

Technical Note

22 October 2021

To West Sussex County Council
CC Stephen Reed
Subject Barnham Road Drainage
Document Reference A29-CAP-HDG-00-AN-D-0082 S3-P01

This Technical Note has been prepared on behalf of West Sussex County Council (WSCC) ("The Applicant") to support the discharging of planning condition 7 for Phase 1 of the A29 Realignment Scheme (planning application ref WSCC/052/20).

Condition 7 is provided below –

Drainage Scheme

7. No development shall be carried out until a detailed drainage scheme (in general accordance with the approved drainage strategy (Drainage Strategy Layout (Ref. A29-CAP-HPN-00-DR-C-0047 Rev P11); Drainage Strategy (Ref. A29-CAP-HDG-00-AN-D-0052-S3-P05); and SuDS Management Train (Ref. A29-CAP-HDG-00-AN-D-0058 Rev S3-P04)) has been submitted to and approved in writing by the County Planning Authority. In addition to that set out within the approved drainage strategy, it shall include details of all necessary improvements to existing drainage in Barnham Road required to accommodate additional flows arising from the development hereby permitted, and a timetable for their implementation. Thereafter the approved drainage scheme shall be implemented and maintained in full.

Reason: To ensure that the proposed development is satisfactorily drained and ensure that impacts through flooding are not caused.

This Technical Note aims to confirm/demonstrate that there are no additional flows discharged into the existing Barnham Road surface water drainage network, as is suggested in condition 7.

The catchment area around the proposed new roundabout on Barnham Road would be drained using conventional road gullies and combined kerb drains (as shown on our supporting drainage design drawings A29-CAP-HDG-00-DR-D-0048 – 0052). The runoff is then conveyed to the outfall via a new network of pipes, completely separate to the existing Barnham Road Surface Water highway drainage network.

The existing surface water highway drainage pipe network is to be retained (adding concrete protection to existing pipes where required as shown on our drainage drawings), in order to continue draining runoff from the areas of Barnham Road outside the catchment for the new proposed network.

As shown in Figure 1 below the area highlighted in red outline represents the catchment area previously drained to the existing network that will be diverted into the proposed network.

The area highlighted in purple outline represents an area which is to continue to discharge into the existing network of pipes. This area drains back into the existing network as it is not feasible to connect into the proposed roundabout network without clashing with existing buried services below the carriageway.

With the proposed design as described above, the existing highway drainage network on Barnham Road catchment area is reduced by approximately 735m². Therefore no new additional flows are required to be accommodated by the existing highway drainage arising from the development – in fact the proposed scheme provides betterment to the existing network by way of reducing the catchment area.

For more details please refer to our drainage pipe and manhole schedule and set of drainage drawings A29-CAP-HDG-00-DR-C-0048 to 0052 which accompany this Technical Note.

