100mm @ A1 (50mm @ A3)

1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

3 Do not scale from this drawing in either paper or digital form. Use written dimensions only. To check drawing has been printed to the intended scale the above bar should be 100mm

3 Abbreviations:-

CL	- Cover Level
IL	- Invert Level
MH	- Manhole
OD	- Outer Diameter
RWP	- Rainwater Pipe
SVP	- Soil Vent Pipe
UTL	- Unable To Lift

4 The contractor is to execute all repair works and recommendations associated with drainage to be retained and reused outlined in the UKDN CCTV report.

Drainage Key

- Proposed SW drain run
- Proposed FW drain run
- Proposed CW drain run
- Proposed Pumped Rising Main
- Existing SW drain run
- Existing FW drain run
- Existing CW drain run
- Existing Pumped Rising Main
- Public sewer
- Unspecified drain run
- Proposed Channel Drain
- Redundant drain run
- RWP — Proposed / Existing Rain Water Pipe
- SVP — Proposed / Existing Soil Vent Pipe
- RE — Proposed / Existing Rodding Eye
- DP — Proposed / Existing Drainage Point
- SS — Proposed / Existing Stub Stack
- G — Proposed / Existing Gully
- Proposed SW Manhole
- Proposed FW Manhole
- Proposed CW Manhole
- Proposed Public Sewer Manhole
- Existing Manhole

Notes:

1 All drainage shall comply with the typical drainage construction details and the requirements of BS EN 752.

2 Access covers and frames shall comply with the loadings specified and to BS EN 124 and kitemarked or if recessed covers are specified then in accordance with FACTA association equivalent.

3 The proposed building outlines shown on this drawing are for information only. Refer to Architects plans for precise location setting out information and details.

4 All drainage pipework shown shall be 100mm diameter unless noted otherwise.

5 All underslab drainage shall be laid at gradients of 1:40 min. for foul pipework and 1:80 min. for surface water unless noted otherwise.

6 All underslab drainage shall be clear of foundations unless shown otherwise with long radius bends kept to a minimum and used where unavoidable.

7 At least one soil pipe at the head of each foul run shall be vented to the atmosphere.

8 All gutters shall be fitted with a leaf filter at each outlet to reduce the risk of blockage.

9 All rainwater downpipes shall be accessible above ground for rodding purposes.

10 Any part of the existing drainage system to be retained as part of the new scheme shall be cleaned and inspected by CCTV survey. Any structural defects shall be repaired or replaced as may be required using appropriate and approved methods.

11 Where existing access locations are to be retained the cover and frames shall be checked to ensure they are of a suitable duty for reuse and levels adjusted to suit proposed finished ground levels.

12 All internal access covers shall be recessed, double sealed and lockable.

13 Cover levels shown on this drawing are approximate and shall be adjusted to suit finished pavement levels on site by Contractor. Covers shall be orientated to suit pavement finishes where appropriate.

14 All private drainage pipework for foul and surface water systems have been designed on the basis of UPVC to BS EN 1401-1, unless noted otherwise.

15 Concrete encasement of the pipework shall be required where the vertical clearance between two pipes crossing is less than 300mm

16 All existing drainage shall be assumed to be 'live' and shall be maintained at all times during the works. Existing drainage shall be reconnected to the new drainage system unless proven to be redundant for abandonment. All existing drainage to be abandoned shall be sealed by appropriate means.

17 All drainage connecting to the public sewer network shall not commence until receipt of the approval from the drainage authority and shall comply with requirements using vitrified clay pipework to BS EN 295 with plain sleeved or socketed flexible joints subject to their approval.

18 Where drainage works are carried out in the public highway the relevant necessary approvals and road opening notices shall be obtained from the highway authority and utility companies.

19 Upon completion all new drainage installation together with any existing drainage retained shall be jetted and CCTV surveyed. Contractor to ensure that the drainage system is fully operational, free of excess debris/silt and all identified faults rectified.

20 The contractor is to execute all repair works and recommendations associated with drainage to be retained and reused.

21 HEALTH & SAFETY: Future works shall be carried out by specialist competent and experienced contractors. All operatives shall have received full and appropriate training with appropriate qualifications for the operations they are required to undertake. All work shall be carried out in accordance with the relevant Health & Safety Regulations.

22 Pumps and GRP chambers specifications are TBC by relevant specialists.

23 Invert levels for FW and SW drain points to start at min. 600mm depth from the cover level.

24 For existing and demolition drainage general arrangememtes refer to HTS drainage drawings.

25 Allow for breaking out of existing slab to form new drainage connections. Existing slabs to be reinstated following drainage installation.

26 Proposed drainage is to be ammended after new CCTV survey is undertaken to confirm existing drainage layout and condition.

Existing Manhole Schedule

Ref	Cover level	Invert level	Chamber size	Construction	Notes
EMH1	21.76	21.56	450x600	Brick and render construction	-
EMH2	20.81	-	DNL	-	No laterals within chamber
EMH3	-	-	1200x900	Brick and render construction	-
EMH4	-	-	-	Brick and render construction	Running trap has no rodding eye installed
EMH5	21.76	-	-	Cast iron	Rodding eye
EMH6	-	-	UTL	-	Frame welded closed
EMH7	20.30	17.820	UTL	-	-
EMH8	17.57	15.63	1200x1200	Concrete construction	Pump station rising main
EMH9	22.78	21.95	750x600	Brick and render construction	-
EMH10	22.64	21.31	-	Brick and render construction	-
EMH11	22.36	21.05	1200x500	Brick and render construction	Chamber blocked with silt
EMH12	22.36	21.36	600x450	Brick and render construction	Chamber blocked with silt
EMH13	-	-	-	-	-
EMH14	19.48	18.87	600x650	Brick construction	-
EMH15	23.58	20.61	1400x650	Brick and render construction	Running trap has no rodding eye installed
EMH20	20.55	19.88	450x650	Brick construction	-

Rev	Date	By	Eng	Amendments
T1	07.12.17	FC	AC	Tender Issue

HEYNE TILLETT STEEL
STRUCTURAL ENGINEERS
hts.uk.com

Job Name
The Hope Project

Drawing Title
Existing and Demo Sub-Basement Drainage Sheet

Purpose of Issue **Preliminary** Scale at A1 **As indicated**

Drg No **1444 / DR010** Rev **T1**

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