

Drainage Technical Note

Pebble Walk, Sinah Lane, Hayling Island, Hampshire

Client

BDW Southampton
Tollbar House, Tollbar Way
Hedge End
Hampshire, SO30 2UH
Ref: 10162
First Issue: 10 September 2021

Consulting Engineers

GTA Civils & Transport Ltd
66a Church Walk
Burgess Hill
West Sussex
RH15 9AS
Tel: 01444 871444

1.0 INTRODUCTION

This Technical Note has been prepared for Barratt David Wilson Homes in relation to the application at said address. No responsibility is accepted to any third party for all or part of this study in connection with this or any other development.

2.0 OVERVIEW

This Technical Note has been prepared in response to the Planning Application, reference APP/20/01093 in order to clear Condition 12, items a. & c.

12 Drainage and Flood risk

No development shall begin until a detailed surface water drainage scheme for the site, based on the principles within the approved documentation, has been submitted to and approved in writing by the Local Planning Authority. The submitted details should include:

- a. Confirmation that the attenuation basin low flow channel will not be affected by groundwater either through lining or the provision of groundwater monitoring information.
- b. Confirmation of any boundary drainage features to ensure existing flow paths are not obstructed.
- c. Details for the long term maintenance arrangements for the surface water drainage system including confirmation that the proposals identified for adoption by Southern Water are acceptable.

Reason: To prevent flooding elsewhere by ensuring that compensatory storage of flood water is provided, to reduce the risk of flooding from blockages to the existing culvert, and to reduce the risk of flooding to the proposed development and future occupants. This condition is required in accordance with Section 9 of the Planning Practice Guidance to the National Planning Policy Framework (NPPF) for Flood Risk and Coastal Change and Policy CS15 Flood and Coastal Erosion Risk of the Havant Borough Local Plan (Core Strategy) 2011.

Our Ref: APP/20/01093

3.0 PLANNING CONDITION DIALOGUE

- a. The relationship between the levels of the low-flow channel of the attenuation basin and ground water levels are shown on drawing 10162/102/P3 included in Appendix A.

The low-flow channel has proposed base levels of 4.515 to 4.245m a.O.D.