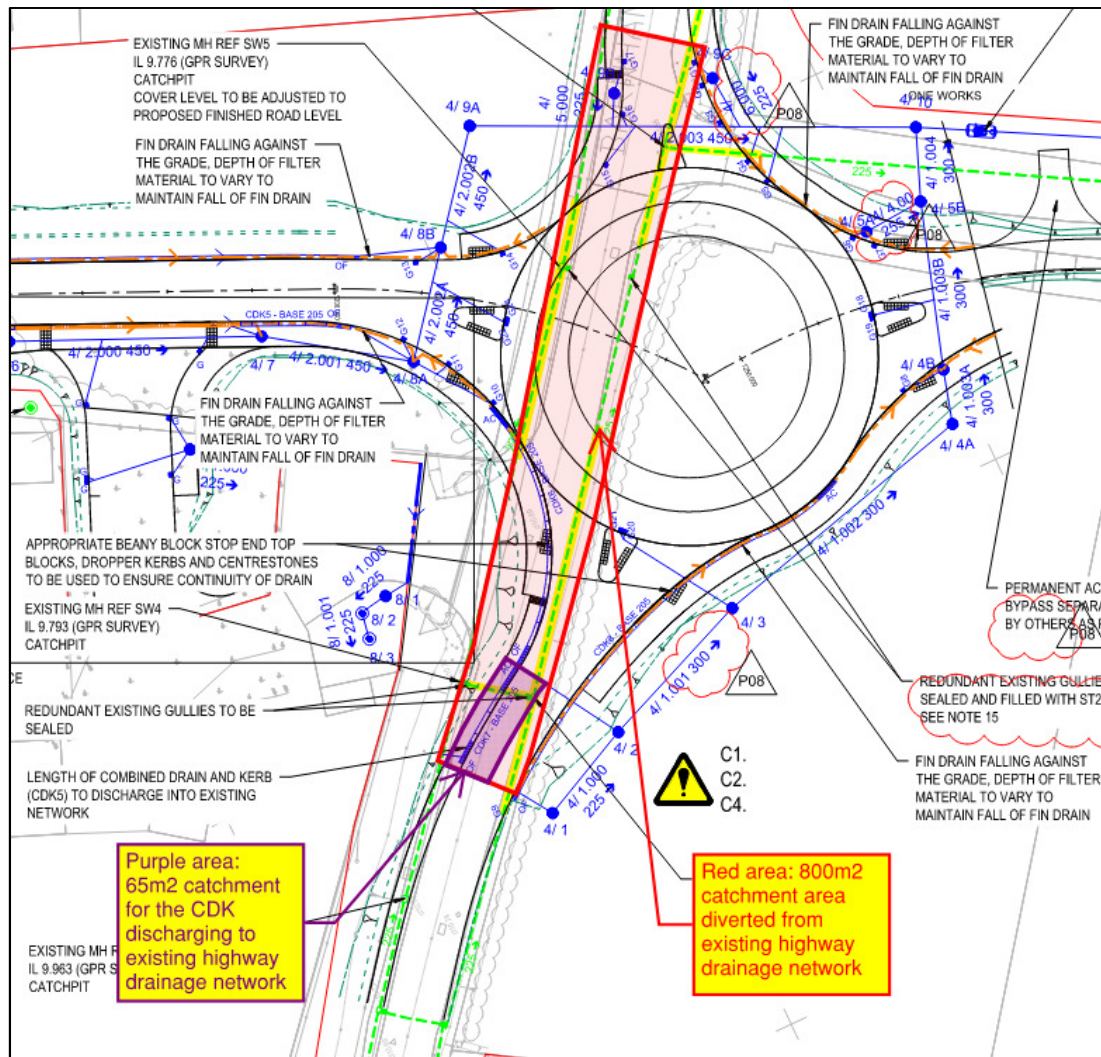
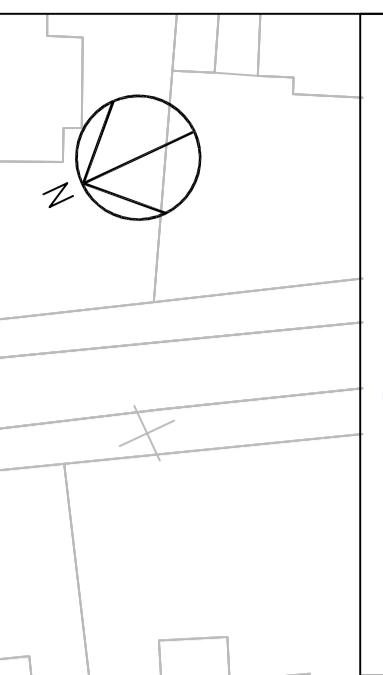
