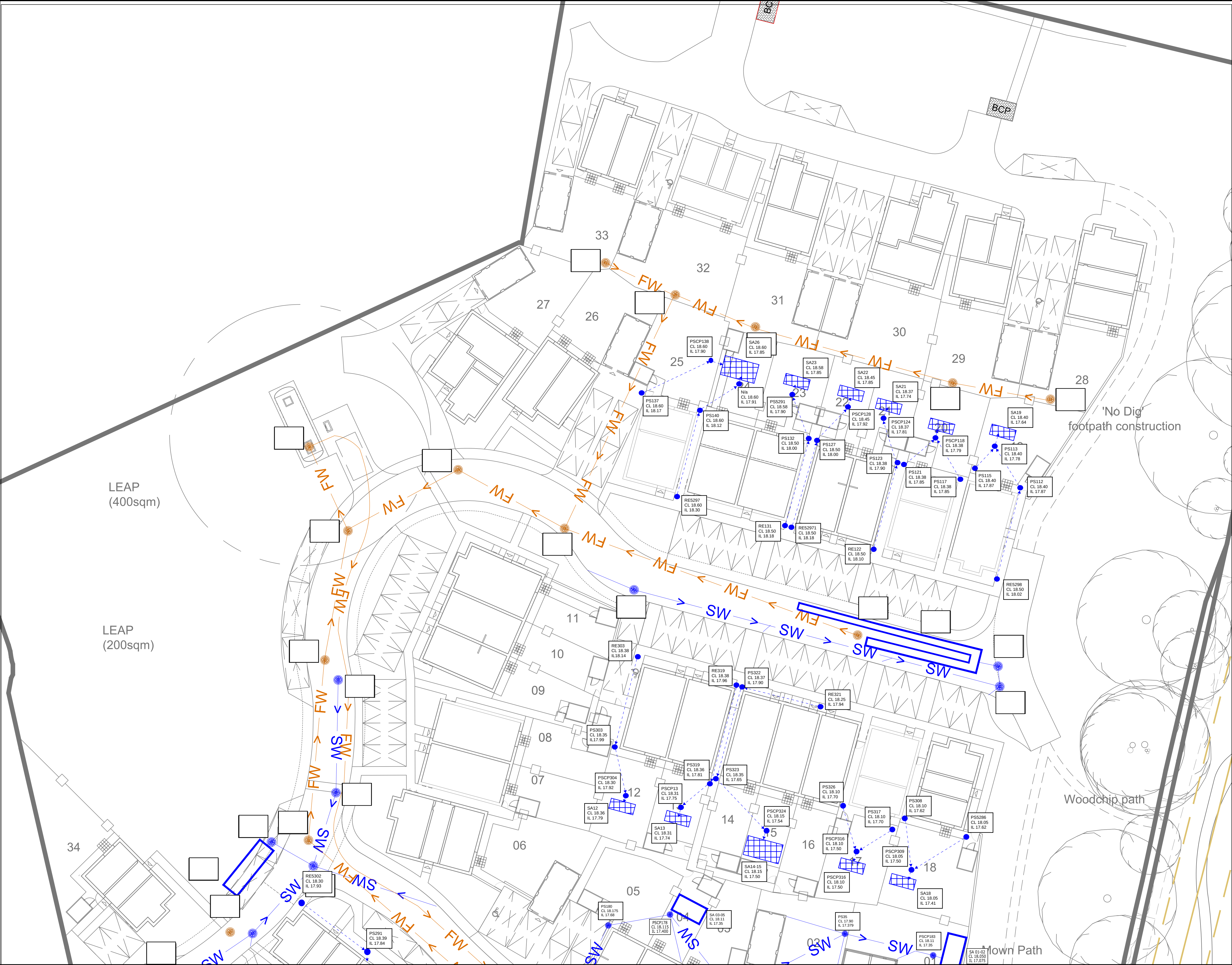
Project Name
LAND AT BAYARDS, EASTERGATE

Draw
ENGINEERING LAYOUT DRAINAGE SHEET 3

Project Phase
CONSTRUCTION

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

Appendix C As Built Survey



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Notes

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- 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	