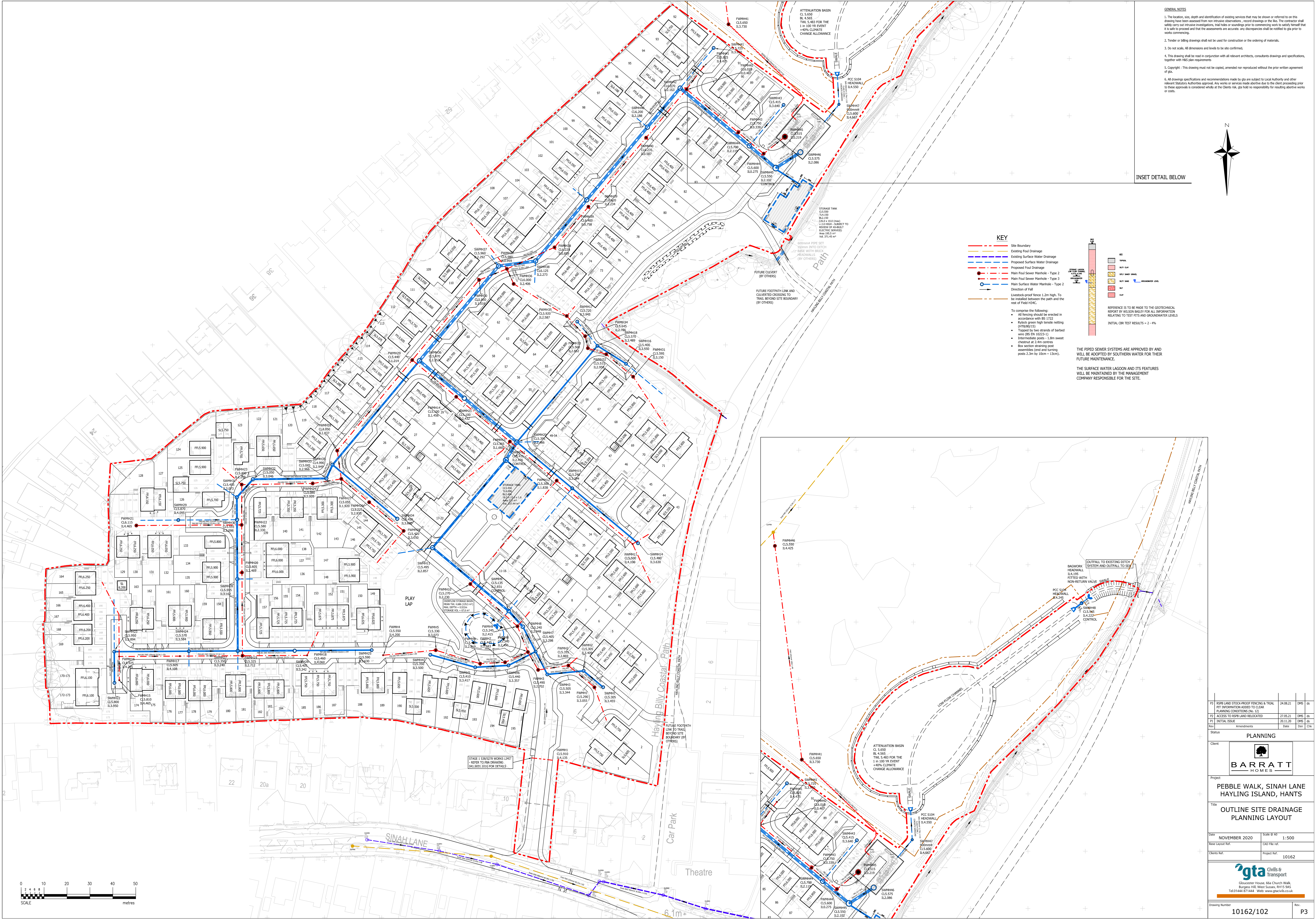
Groundwater levels were recorded in the Site Investigation Report by Wilson Bailey as presented in the Flood Risk Assessment prepared by RCP, dated June 2018. The report indicates groundwater was encountered at 1.7m below existing ground levels and is at a consistent level across the site. The existing ground level at the attenuation basin is 5.65m a.O.D. and therefore the groundwater horizon would be at 3.95m a.O.D., i.e. 295mm below the lowest base level of the low-flow channel.

The relevant borehole log, ref. BH5, is included in Appendix C.

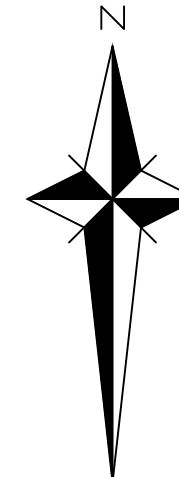
- b. Any details relating to fencing are beyond the scope of the civil engineer and are to be confirmed by the project architect or landscape architect if necessary.
- c. All piped surface water sewers and associated manholes upstream and including the inlet headwall of the attenuation basin are approved by and will be adopted and maintained by Southern Water.

All surface water attenuation features downstream of the adopted inlet headwall comprising the attenuation basin, low-flow channel, outfall headwalls, control chamber and ditch connecting to the existing watercourse will be maintained in perpetuity by the Management Company who will be responsible for maintaining all the communal areas of the site on completion.