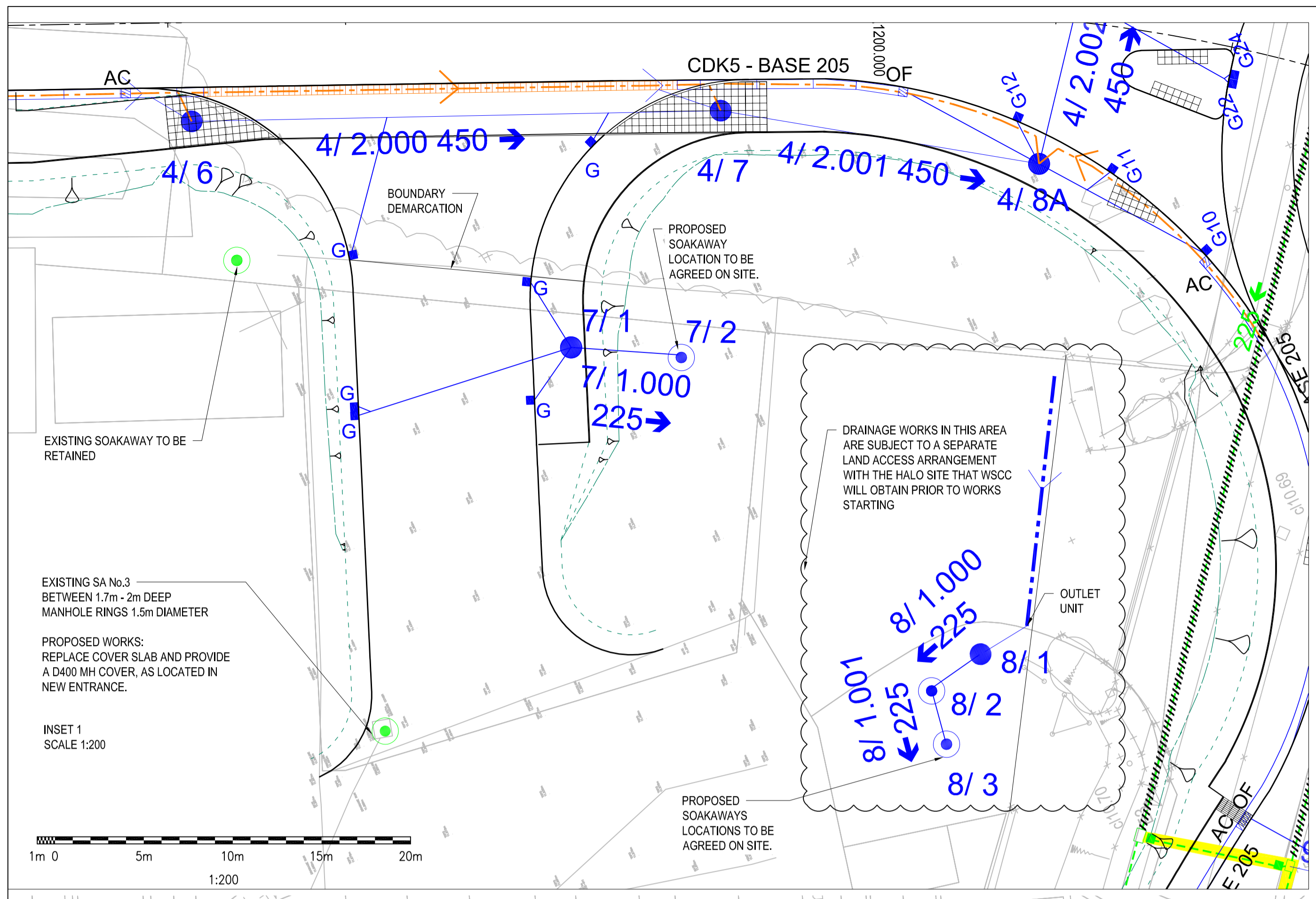


