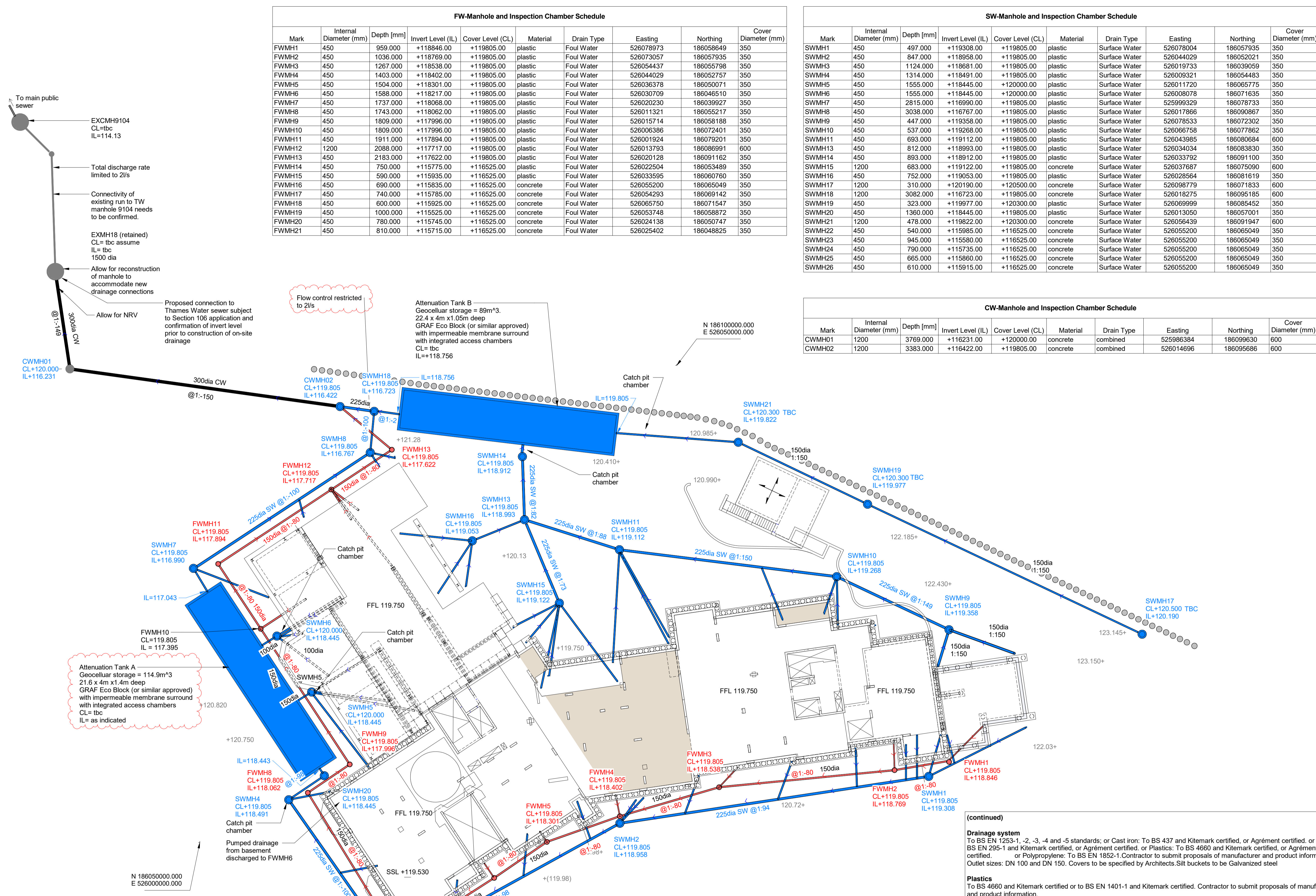


FW-Manhole and Inspection Chamber Schedule									
Mark	Internal Diameter (mm)	Depth [mm]	Invert Level (IL)	Cover Level (CL)	Material	Drain Type	Easting	Northing	Cover Diameter (mm)
FWMH1	450	959.000	+118846.00	+119805.00	plastic	Foul Water	526078973	186058649	350
FWMH2	450	1036.000	+118769.00	+119805.00	plastic	Foul Water	526073057	186057935	350
FWMH3	450	1267.000	+118538.00	+119805.00	plastic	Foul Water	526054437	186055798	350
FWMH4	450	1403.000	+118402.00	+119805.00	plastic	Foul Water	526044029	186052757	350
FWMH5	450	1504.000	+118301.00	+119805.00	plastic	Foul Water	526036378	186050071	350
FWMH6	450	1588.000	+118217.00	+119805.00	plastic	Foul Water	526030709	186046510	350
FWMH7	450	1737.000	+118068.00	+119805.00	plastic	Foul Water	526020230	186039927	350
FWMH8	450	1743.000	+118062.00	+119805.00	plastic	Foul Water	526011321	186055217	350
FWMH9	450	1809.000	+117996.00	+119805.00	plastic	Foul Water	526015714	186058188	350
FWMH10	450	1809.000	+117996.00	+119805.00	plastic	Foul Water	526006386	186072401	350
FWMH11	450	1911.000	+117894.00	+119805.00	plastic	Foul Water	526001924	186079201	350
FWMH12	1200	2088.000	+117717.00	+119805.00	plastic	Foul Water	526013793	186086991	600
FWMH13	450	2183.000	+117622.00	+119805.00	plastic	Foul Water	526020128	186091162	350
FWMH14	450	750.000	+115775.00	+116525.00	plastic	Foul Water	526022504	186053489	350
FWMH15	450	590.000	+115935.00	+116525.00	plastic	Foul Water	526033595	186060760	350
FWMH16	450	690.000	+115835.00	+116525.00	concrete	Foul Water	526055200	186065049	350
FWMH17	450	740.000	+115785.00	+116525.00	concrete	Foul Water	526054293	186069142	350
FWMH18	450	600.000	+115925.00	+116525.00	concrete	Foul Water	526065750	186071547	350
FWMH19	450	1000.000	+115525.00	+116525.00	concrete	Foul Water	526053748	186058872	350
FWMH20	450	780.000	+115745.00	+116525.00	concrete	Foul Water	526024138	186050747	350
FWMH21	450	810.000	+115715.00	+116525.00	concrete	Foul Water	526025402	186048825	350

SW-Manhole and Inspection Chamber Schedule									
Mark	Internal Diameter (mm)	Depth [mm]	Invert Level (IL)	Cover Level (CL)	Material	Drain Type	Easting	Northing	Cover Diameter (mm)
