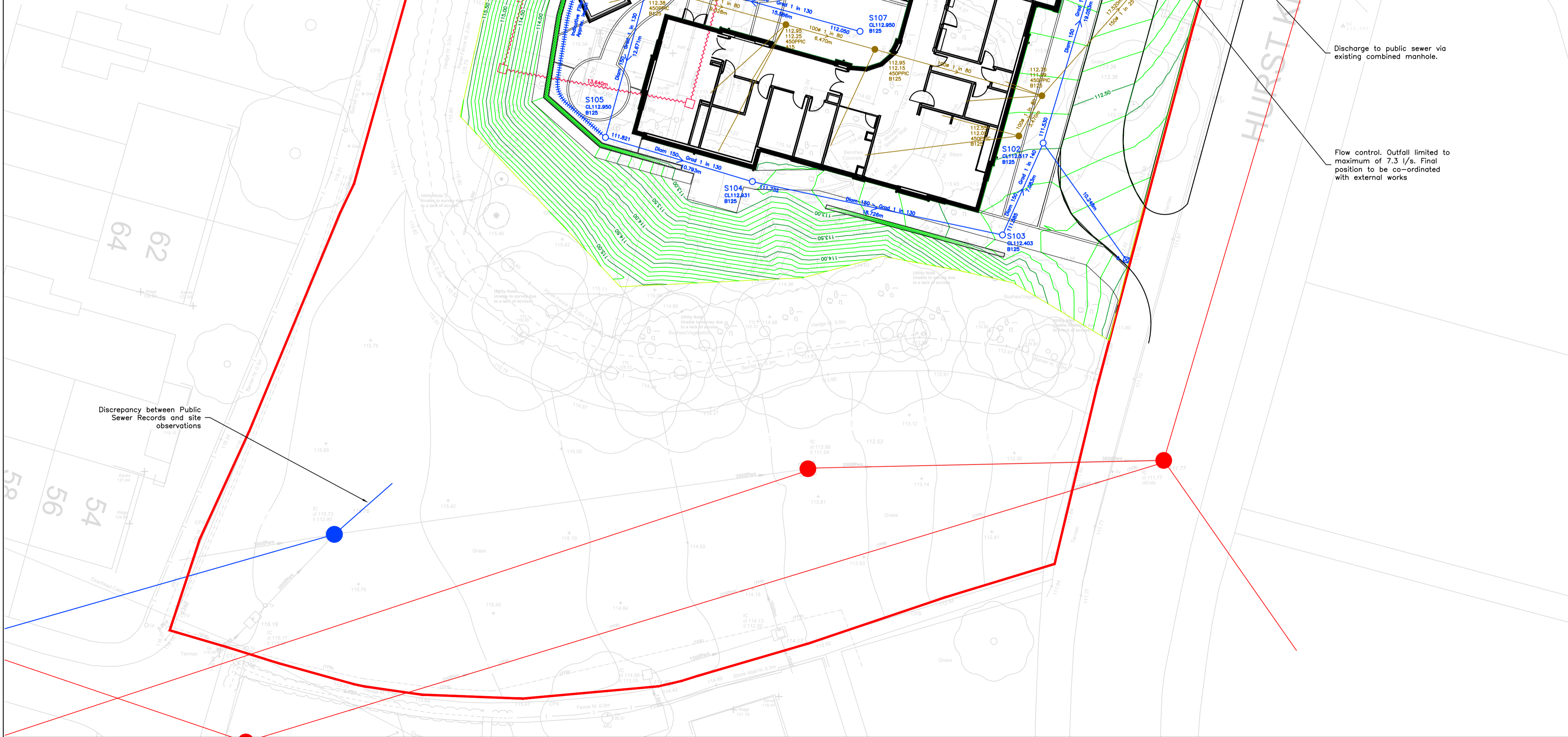


Manhole Number	Cover Level	Connections	Pipe Code	Inverts	Diams	Manhole Size	Manhole	Types	Cover
S100	112.964	1	1.2006	111.303	225	1200	Existing	D400	
E. 417256.753 N. 415792.706	1.436								
S101	113.189	2	2.2003 1.1005	111.342 111.394	225 150	1200	Conc	D400	
E. 417254.017 N. 415793.793	1.645								
S102	112.517	1	1.2004	111.330	150	450	PPC	B125	
E. 417248.287 N. 415779.622	0.837								
S103	112.403	1	1.2003	111.385	150	450	PPC	B125	
E. 417245.240 N. 415768.733	0.668								
S104	112.831	1	1.2002	111.732	150	450	PPC	B125	
E. 417226.373 N. 415772.314	1.049								
S105	112.950	1	1.2001	111.821	150	450	PPC	B125	
E. 417215.225 N. 415775.435	0.979								
S106	112.950	1	1.2000	111.924	150	450	PPC	B125	
E. 417218.813 N. 415786.367	0.876								
S107	112.950	1	1.2000	111.924	150	450	PPC	B125	
E. 417234.054 N. 415783.998	0.750								
S110	113.119	1	2.2002	111.472	225	1200	Conc	D400	
E. 417258.426 N. 415812.139	1.422								
S111	113.074	1	2.2001	111.700	225	600	PPC	D400	
E. 417228.419 N. 415820.295	1.149								
S112	112.950	1	2.2001	111.853	225	600	PPC	B125	
E. 417223.109 N. 415801.161	0.872								
S113	112.950	1	2.2000	112.050	150	450	PPC	B125	
E. 417237.625 N. 415797.133	0.750								



- General Notes**
- The purpose of this drawing is to illustrate the surface and foul water drainage strategy. This drawing is not provided as a design for construction nor is it to be used for setting out purposes.
 - The strategy is subject to approval by the Regulating Authorities.
 - Do not scale. All dimensions shown are in metres unless noted otherwise.
 - Existing information has been reproduced from topographic survey undertaken in 2020 (file reference 3793A_REV0_3D.DWG).
 - Proposed information is reproduced from Frank Shaw Associates site plan (file reference 20309-FSA-XX-DR-A-1100_Layout Plan_P08.dwg). Drainage connection positions/requirements have not yet been designed.
 - This drawing is to be read in conjunction with Architects, Engineers & Specialist Contractors Details. Should there be any discrepancy between details indicated on this drawing and those indicated on other drawings the Engineer should be informed PRIOR to construction on site.
