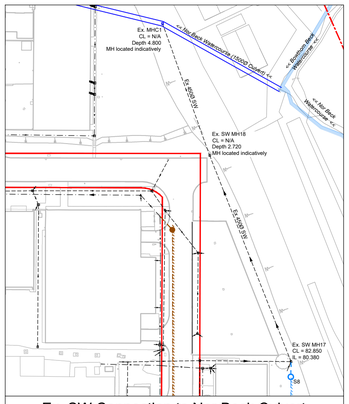
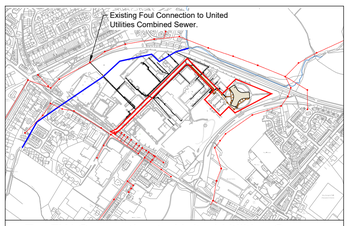
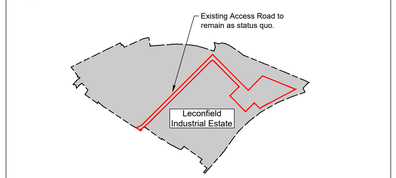


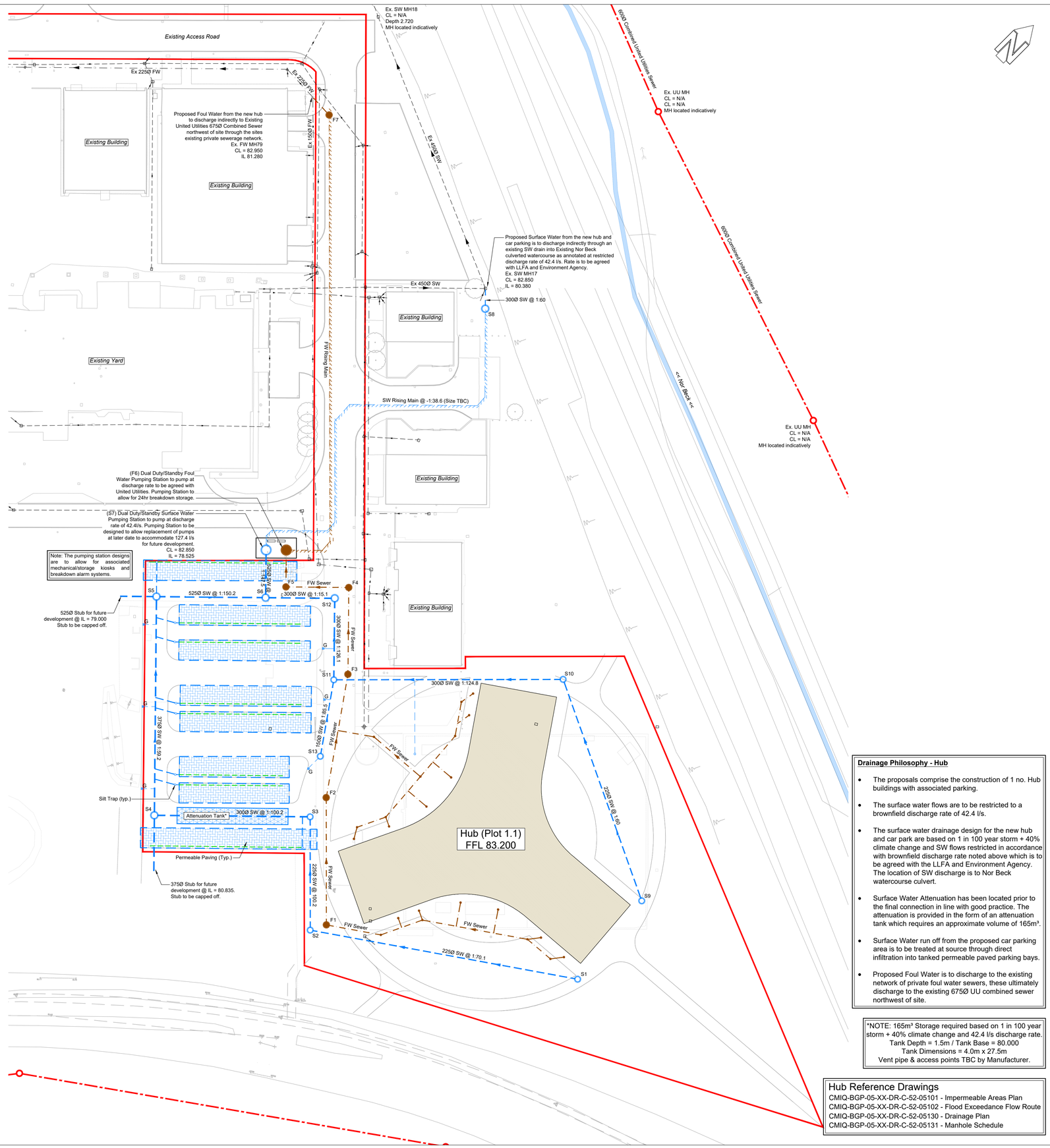
Ex. SW Connection to Nor Beck Culvert
Scale 1:1000