SWMH1	450	497.000	+119308.00	+119805.00	plastic	Surface Water	526078004	186057935	350
SWMH2	450	847.000	+118958.00	+119805.00	plastic	Surface Water	526044029	186052021	350
SWMH3	450	1124.000	+118681.00	+119805.00	plastic	Surface Water	526019733	186039059	350
SWMH4	450	1314.000	+118491.00	+119805.00	plastic	Surface Water	526009321	186054483	350
SWMH5	450	1555.000	+118445.00	+120000.00	plastic	Surface Water	526011720	186065775	350
SWMH6	450	1555.000	+118445.00	+120000.00	plastic	Surface Water	526008078	186071635	350
SWMH7	450	2815.000	+116990.00	+119805.00	plastic	Surface Water	525999329	186078733	350
SWMH8	450	3038.000	+116767.00	+119805.00	plastic	Surface Water	526017866	186090867	350
SWMH9	450	447.000	+119358.00	+119805.00	plastic	Surface Water	526078533	186072302	350
SWMH10	450	537.000	+119268.00	+119805.00	plastic	Surface Water	526066758	186077862	350
SWMH11	450	693.000	+119112.00	+119805.00	plastic	Surface Water	526043985	186080684	600
SWMH13	450	812.000	+118993.00	+119805.00	plastic	Surface Water	526034034	186083830	350
SWMH14	450	893.000	+118912.00	+119805.00	plastic	Surface Water	526033792	186091100	350
SWMH15	1200	683.000	+119122.00	+119805.00	concrete	Surface Water	526037687	186075090	600
SWMH16	450	752.000	+119053.00	+119805.00	plastic	Surface Water	526028564	186081619	350
SWMH17	1200	310.000	+120190.00	+120500.00	concrete	Surface Water	526098779	186071833	600
SWMH18	1200	3082.000	+116723.00	+119805.00	concrete	Surface Water	526018275	186095185	600
SWMH19	450	323.000	+119977.00	+120300.00	plastic	Surface Water	526069999	186085452	350
SWMH20	450	1360.000	+118445.00	+119805.00	plastic	Surface Water	526013050	186057001	350
SWMH21	1200	478.000	+119822.00	+120300.00	concrete	Surface Water	526056439	186091947	600
SWMH22	450	540.000	+115985.00	+116525.00	concrete	Surface Water	526055200	186065049	350
SWMH23	450	945.000	+115580.00	+116525.00	concrete	Surface Water	526055200	186065049	350
SWMH24	450	790.000	+115735.00	+116525.00	concrete	Surface Water	526055200	186065049	350
SWMH25	450	665.000	+115860.00	+116525.00	concrete	Surface Water	526055200	186065049	350
SWMH26	450	610.000	+115915.00	+116525.00	concrete	Surface Water	526055200	186065049	350