APPENDIX A – OUTLINE SITE DRAINAGE PLANNING LAYOUT, drawing 10162/102



- GENERAL NOTES**
1. The location, size, depth and identification of existing services that may be shown or referred to on this drawing have been assessed from non-invasive observations, record drawings or the site. The contractor shall verify the location, size, depth and identification of existing services by carrying out intrusive investigations, trial holes or soundings prior to commencing work to satisfy himself that it is safe to proceed and that the assessments are accurate. Any discrepancies shall be notified to the client prior to works commencing.
 2. Tender or billing drawings shall not be used for construction or the ordering of materials.
 3. Do not scale. All dimensions and levels to be site confirmed.
 4. This drawing shall be read in conjunction with all relevant architects, consultants drawings and specifications, together with HES plan requirements.
 5. Copyright - This drawing must not be copied, amended nor reproduced without the prior written agreement of gta.
 6. All drawings specifications and recommendations made by gta are subject to Local Authority and other relevant Statutory Authorities approval. Any works or services made obsolete due to the client proceeding prior to these approvals is considered wholly at the Client's risk. gta hold no responsibility for resulting abortive works or costs.



INSET DETAIL BELOW

KEY

- Site Boundary
- Existing Foul Drainage
- Existing Surface Water Drainage
- Proposed Surface Water Drainage
- Proposed Foul Drainage
- Main Foul Sewer Manhole - Type 2
- Main Foul Sewer Manhole - Type 3
- Main Surface Water Manhole - Type 2
- Direction of Fall
- Livestock-proof fence 1.2m high. To be installed between the path and the rest of Field H34C.

To comprise the following:

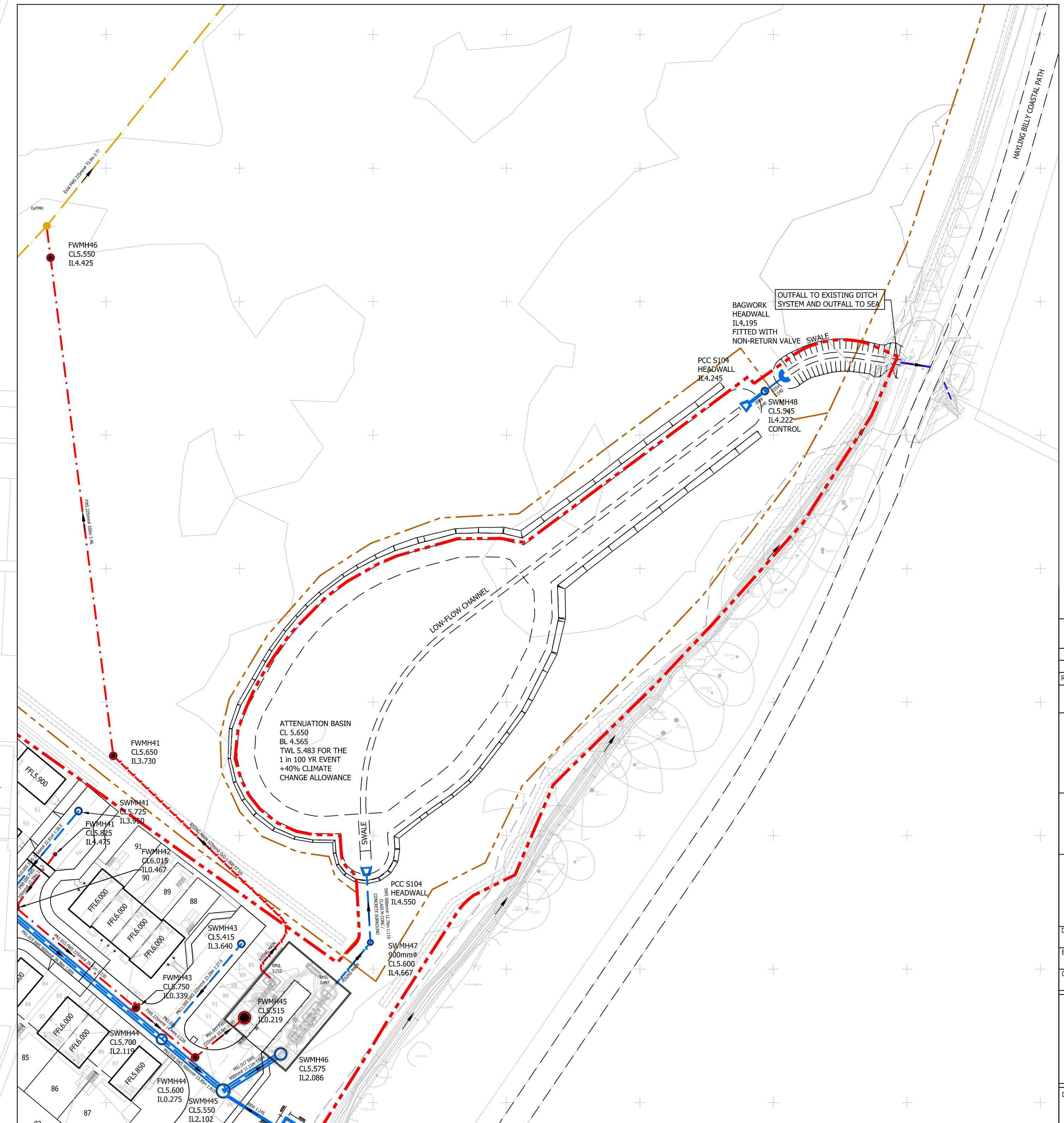
- All fencing should be erected in accordance with BS 1722.
- Pylock green high tensile netting (HTS/RN15).
- Topped by two strands of barbed wire (BS EN 10223-1).
- Intermediate posts - 1.8m sweet chestnut at 2.4m centres.
- Box section straining post assemblies (end and turning posts 2.3m by 10cm - 13cm).

