Foul Drainage

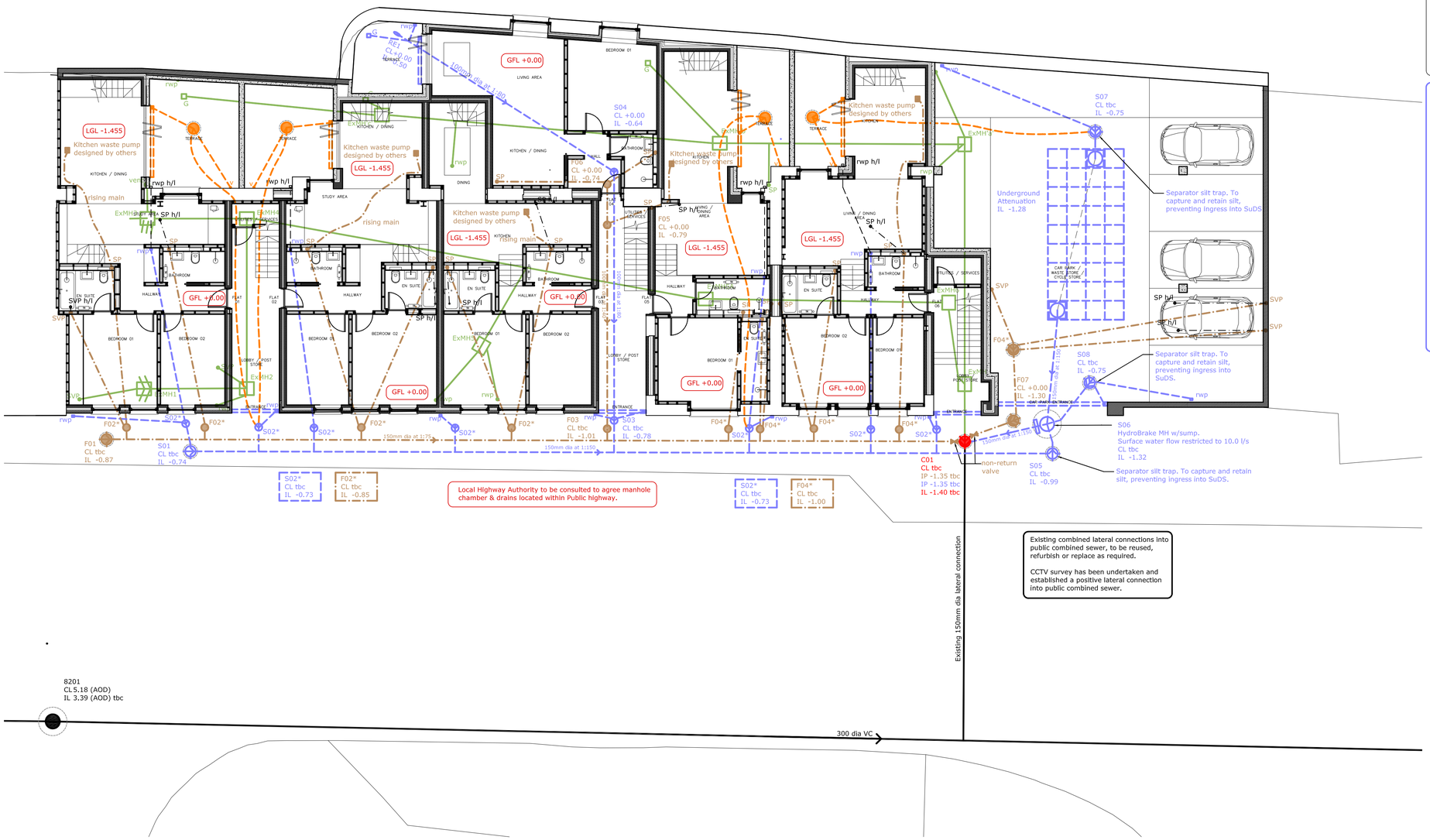
Typically main bathroom/en-suite drains to discharge under gravity into a new private foul sewer.

Kitchen waste taken to a macerator pump, to discharge via a rising main into the new foul manhole chamber.

The foul waste runs to be contained within the curtilage of the related flat, or communal area.

All existing drainage found on site is to be checked to establish use. Any drains found to be active must be diverted. The Engineer to be consulted.
Any manhole or drain found to now be redundant is to be completely grubbed out.

All indicative terrace and cavity drain sump, pump, vents are IN ABEYANCE.
Subject to detailed design by specialist.



Site Plan Showing Drainage Layout (1:100)

A1

0m 1:10 0.2m 0.4m 0.6m 0.8m 1.0m
0m 1:20 0.4m 0.8m 1.2m 1.6m 2.0m
0m 1:50 1m 2m 3m 4m 5m
0m 1:100 2m 4m 6m 8m 10m
0m 1:200 4m 8m 12m 16m 20m

Drainage Preliminary Design Assumptions

Existing Drainage Assessment

Surface Water Drainage

752m² = Total site area.

752m² = Estimate of impermeable area.
0m² = Estimate of permeable area.

752m² = Total estimate of impermeable area discharging into Southern Water public sewer.

CCTV survey has established existing dwelling, foul & storm flows discharge via a private 150mm dia. combined drain into the public combined sewer located in the Ham Road via a lateral connection.

12.7 l/s = Estimate of existing site impermeable area discharge rate. Critical summary result for 15 minute, 2 year winter return period, from Micro Drainage.

Proposed
752m² = Estimate of proposed impermeable area.
0m² = Estimate of proposed permeable area.

752m² = Total impermeable area discharging into Southern Water public sewer

Designed for a 100 year + 40 % climate change return period.