 - The information shown and which originates from others may have been simplified for clarity. Refer to the originators details for additional information.
 - Where encountered, redundant pipework, ducts, cables and the like are to be excavated, removed and resultant trenches backfilled to an appropriate standard relative to the proposed end use. It is assumed that all existing services which are made redundant by the proposals are to be stopped/uptapped off at the site boundary.

- Contractual Notes**
- It is the responsibility of the contractor to locate any service apparatus in the vicinity of the works. HSP Consulting Engineers Ltd will accept no claims whatsoever in respect of any losses or damage caused in respect of such apparatus.
 - It is the responsibility of the contractor to execute the works at all times in strict accordance with the requirements of the Health And Safety At Work Act 1974, and the C.D.M Regulations 2015. The Contractor will be deemed to have allowed for full compliance, including full liaison with the Principal Designer, with his rates.
 - The contractor is responsible for ensuring that all works are to the satisfaction of the engineer, and shall be deemed to have included within his rates for any necessary testing.
 - The contractor will be responsible for providing all necessary de-watering and trench support to execute the works in a satisfactory manner, and shall be deemed to have allowed for the same within his rates.
 - The contractor must ensure that the gradients indicated are checked between the levels shown, prior to laying pipes. At no time must the contractor proceed with pipe laying by dialling the gradient shown into a laser without checking. Any discrepancy in this respect must be reported to the engineer prior to pipe laying.
 - The contractor shall check his pipe gradients by means of boning rods and traverler to verify the laser gradients.
 - In the event of the above procedures not being followed, HSP Consulting Engineers Ltd will accept no responsibility whatsoever for any consequent loss or damage.