CW-Manhole and Inspection Chamber Schedule									
Mark	Internal Diameter (mm)	Depth [mm]	Invert Level (IL)	Cover Level (CL)	Material	Drain Type	Easting	Northing	Cover Diameter (mm)
CWMH01	1200	3769.000	+116231.00	+120000.00	concrete	combined	525986384	186099630	600
CWMH02	1200	3383.000	+116422.00	+119805.00	concrete	combined	526014696	186095686	600



- General Notes**
- This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.
 - The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.
 - Do not scale from this drawing.
- Legend**
- Foul water pipe (Proposed)
 - Surface water pipe (Proposed)
 - Existing combined drainage (Assumed route)
 - Existing drainage
 - X X X Existing drainage runs to be removed
 - SVP Proposed locations (by others)
 - SVPE Existing locations
 - SS Sub stacks (by others)
 - CL Cover Level
 - IL Invert Level
 - IC Inspection Chamber
 - MH Manhole
 - TW... Thames water Sewer
 - CW Combined foul + surface water
 - Pumped drainage. Rising main.
 - Existing manhole assumed
 - RWP Rainwater pipe (by others)
 - RWPE Rainwater pipe existing
 - RE Rodding eye
 - CD Channel drain (by others)
 - G Proposed new Gully by others. To be roddable unless agreed otherwise. To have 7.5l/s flow capacity typically.
 - GE Existing Gully
 - AP Access panel to linear slot / channel drain. Lid with inset finishes to landscape Architect's details.
 - LSD Linear slot drain. ACO Multidrain constant depth channel M100DS, 300mm deep with brickslot drain over with stainless steel finish. C250 cover rating.

All SW drainage 150 Dia. pipes, 1:100 falls U.N.O, FW drainage 150 Dia. pipes, 1:80 falls U.N.O

Cover levels to be re-set to suit new landscaping. Details by others

Existing Retained Drainage

Before starting work, check invert levels and positions of existing drains, sewers, inspection chambers and manholes against drawings. Report discrepancies. Protect existing drains to be retained and maintain normal operation if in use.

Chambers and Covers and Frames to comply with BS EN124

Loading grades are to BS EN 124. These are categorized by usage:

- D400 for roads;
- C250 for areas with light vehicles such as car park;
- B125 for pavements and pedestrian areas;
- A15 for areas inaccessible to motor vehicles.

For internal access covers and frames, standards to BS EN 124 and Double seals and grease Recessed covers for concrete filling. Loading grades to BS EN 124: B125 generally

Rev	Date	By	Chkd	Description
P5	25.02.22	JH	MT	Updated For Planning
P4	04.02.22	JH	MT	Schedules Added
P3	10.12.21	AM	MT	Issued For Tender
P2	25.10.21	AM	JH	Issued For Information
P1	21.10.21	CS	MT	Issued For Information

Eckersley O'Callaghan

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Project Title
Branch Hill House, London

Drawing Title
Below Ground Drainage
Ground Level

Project No
21021

Scale:
As indicated [A1]