Ex. FW Connection to United Utilities Sewers
Scale 1:10000



Site Location Plan
Scale 1:10000



Drainage Philosophy - Hub

- The proposals comprise the construction of 1 no. Hub buildings with associated parking.
- The surface water flows are to be restricted to a brownfield discharge rate of 42.4 l/s.
- The surface water drainage design for the new hub and car park are based on 1 in 100 year storm + 40% climate 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 watercourse culvert.
- 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 tank which requires an approximate volume of 165m³.
- Surface Water run off from the proposed car parking area is to be treated at source through direct infiltration into tanked permeable paved parking bays.
- Proposed Foul Water is to discharge to the existing network of private foul water sewers, these ultimately discharge to the existing 675Ø UU combined sewer northwest of site.

*NOTE: 165m³ Storage required based on 1 in 100 year storm + 40% climate change and 42.4 l/s discharge rate.
Tank Depth = 1.5m / Tank Base = 80.000
Tank Dimensions = 4.0m x 27.5m
Vent pipe & access points TBC by Manufacturer.

Hub Reference Drawings
CMIQ-BGP-05-XX-DR-C-52-05101 - Impermeable Areas Plan
CMIQ-BGP-05-XX-DR-C-52-05102 - Flood Exceedance Flow Route
CMIQ-BGP-05-XX-DR-C-52-05130 - Drainage Plan
CMIQ-BGP-05-XX-DR-C-52-05131 - Manhole Schedule

DO NOT SCALE

Notes

1. 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).
3. Invert levels of all existing chambers and connection points are to be confirmed and engineer advised prior to commencement of any Drainage Works.
4. Where proposed sewers connect into existing sewers, the existing sewers must to be checked for line, level and condition preferably by a CCTV survey
5. Concrete bed and surround is required to all gully leads and to all pipes in highways/hardstanding where cover to pipe <1200mm
6. 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.
7. Existing sewer positions are indicative and are not to be used in conjunction with design. Contractor to confirm location.
8. 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.
9. 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.

S.H.E.
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
- Nor Beck (Culverted)
- Existing SW Sewer
- Existing FW Sewer
- Existing UU Combined Sewer
- Hub Site Boundary
- Proposed Attenuation Tank
- Proposed Building
- Tanked Permeable Paved Parking Bays with perf. pipe

Additional Notes

Proposed Impermeable Area = 7175m² (0.7175Ha.)
Brownfield Discharge Rate = **42.4 l/s**
Storage Required = **165m³**

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

Issued for Planning	JJH	P01	JC	23.03.2022
AMENDMENT	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.

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Client
Copeland Borough Council

Project
Cleator Moor Innovation Quarter

Project No.
21T2034

Drawing Title
Hub - Drainage Plan

Drawn	Date	Checked	Date	Size	Scale	Class.	Rev.
JJH	March 2022	JC	March 2022	A1	1:500	52	P01

Location	Originator	Volume	Level	Type	Role	Unique No.
CMIQ	BGP	05	XX	DR	C	05130

File Reference
CMIQ-BGP-05-XX-DR-C-52-05130