

DO NOT SCALE

- All works to be carried out in accordance with:
- 1.1 Design and Construction Guidance (DCG) and Sewerage Sector Guidance (SSG) for all sewers proposed to be offered for adoption. (note - the SSG replaces Sewers for Adoption (SfA) for all new developments)
- 1.2 BS EN 752 'Drain and Sewer Systems Outside Buildings'
- 1.3 Current applicable Building Regulations
- 1.4 BGP Specifications
- 1.5 Manufacturer installation guidance and requirements
- 2. All levels shown are in metres and are relative to ordnance datum (m AOD).
- Invert levels of all existing chambers and connection points are to be confirmed and engineer advised prior to commencement of any Drainage Works.
- Where proposed sewers connect into existing sewers, the existing sewers must to be checked for line, level and condition preferably by a CCTV survey
- Concrete bed and surround is required to all gully leads and to all pipes in highways/hardstanding where cover to pipe <1200mm
- All pipes to be either extra strength V.C. to BS 65 or PVC certified to WIS 4-35-01 and BS/EN13476 `UPONOR ULTRARIB' or concrete pipes Class 120 to BS/EN 1916/BS5911-1 2002.
- Existing sewer positions are indicative and are not to be used in conjunction with design. Contractor to confirm location.
- Contractor is responsible for positioning MHs so they do not compromise line or level of kerbing or other delineation at the juncture of two surface materials.
- Cover levels shown are indicative and may vary on site. The contractor should adjust levels to suit site conditions
- 10. Other services are not shown on this drawing, however their presence must be anticipated. The contractor is to confirm prior to commencing any works, the location and depth of all services that may affect the works the manufacturers requirements and recommendations.
- 11. All Information provided is for planning purposes only and should not be relied upon for either costing or construction.
- 12. All drainage outfall levels are to be investigated and confirmed prior to detailed design. Engineer to be informed of findings. Current design shown is indicative.
- 13. All Surface water discharge rates and methods of discharge are to be agreed with the Lead Local Flood Authority and Environment Agency.

Do not excavate until all underground services have been identified and marked out. Refer to service providers drawings and to the utilities survey drawings. Unknown underground services may exist. Check for services by carrying out a scan with a cable avoidance tool.

Legend

Proposed SW Sewer	
Proposed FW Sewer	

Existing SW Sewer -----

Existing FW Sewer Existing UU Combined Sewer

BOC Yard Redline Boundary

Nor Beck (Culverted)

Existing UU Sewer Easement

Proposed Attenuation Tank

Additional Notes

Proposed Impermeable Area = 4470m² (0.4470Ha.)

Brownfield Discharge Rate

Storage Required

Issued for Information	JJH	P04	JC	07.09.2022
Issued for Information	ZW	P03	JC	10.05.2022
Issued for Planning	JJH	P02	JC	04.03.2022
FIRST DRAFT	JJH	P01	JC	11.01.2022
AMENDMENT	BY	REV	СНК	DATE

See Drawing CMIQ-BGP-01-XX-DR-C-52-01901 for Discharge Rate Calculations.

BY REV CHK DATE Rev P = Preliminary T = Tender C = Construction LCI = Last Construction Issue

In instances where this drawing completes or partly completes a contract, Billinghurst George & Partners will consider that it's product has been validated, unless in a period not exceeding 90 working days, the client advises to the contrary.



Billinghurst George & Partners

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Coneland Borough Council

Copeland Borough Council	
Project	Project No.
Cleator Moor Innovation Quarter - BOC Yard	21T2034

Drawing Title

Drainage Plan										
Drawn JJH	Date Jan 2022	Checked JC	Date Jan 2022	Size A1	Scale 1:500	Class. 52	Rev. P04			
Location CMIQ	Originator BGP	Volume 04	Level XX	Type DR	Role C	Unique No 04130	0.			

File Reference CMIQ-BGP-04-XX-DR-C-52-04130

Note: Foul Outlets shown indicatively for planning purposes \odot - Klargester Full Retention NSF Separator Model: NSFA080 Inlet = 79.400Outlet = 79.300 Althon CH375 with EHB Lid Existing Nor Beck Culverted Watercourse 1200-1500Ø Important Note: Line and Location of United Utilitie 675Ø combined sewer and Nor Beck Culverted Ex. FW MH 17 S3 | 300Ø SW @ 1:76. Watercourse are indicative and based on CCT information received. Both are to have positions IL Depth 4.84m levels and diameters confirmed prior to construction See NOTE** Ex. SW MH 49 CL N/A Demolished IL Depth 8.9m **Building Footprint** Althon CH250 with EHB Lid NOTE**: Proposed Foul Water discharge from New Portakabins to discharge indirectly into Existing 675Ø United Utilities combined sewer at an unrestricted rate. Manhole to be located. 300Ø Stub for ground level and invert level to be investigated future development and engineer to be informed prior to further @ IL = 77.600 300Ø SW @ 1:100 Note: All existing manhole/service development beyond planning. Assumed CL = 80.850 covers within new yard to have covers Assumed Outfall IL = 76.010 lifted to suit new levels. Covers to be renewed with D400 class lids. New Backdrop IL = 79.000 Proposed Surface Water discharge fromexternal yard to discharge indirectly into Existing - 225Ø SW @ 1:51.4 Nor Beck culverted watercourse as annotated at 150Ø FW @ 1:100 restricted discharge rate of 15.0 l/s. Rate is to be agreed with LLFA and Environment Agency. —New FW for future Manhole S6 is to be installed on existing SW

Existing Building

Cover levels are approximate only and may vary on site. Covers to suit finished levels. Contractor is responsible for positioning MHs so they do not compromise line or level of kerbing or other delineation at the juncture of two surface materials.