Figure 1 Barnham Road drainage catchment areas

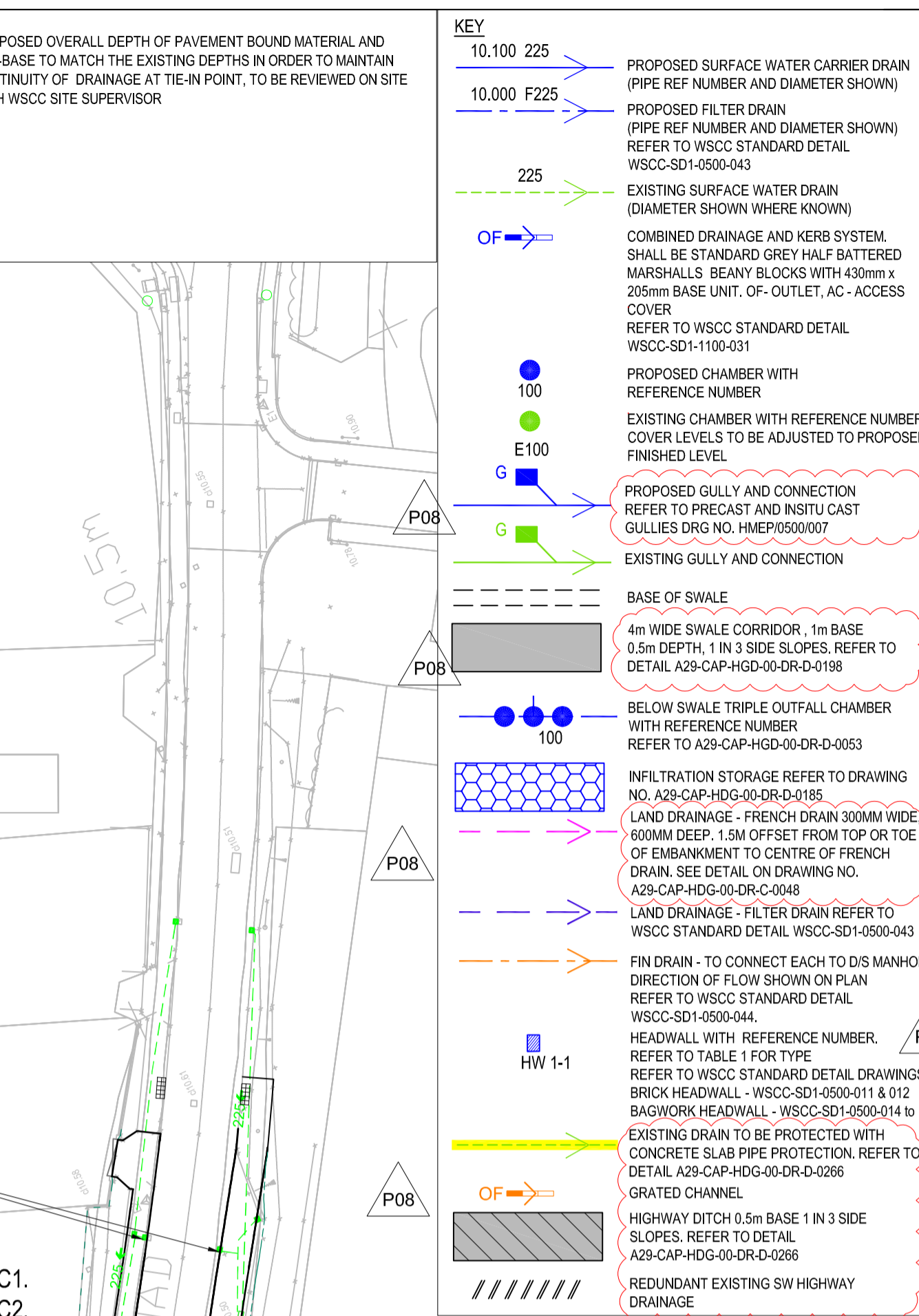


KEY - HALO SITE

- EXISTING SOAKAWAY IN HALO SITE
- PROPOSED SOAKAWAY IN HALO SITE TO MATCH EXISTING SOAKAWAY DIMENSIONS AS PER SA No3 1500mm DIAMETER RING DEPTH 1000mm BELOW DEEPEST INLET PIPE INVERT DIAMETER. REFER TO WSSC STANDARD DETAIL WSSC-SD1-0500-001
- PROPOSED LINEAR DRAINAGE CHANNEL IN HALO SITE. REFER TO WSSC STANDARD DETAIL WSSC-SD1-1100-032 (CARRIAGEWAY INSTALLATION) MARSHALL - BIRCO 100 WITH 100 CHANNEL UNIT (CONSTANT FALL)

NOTES (cont)