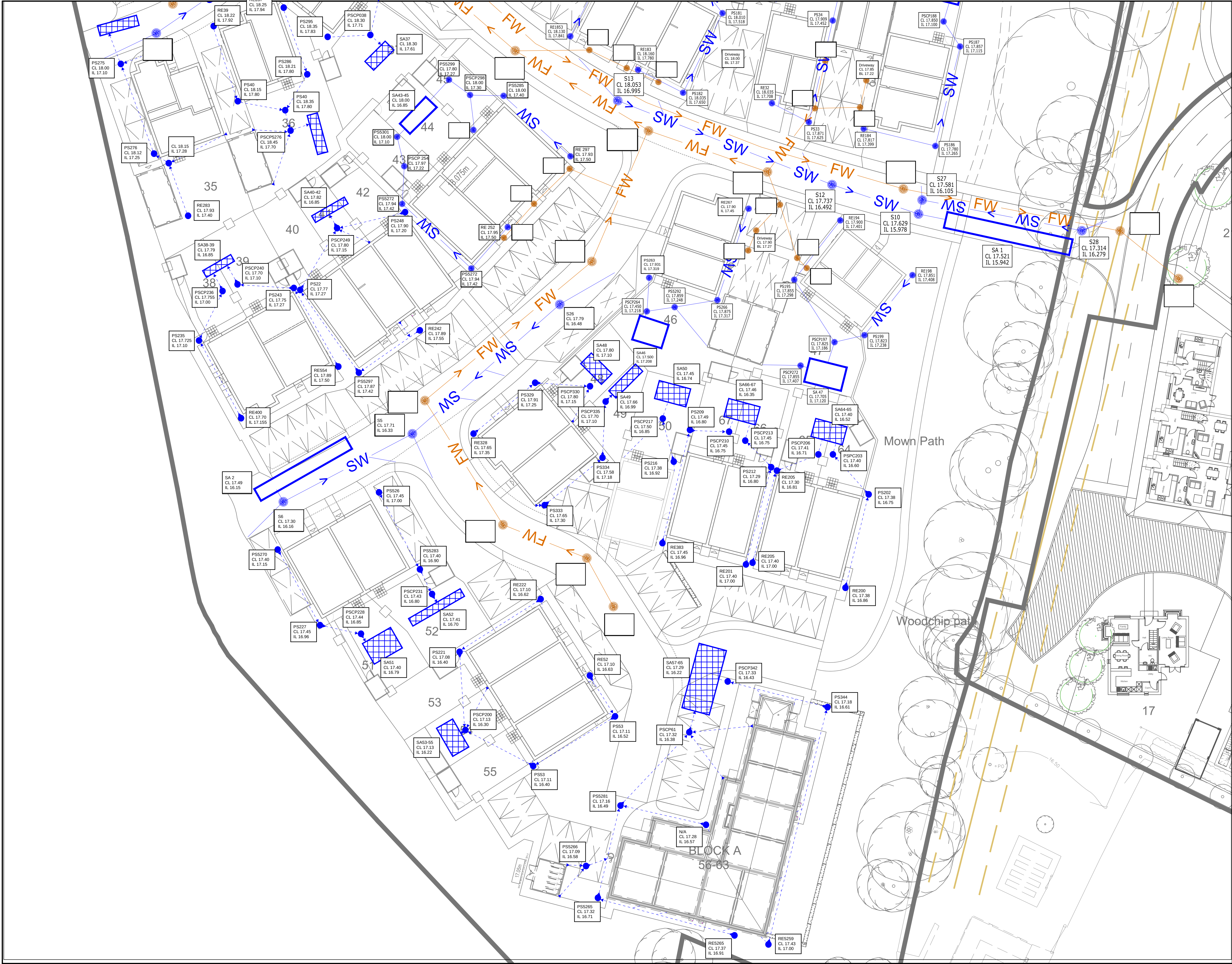
FOR INFORMATION

BAYARDS LANE
EASTERGATE

HI-ACRE CONSTRUCTION

AS BUILT DRAINAGE
LAYOUT PLAN
SHEET 1 OF 2

Project No:	Scale (8A1):	BT	Date:
EASTERGATE	1:200		AUG 23
Drawing No:			Rev:
EASTERGATE-HA-XX-DR-C-00001			101



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 - 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

I01	FOR INFORMATION	22/08/2023	RU	RU
Rev	Description	Date	By	App
			Chk	

FOR INFORMATION

BAYARDS LANE
EASTERGATE



AS BUILT DRAINAGE
LAYOUT PLAN
SHEET 2 OF 2

Project No:	Scale (0A1):	Drawn:	Date:
EASTERGATE	1:200	BT	AUG 23
Drawing No:		Rev:	
EASTERGATE-HA-XX-DR-C-00002		I01	

Appendix D Materials

Appendix E CCTV Survey of Pipelines and CCTV Video Files