Drawn By
MK

Date
March 2021

Drawing Suitability
S4 - For Stage Approval

Ver

Drawing Number
BHH-EOC-V1-00-DR-S-5000

Rev
P5

- General note 2:**
- At the commencement to works on site the contractor is to carry out trial pits and liaise with Utility companies in order to establish the exact position of all existing statutory utility plant in the vicinity of works and take adequate precautions for their protection.
 - All manhole covers/ valves/ inspection covers in existing carriageway/verges to be adjusted where necessary to suit design levels.
 - The contractor shall ascertain the CBR of the subgrade in order to determine the required sub-base/capping thickness
 - Prior to laying any material the subgrade must be inspected and any soft spots removed and filled with 6F2 capping material.
 - Prior to construction of any drainage works, the Contractor is to confirm the invert levels of existing manholes and sewers. any variations from the designed levels shown on the drawings shall be reported to the Engineer in advance of construction works commencing.
 - All drain and sewer pipes to be laid soffit to soffit unless shown otherwise.
 - Contractor to refer to Health & Safety Executive 'Note 47-avoiding Danger from underground Services' and 'Document G56 - Avoiding Danger from Overhead Electric Lines'.
 - All levels are in meters and above Ordnance Datum.
 - All drainage to comply with British Standard BS EN 752:2017 'Drain and Sewer Systems outside Buildings' and Part H of the Building Regulations 2015.
- All terraces to permeate to ground. Storage to be provided below as required to allow for 1:100 yr + 40% event
- Final RWP and SVP to be coordinated with Architect.
 - Final internal IL of drainage subject to coordination with MEP contractor. IL at retaining wall intersection to be provided by MEP contractor
 - IL and FFL to be agreed with Architect. Levels are subject to confirmation of landscape levels
 - Road gullies to landscape details
 - Landscape drain to BS 5911-3 and BS EN 1917 and Kitemark certified; orage to be confirmed by landscape architect

- (continued)
- Drainage system**
- To BS EN 1253-1, -2, -3, -4 and -5 standards; or Cast iron: To BS 437 and Kitemark certified, or Agrément certified, or Clay: To BS EN 295-1 and Kitemark certified, or Agrément certified, or Plastics: To BS 4660 and Kitemark certified, or Agrément certified, or Polypropylene: To BS EN 1852-1. Contractor to submit proposals of manufacturer and product information. Outlet sizes: DN 100 and DN 150. Covers to be specified by Architects. Silt buckets to be Galvanized steel
- Pipes**
- To BS 4660 and Kitemark certified or to BS EN 1401-1 and Kitemark certified. Contractor to submit proposals of manufacturer and product information.
- Pipes, bends and junctions - supply**
- From same manufacturer for each pipeline
- Pipes, bends and junctions - plastics - structured wall**
- For Surface water and foul drainage, provide Type A, to BS EN 13476-1 and -2, Kitemark or Agrément certified standards. Puncture resistance, jetting resistance and longitudinal bending to requirements of WIS 4-35-01, issue 2. Material to be PVC-U. Contractor to submit proposals of manufacturer and product information. Recycled content to be 75% (minimum) to BS EN ISO 14021. Sizes: DN 110, DN 150, and DN 255. Joining type: Spigot and socket
- Inspection chambers - plastics**
- To BS EN 13598-1, BS EN 13598-2 or Agrément certified. Material to be Polypropylene.
- Manholes - concrete**
- To BS 5911-3 and BS EN 1917 and Kitemark certified; or To BS 5911-4 and BS EN 1917.
- Design - private packaged pumping station systems**
- For the design, select appropriate proprietary packaged unit in accordance with BS EN 752. Submit drawings, technical information, calculations and manufacturers' literature. Submit proposals for installation details, base or bedding, surround and backfilling. Submit details of requirements for access covers. Provide maintenance requirements.
- Flexible couplings**
- To BS EN 295-4 or WIS 4-41-01 and Kitemark certified, or Agrément certified.
- Selected fill for backfilling**
- As-dug material, free from vegetable matter, rubbish, frozen soil and material retained on a 40 mm sieve. Compaction to be By hand in 100 mm layers.

- General Note 1:**
- All terraces to permeate to ground. Storage to be provided below as required to allow for 1:100 yr + 40% event
- Final RWP and SVP locations to be coordinated with Architect.
 - Final internal IL of drainage subject to coordination with MEP contractor. IL at retaining wall intersection to be provided by MEP contractor
 - IL and FFL to be agreed with Architect. Levels are subject to confirmation of landscape levels
 - Road gullies to landscape details
 - Landscape drain to BS 5911-3 and BS EN 1917 and Kitemark certified; orage to be confirmed by landscape architect