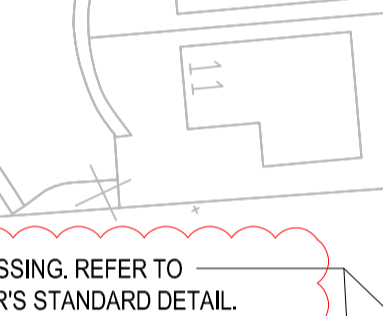
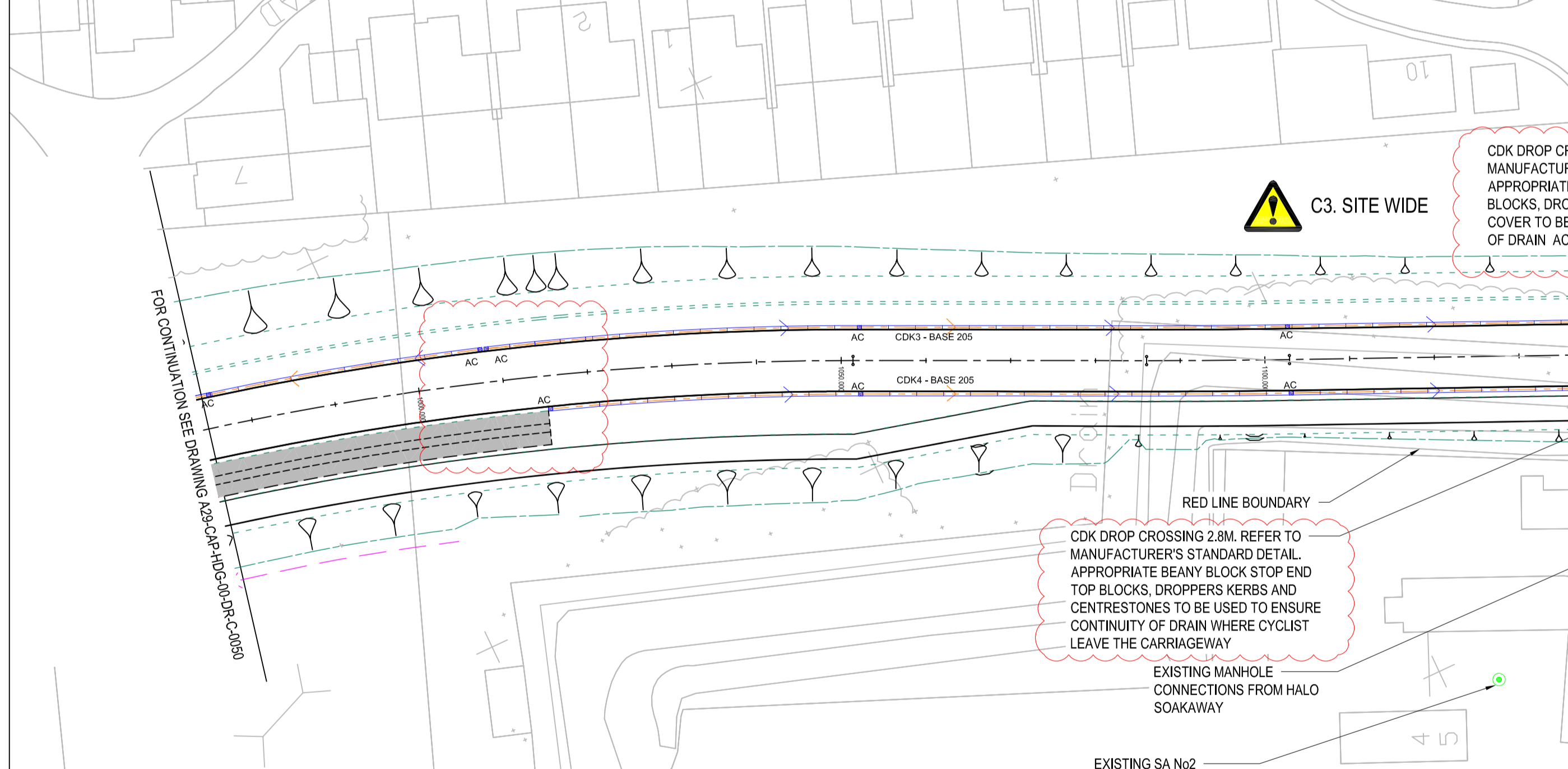
17. PROPOSED OVERALL DEPTH OF PAVEMENT BOUND MATERIAL AND SUB-BASE TO MATCH THE EXISTING DEPTHS IN ORDER TO MAINTAIN CONTINUITY OF DRAINAGE AT THE IN POINT, TO BE REVIEWED ON SITE WITH WSSC SITE SUPERVISOR