Flow control chamber to restrict flow from site into the public sewer

10.0 l/s = Proposed restricted discharge site run off rate for a 100 year return period + 40% climate change

This represents a 20% betterment of the existing storm discharge flow for 15 minute, 2 year winter return period.

In accordance in with the current SUD's Guidance Manuel 2015 (report C753), to prevent the risk of blockages and clogging a proposed minimum 100m diameter flow control restriction has been adopted.

15m³ = Approximate underground storage volume required to safely accommodated storm flows without flooding on or off site for a 100 year + 40% climate change storm event return period.

Underground storage structure subject to detailed structural design by specialist supplier.

The above is subject to agreement with Building Control.

Foul Water Drainage

Proposed dwellings to be connected to public sewer.

14No. = Total number of dwellings.

The above discharge rate is subject to agreement with Southern Water.

Surface Water
Designed for a 100 year + 40% climate change storm event return period

752m² = Estimate of proposed impermeable area discharging to public sewer (equal to existing).

15m³ = Approximate underground storage volume required to safely accommodated storm flows without flooding on or off site for a 100 year + 40% climate change storm event return period, based on a maximum allowable discharge rate of 10.0 l/s (This represents a 20% betterment of the existing storm flow)

Underground attenuation provide by min. 21.4m² x 0.7m deep graf cellular storage units or equivalent with:-
- 2No. inspection shafts for inspection and maintenance.
- Ventilation, specialist manufacturer to confirm requirements.
- Inspection channel, for inspection, cleaning and maintenance.

Cellular storage units IN ABEYANCE subject to detailed design by specialist manufacturer:-
- minimum 10 tonne traffic loading.
- Approx 0.58m cover depth below ground.
- 26° assumed angle of internal friction.
- No infiltration, storage only.
- -1.28 Invert Level

The above is subject to agreement with Building Control and Southern Water

Drainage Notes
This drawing complies with "Sewers For Adoption 7th Edition".

All dimensions shown are in millimetres unless otherwise stated.

These notes shall be read directly in conjunction with JMLA's other relevant drawings, details and specification, together with any subsequent revisions and amendments.

The Contractor shall be responsible for all temporary and permanent support works necessary.

In general, no fall shall be less than:-
1 in 40 for foul under a structure or 1 in 80 elsewhere.
1 in 100 for surface water.

Pipe work and fittings to all sewers shall be adequately durable and projected against damage.

Drain materials and components shall be in accordance with the following standards :-

Vitrified Clay - BS 65 or BS EN 295
Precast Concrete - BS 5911
Plastic - BS 4962, BS 4660 or BS EN 1401-1

Adoptable sewers and laterals are to be vitrified clay.

All other drainage shall comply with Local Building Authority and relevant Structural Warranty provider standards.

Special protection may be required where pipes are near the ground surface or where they could be damaged by the weight of backfill or traffic load form above.

For flexible pipes, and where greater safety is needed, the bedding class and grading of backfill should comply with BS EN 13242.

All drain runs from RWP & SVP stacks to be 102/110mm diameter unless noted otherwise.

All pipes within close proximity to and deeper than new or existing foundations shall be encased in concrete and backfilled in concrete up to the level of those foundations.

Adequate sleeves or bridges shall be provided wherever drains pass through walls or foundations.

Manhole & access chamber covers to suit BS EN 124 loading:-
Grade A15 - Gardens
Grade B125 - Driveways & footways.
Grade D400 - Roads & carriageways.
Two sets of lifting keys to be provided to client for each type of cover at handover.

All pipes to be bedding class ('S'/'Y' or 'Z') depending on position with granular surround as shown on detail drawing if crown of pipe is within 450mm of finished ground level then to be encased in concrete class 'Y' or 'Z'

Drainage Legend

- Existing foul drainage run
- New foul water drainage run constructed to adoptable standards
- New private foul drainage run
- SVP — Soil & vent pipe, open to outside air
- SP — Soil pipe with air admittance valve
- SS — Stub stack @ low level (e.g. under sink)
- BIG — Back inlet gully
- G — Trapped floor gully
- Existing surface water drainage run
- New surface water drainage run constructed to adoptable standards
- New private surface water drainage run
- RE — Rodding eye
- RA — Rodding access @ low level (e.g. above floor)
- RWP — Rainwater down pipe with gully at base
- RG — External gully
- Road gully
- Channel drain
- Cellular storage units
- Existing combined drainage run
- New combined drainage run constructed to adoptable standards
- New private combined drainage run
- Abandoned / redundant drainage To be confirmed on site
- Indicative terrace and cavity drain sump, pump, vents In Abeyance. subject to detailed design by others
- Manhole Types '1' & '2'
- Inspection Chamber Type '3'
- Inspection Chamber Type '4'
- Backdrop manhole or Inspection chamber

N

Indicative Only

Levels datum : 'Arbitrary'
Based on values taken from temporary bench mark +0.00 given as 'Existing Finish Floor Level'

Topographical survey to be undertaken to establish an ordnance datum (AOD).

Following survey results existing lateral connections to be assessed to confirm if a existing connection can be reused.

For Tender

rev	date	amendment	by
P03	07/09/18	Tender issue	rmh
P02	24/08/18	Issued for comment / agreement	rmh
P01	08/08/18	Issued for comment / agreement	rmh

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client
Caxton House Developments Limited

architectural design
Dunn Architects

project
Caxton House, Ham Road
Shoreham-by-Sea

drawing title
Proposed Development Of 14No. Units
Drainage Layout

scale	date	drawn by
as shown @ A1	july 18	rmh

drwg no 06757-jmla-TY-00-DR-D-2200-D2-P03 rev