THE PIPED SEWER SYSTEMS ARE APPROVED BY AND WILL BE ADOPED BY SOUTHERN WATER FOR THEIR FUTURE MAINTENANCE.

THE SURFACE WATER LAKE AND ITS FEATURES WILL BE MAINTAINED BY THE MANAGEMENT COMPANY RESPONSIBLE FOR THE SITE.

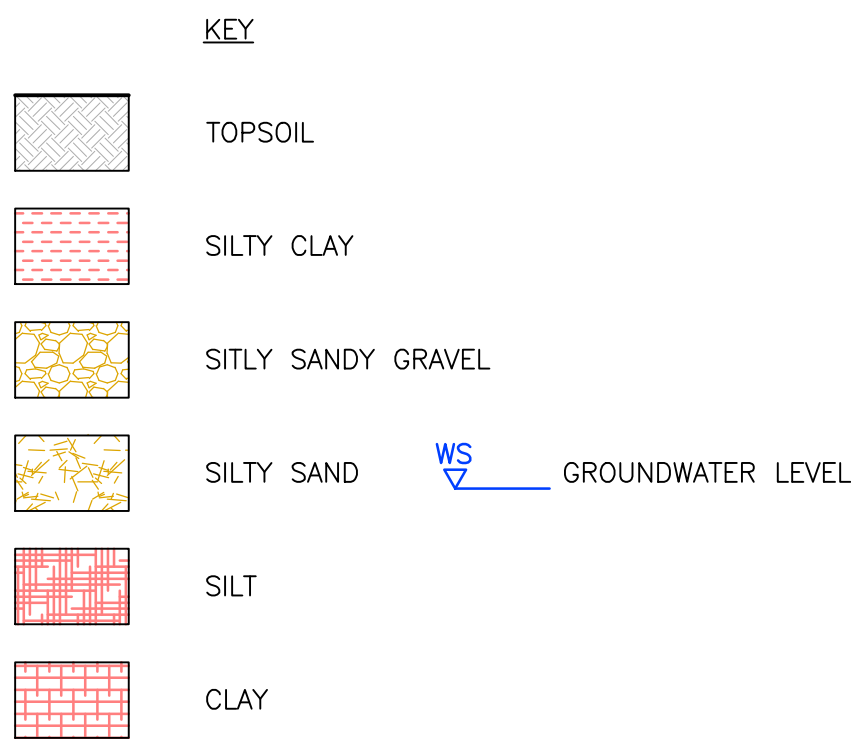
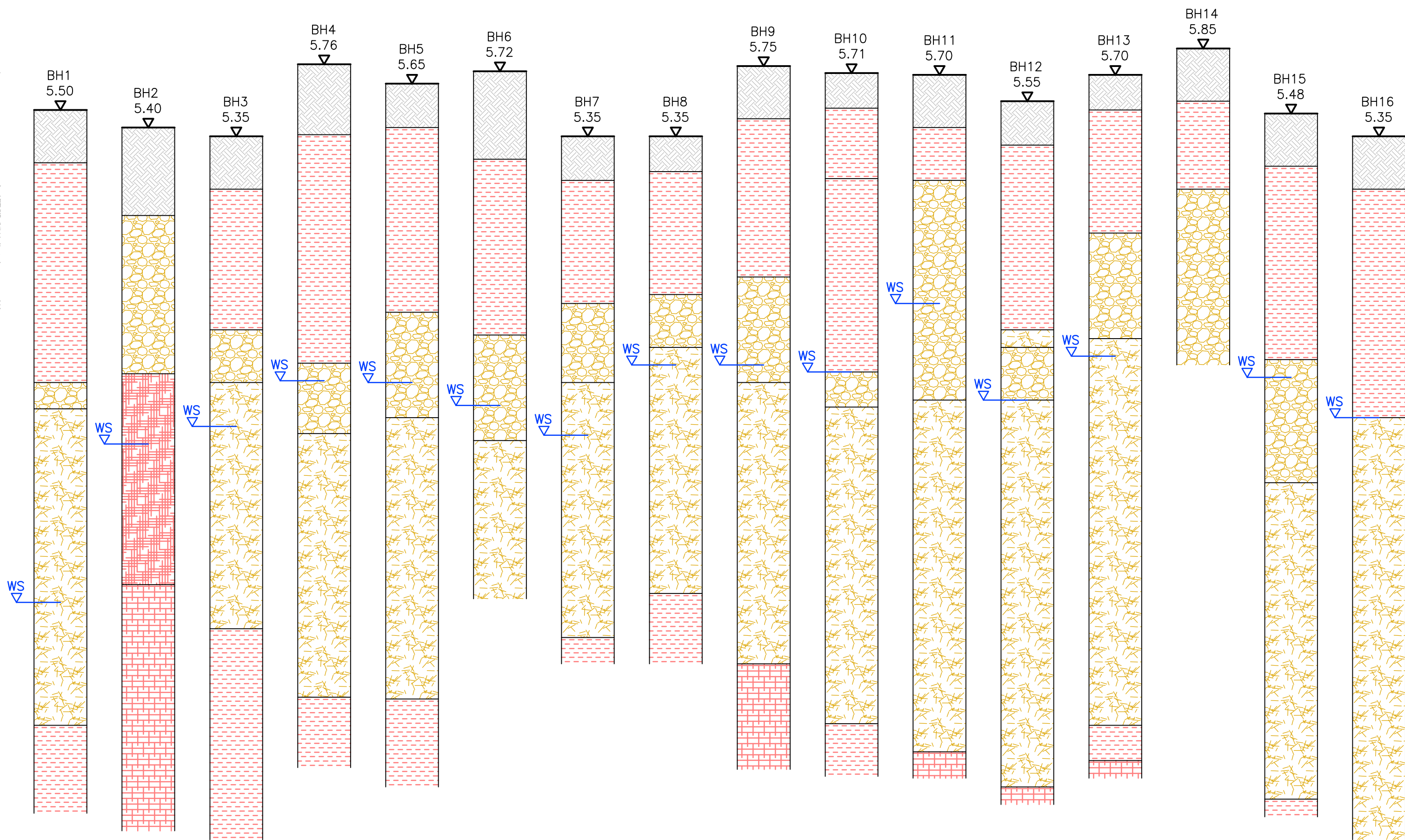
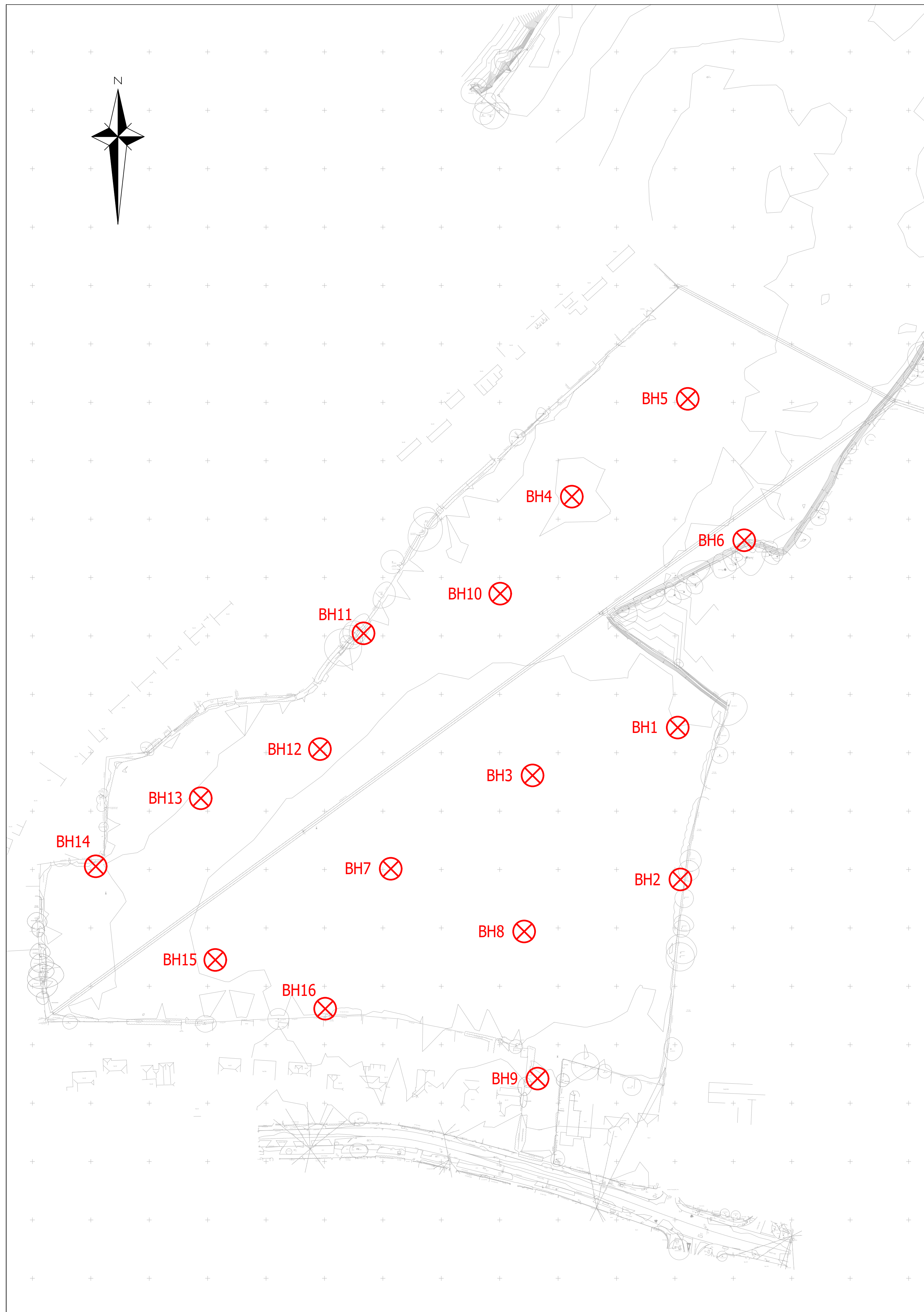
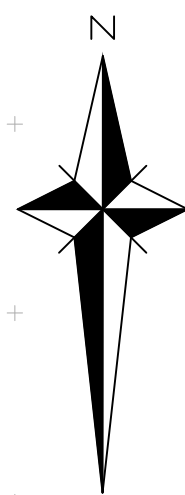
REFERENCE IS TO BE MADE TO THE GEOTECHNICAL REPORT BY WILSON BULL FOR ALL INFORMATION RELATING TO TEST PIT AND GROUNDWATER LEVELS.