NOTES

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS AND SPECIFICATION APPENDIX 500 SERIES DOCUMENT NO A29-CAP-HDG-00-DR-C-002
- THE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH REQUIREMENTS OF WSSC
- ALL CHAMBERS TO BE CATCHPITS WITH 450mm SLUMP UNLESS OTHERWISE STATED
- FOR WSSC STANDARD DETAIL REFER TO THE FOLLOWING DRAWING: FOR CATCHPIT DETAIL REFER TO TYPE 7 CHAMBER (1050 CATCHPIT) DRG NO. HCD F11. INTERNAL DIAMETER D AS SPECIFIED IN THE MANHOLE SCHEDULE
- TYPE 1 CHAMBER (BRICK OR IN-SITU CONCRETE MANHOLE)-HCD F3 (FOR PIPES 450 MAX. DIAMETER, MAX DEPTH 1500 + PIPE DIAMETER)
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- FOR CONTROL DISCHARGE MANHOLE DETAIL REFER TO VORTEX FLOW CONTROL TYPE B MANHOLE DRG NO. A29-CAP-HDG-00-DR-D-0266
- FOR PROPOSED PIPE BEDDING DETAILS REFER SURFACE WARNING DRAINS TRENCH AND BEDDING DETAILS-HCD F1
- REFER TO DOCUMENT A29-CAP-HDG-00-SH-D-0025 FOR THE DRAINAGE MANHOLE AND PIPE SCHEDULE
- FURTHER WINTER INFILTRATION TESTING IS REQUIRED TO VALIDATE THE INFILTRATION TANK DESIGN AT FONTWELL AVENUE ROUNDABOUT. IF THE INFILTRATION RATE IS NOT ACCEPTABLE, ADDITIONAL EXCAVATION TO THE SAND LAYER, AT APPROXIMATELY 10.00M AOD, IS REQUIRED. THE ADDITIONAL EXCAVATED MATERIAL IS TO BE REPLACED WITH A SUITABLE SELECTED GRANULAR FILL MATERIAL CLASS 6A
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Location Key Plan (Not to Scale)