- Drainage Notes**
- In the absence of any other Specification, all drainage works shall be carried out in accordance with WRc Sewers for Adoption (8th Edition/A Design Guide for Developers), Civil Engineering Specification for the Water Industry (8th Edition) and The Building Regulations.
 - The position of all RWP's and foul outlets are to be confirmed by the Architect.
 - The arrangement of pipework shown may vary once all connections, structural requirements and the like are known. DRAWING INDICATES INDICATIVE PROVISIONS ONLY.
 - The proposed foul and surface water drainage systems including the connections to the existing public sewer system shall be subject to the approval of all relevant Authorities.
 - Pipe runs near buildings. If trench fill is within 1 m of the building the trench shall be filled with concrete up to its lowest level of the building. If trench is greater than 1 m from the building the trench shall be filled with concrete up to a level below the building equal to the distance from the building less 150mm. All planting in the area of pipework to be in accordance with the Regulators requirements.
 - Where inspection chambers exceed 1.2m in depth, the access opening is to be restricted to a diameter of 300mm or 300x300mm.
 - The Statutory Undertakers are to be advised of and permitted to witness/supervise all connections into the adopted sewer network.
 - No private areas are to drain onto areas already adopted or being offered for adoption and no private surface water drainage can be discharged into any highway gully, highway surface water drain, manhole or soakaway maintained by the Local Authorities.
 - All adoptable drainage is subject to the approval of the Statutory Undertaker.
 - All connections to be turned in direction of flow using pipe bends.
 - The Principal Contractor shall be responsible for checking the existing line and invert levels of any connection points for both the foul and surface water systems, prior to undertaking installation of any new drainage works. Any deviation to the levels and positions indicated on the drawing should be brought to the attention of the Project Engineer.
 - All polypropylene inspection chambers shall be in accordance with BS EN 13398-2:2009.
 - It is assumed that Others will provide notice (S106) to the local sewerage undertaker of the intention to communicate flows to the public sewer, as required by The Water Industry Act (1991) as amended.
 - All drains to be tested prior to backfilling, after backfilling and upon completion of hard landscaping, in addition all drains to be inspected by CCTV methods prior to hard landscaping.
 - All drainage works within retained tree canopy are to be constructed in accordance with BS 5837:2012, the NHB Standards and the tree preservation officers requirements. Refer to landscaping plans for further information.
 - Proposed drainage routes to be co-ordinated with the Landscape Architect's requirements. Root protection barriers and/or modified drainage routes may be required.

- SAFETY, HEALTH & ENVIRONMENTAL INFORMATION**
- In addition to the hazards and risks which are typically associated with the work presented upon this drawing, attention is drawn to the following:
- CONSTRUCTION**
Batters and existing vegetation/trees
Overloading surface water attenuation cells
Drainage runs beneath building
- MAINTENANCE/CLEANING**
Flow control/attenuation may mean pipework full for a period after storm
Non-return valves on foul drainage system
- DECOMMISSIONING/DEMOLITION**
Retaining structures
- This list is not definitive references abnormal risks only. It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement. The risks identified relate only to the activities which are the subject of this drawing. Other risk may also exist eg. related to the Architectural discipline.

Legend

GREY	Existing typically shown in GREY. See notes.
BLACK	Proposed typically shown in BLACK
Red line	Indicative site boundary
Red circle	Existing public combined sewer
Red circle with dot	Digitised from Undertakers Record Plan
Orange line	Existing combined sewer to be retained
Red dashed line	Existing drainage to be removed

S40	Flow control chamber
Blue circles	Modular storage cells
Blue lines	Filter drain/collector pipe
Yellow lines	Indicative private foul water drainage. Shown with Cover level, Invert level, Chamber type, Cover strength

REV	BY	DATE	DETAILS	CKD
P08	CJ	26.01.22	Foul drainage amended to suit revised layout	PRD
P08	CJ	21.01.22	Foul drainage amended to suit revised layout	PRD
P07	CJ	20.01.22	Foul drainage to External WC amended	PRD
P06	CJ	11.01.22	Manhole positions amended	PRD
P05	CJ	10.01.22	Amended to suit revised layout	PRD
P04	CJ	03.12.21	Amended to suit revised layout	PRD
P03	CJ	24.09.21	Amended to suit revised layout	PRD
P02	CJ	20.07.21	Amended to suit QS comments	PRD

STATUS	S2 - INFORMATION
CLIENT	Frank Shaw Associates
PROJECT	Kirklees Care Homes The Homestead
TITLE	Drainage Strategy

SCALE	PROJECT NO.	SHEET
1:200	C3257	SIZE A1
DATE	DRAWN	CHECKED
17.06.21	CJ	PRD
DRAWING NO.	REV	
20309-HSP-XX-XX-DR-C-2001	P09	

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