INITIAL CBR TEST RESULTS = 2 - 4%



P3	RSB LAND STOCK-PROOF FENCING & TRAIL PIT INFORMATION ADDED TO CLAR	24.08.21	DMS	ds
P2	ACCESS TO RSB LAND RELOCATED	27.08.21	DMS	ds
P1	INITIAL ISSUE	20.11.20	DMS	ds
Status				
PLANNING				
Client				
BARRATT HOMES				
Project				
PEBBLE WALK, SINAH LANE HAYLING ISLAND, HANTS				
Title				
OUTLINE SITE DRAINAGE PLANNING LAYOUT				
Date				
NOVEMBER 2020				
Scale @ A0				
1:500				
Base Layer Ref.				
CAD File ref.				
Client Ref.				
10162				
Drawing Number				
10162/102				
Rev.				
P3				

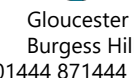
APPENDIX B – GEOTECHNICAL SUMMARY PLAN, drawing 10162/1003



REFERENCE IS TO BE MADE TO THE GEOTECHNICAL REPORT BY WILSON BAILEY FOR ALL INFORMATION RELATING TO TEST PITS AND GROUNDWATER LEVELS

INITIAL CBR TEST RESULTS = 2 - 4%

- GENERAL NOTES
1. The location, size, depth and identification of existing services that may be shown or referred to on this drawing have been assessed from non intrusive observations, record drawings or the like. The contractor shall safely carry out intrusive investigations, trial holes or soundings prior to commencing work to satisfy himself that it is safe to proceed and that the assessments are accurate. any discrepancies shall be notified to gta prior to works commencing.
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T1	GROUNDWORKS TENDER ISSUE	06.12.19	DMS	ds
P1	INITIAL ISSUE FOR S38 DISCUSSION	22.11.19	DMS	ds
Rev	Amendments	Date	Dsn	Chk
Status				
INFORMATION				
Client				
 BARRATT — HOMES —				
Project				
PEBBLE WALK, SINAH ROAD HAYLING ISLAND, HANTS				
Title				
GEOTECHNICAL SUMMARY PLAN				
Date		Scale @ A1		
NOVEMBER 2019		1:1000		
Base Layout Ref.		CAD File ref.		
Clients Ref.		Project Ref.		
		10162		
gta Civils & Transport Gloucester House, 66a Church Walk, Burgess Hill, West Sussex, RH15 9AS Tel.01444 871444 Web: www.gtacivils.co.uk				
Drawing Number				Rev.
10162/1003				T1

APPENDIX C – BOREHOLE LOG BH5

Project Name
Sinah Lane Development Site

Project No.
J16123

Co-ords: -

Hole Type
WLS

Location: Hayling Island, Hampshire

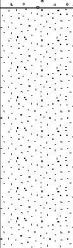
Level: -

Scale
1:50

Client: BDW Southampton

Dates: 22/09/2014

Logged By
DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.25			TOPSOIL	
		0.50	D					Firm orange-brown silty sandy CLAY with occasional fine flint gravel	1
		1.00	D						
		1.30						Orange-brown silty sandy fine to medium flint GRAVEL	
		1.50	D						
		1.90						Pale yellowish brown silty SAND	2
		2.00	D						
		2.50	D						
		3.00	D						3
		3.50	D					Firm pale brown and brown silty sandy CLAY	
		3.90							
		4.00	D		4.00			Stiff dark bluish grey silty CLAY	4
								End of Borehole at 4.00 m	
									5
									6
									7
									8
									9

Remarks: Groundwater encountered at 1.70m.