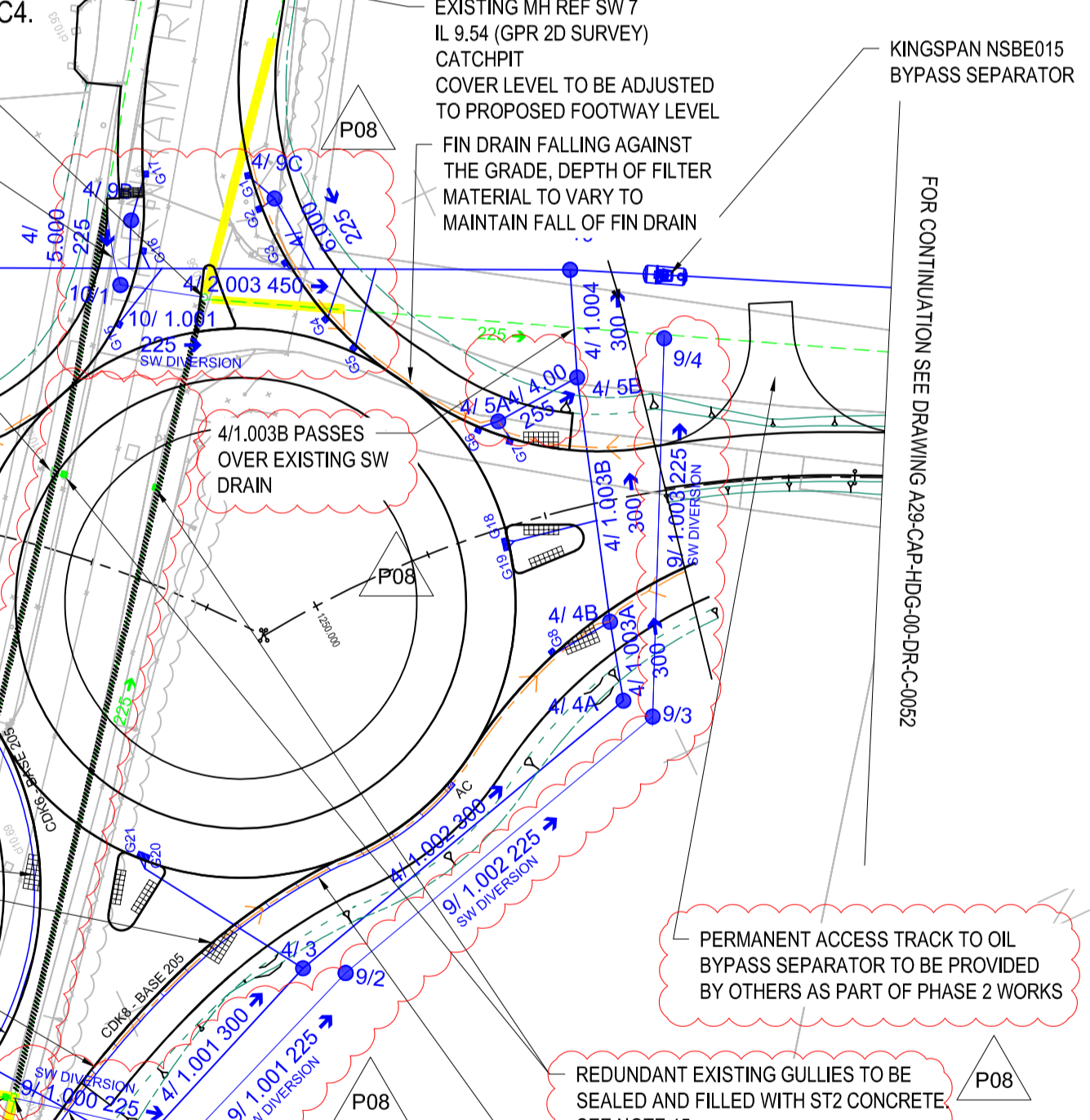


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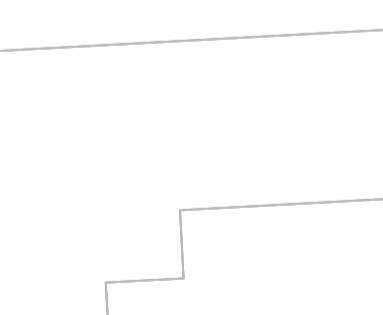


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Location Key Plan (Not to Scale)

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION	
IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING:	
CONSTRUCTION	C1 - EXISTING SERVICES AND HIGHWAY DRAINAGE ALONG B2233 BARNHAM ROAD. C2. COAL TAR PRESENT IN FABRIC OF EXISTING CARRIAGEWAY. C3. POTENTIAL BURIED UNEXPLODED ORDNANCE (UXO). C4. INTERFACE WITH EXISTING TRAFFIC & PEDESTRIANS WHEN IMPLEMENTING PHASED WORKS. TEMPORARY DIVERSIONS AND TRAFFIC MANAGEMENT.
MAINTENANCE / CLEANING	NONE IDENTIFIED.
DECOMMISSIONING / DEMOLITION	NONE IDENTIFIED.
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT	