Existing Yard

PPIC manhole diameters may vary and are dependant on manufactures specification and diameter of incoming / outgoing pipes. 4. Concrete manhole diameters are dependant on nominal internal diameter of largest pipe in manhole. See Table A on Typical Manhole Details drawing.

	Surface Water Drainage Manhole Schedule							
MH Ref. Cover Level		Invert Level	Туре	MH Dia.	Cover Type	Comments		
S1	81.600	80.375	Conc.	1200	D400			
S2	80.850	79.750	Conc.	1200	D400			
S3	81.000	79.475	Conc.	1500	D400			
S4	81.000	77.625	Conc.	1800	D400	BD = 79.230		
S5	81.270	77.450 (Inlet) 77.400 (Outlet)	Conc.	2100	D400	Hydrobrake Flow Control set at 15.0 l/s		
S6	81.270	76.500 (TBC prior to construction)	Conc.	1800	D400	BD = 77.340		
S7	81.250	79.000	Conc.	1350	D400	MH to serve future development		

	Foul Water Drainage Manhole Schedule								
MH Ref.	Cover Level	Invert Level	Туре	MH Dia.	Cover Type	Comments			
F1	81.000	80.000	PPIC	450	D400				
F2	81.000	79.605	PPIC	450	D400				
F3	81.150	79.105	Conc.	1200	D400				
F4	81.025	81.025	PPIC	450	D400				
F5	81.025	81.025	PPIC	450	D400				
F6	81.250	79.250	Conc.	1200	D400	MH to serve futur development			

Existing Kerb Drains —

Ex. SW MH 50

_Ex. 150Ø SW ____IL_81.010 ____Ex. 150Ø SW

CL 81.990

IL 80.350

Existing Building

development

무Ex. SW MH 57

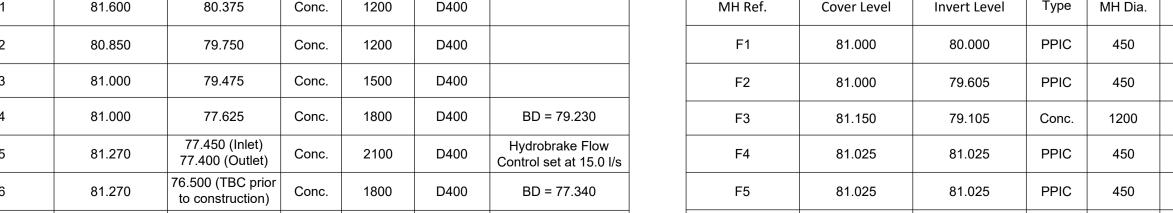
CL 81.810

IL 81.390

ரு Ex. FW MH 27

CL 81.830 IL 81.070 Existing Yard

Existing Building



drain with 300Ø stub for next phase of works.

to be investigated and engineer to be informed

prior to further development beyond planning. CL = 80.700

Assumed Outfall IL = 77.340

The position of the MH's noted are approximate and

have been determined by sonde. All MH's

downstream of both are indicatively positioned also

and are all to be exposed prior to construction.

Ex. SW MH 48

IL Depth 4.660m

Ex. SW MH 47

CL N/A

IL Depth 3.780m

IL N/A ┤∟

CL N/A | | Ex. FW MH 16

IL Depth 4.630m

Ex. FW MH 13

CL N/A FW

Pipe to be located, ground level and invert level

Existing Access Road to remain as status quo. ndustrial Estate

Site Location Plan

Scale 1:10000

BOC Yard Reference Drawings CMIQ-BGP-04-XX-DR-C-52-04101 - Impermeable Areas Plan CMIQ-BGP-04-XX-DR-C-52-04102 - Flood Exceedance Flow Route CMIQ-BGP-04-XX-DR-C-90.4-04110 - Externals Plan CMIQ-BGP-04-XX-DR-C-52-04130 - Drainage Plan

Manhole S5 Flow Control Details

Drainage System

Head = 2.250m

(Horizontal Discharge)

SW Drainage Philosophy - BOC Yard

The proposals comprise the construction of an

The surface water flows are to be restricted to a

The surface water drainage design for the new yard

change and SW flows restricted in accordance with

brownfield discharge rate noted above which is to be agreed with the LLFA and Environment Agency. The

location of SW discharge is to Nor Beck culverted

Surface Water Attenuation has been located prior to

the final connection in line with good practice. The

attenuation is provided in the form of an attenuation

Surface Water run off from the yard area and access

*NOTE: 180m³ Storage required based on 1 in 100 year

storm + 40% climate change and 15.0 l/s discharge rate.

Tank Depth = 2.0m / Tank Base = 77.700

Tank Dimensions = 6.0m x 15.0m

Vent pipe & access points TBC by Manufacturer.

Hydro-Brake® Optimum Flow Control - Surface/Storm

1Nr 157mm Type SH (MD5) Hydro-Brake® Flow Control

Technical Criteria: Design / Duty Point Flow = 15.000 l/s

Flush-Flo™ Point Flow = 15.000 l/s Head = 0.658m

Kick-Flo® Point Flow = 11.800 l/s Head = 1.353m

Reference: MD-SHE-0157-1500-2250-1500

road is to be treated by a petrol interceptor.

tank which requires an approximate volume of 180m³.

ais based on 1 in 100 year storm + 40% climate

land previously occupied by a service yard.

brownfield discharge rate of 15.0 l/s.

watercourse.

external yard for storage and distribution purposes on