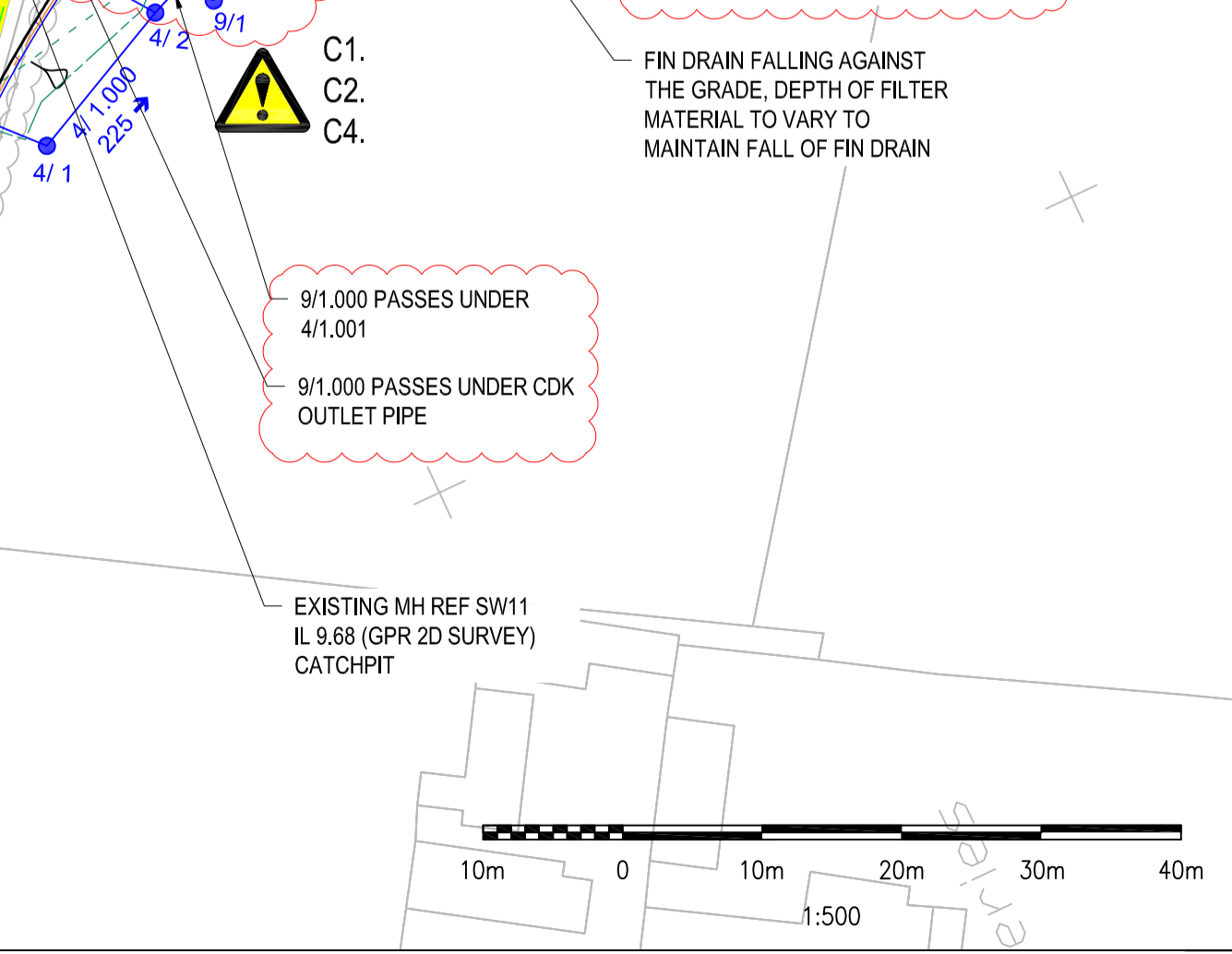


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Rev	Drawn	Chk'd	App'd	Description	Date
P08	AZ	KS	AB	NOTES AND KEY AMENDED SW DIMENSION PIPE RUNS	16.12.2021
				9.6.10 ADDED	
				GULLIES AMENDED AT THE HALO ENTRANCE FOR THE	27.05.2021
P07	LR	KS	AB	BOUNDARY LINE DRAINAGE DETAILS & INSET 1 ADD FOR HALO SITE	24.05.2021
P05	AZ	KS	AB	NOTE 15 AMENDED	08.04.2021
P04	JB	KS	AB	CLIENTS COMMENTS ADDRESSED	09.03.2021
P03	JB	KS	AB	ADDRESS WSSC COMMENTS, FIN AND LAND DRAINAGE	27.11.2020
				ADDED: KERB DETAILS SHOWN ON NEW DRAWINGS	31.07.2020
P02	LR	AZ	KS	UPDATES TO MODELS	07.07.2020
P01	PD	RP	KS	FIRST ISSUE	

Purpose of Issue
For Acceptance S4

Classification
Commercial In Confidence

Client
west sussex council



Project
A29 Realignment Scheme

Drawing
Drainage Layout Plan
Sheet 4 of 5

Scale @ A1	Drawn	Checked	Approved
1:500	PD	RP	KS

Project No.
CS099505

Date
02.07.20

Drawing Identifier
Project - Originator - Zone - Level - File Type - Role - Number
A29-CAP-HDG-00-DR-C-0051

BS1192 Compliant revision
P08



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