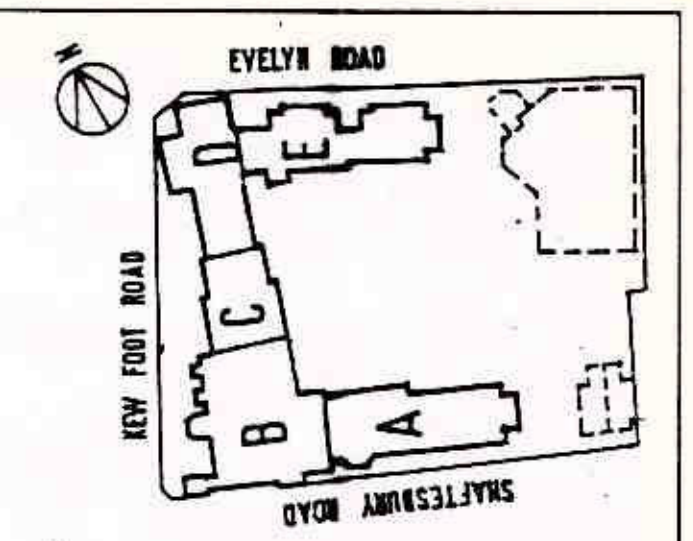


LEGEND
 --- EXISTING DRAIN RUN.
 - - - NEW DRAIN RUN.
 [Symbol] DRAINAGE CHANNEL WITH PERFORATED GRATING, WITH IN-BUILT FALLS.
 I.C. - INSPECTION CHAMBER.
 R.W.P. - RAIN WATER PIPE.
 G. - GULLEY.
 R.G. - ROAD GULLEY.
 R.I. - RODDING EYE.
 I.L. - INVERT LEVEL.



MANHOLE No.	COVER	INVERT	NOTES	COVERS
SMH 1	6.78	5.38	EXISTING MANHOLE WITH NEW INLET CONNECTION, MAKE GOOD AS NECESSARY.	USING EXISTING MANHOLE COVER CLEAN DOWN & APPLY GREASE TO EDGE SEALS.
SMH 2	6.79	5.75	AS ABOVE, BUT WITH TWO NEW INLETS.	AS ABOVE.
SMH 3	6.97	5.95	NEW BRICK MANHOLE (200x750mm) INTERNAL DIMENSION (SEE SPEC).	GLYNWED BRICKHOUSE BRISTOL SINGLE SEAL PEDESTAL COVER & FRAME REF: 6222C (600x600)
SMH 4	7.00	6.05	AS ABOVE	AS ABOVE.
SMH 5	6.84	5.62	AS ABOVE	AS ABOVE
SMH 6	6.76	5.48	AS ABOVE.	GLYNWED BRICKHOUSE VISOR, HEAVY DUTY HINGED COVER REF: 5212 (600x600).
PETROL INTERCEPTOR	COVER	INVERT	NOTES	COVERS
PI 1	6.86	4.40	CONDOR BYPASS SEPARATOR, REF: BC1/22/100, CAST IN A CONC. SURROUND TO MANUF. RECOMM.	GLYNWED BRICKHOUSE VISOR, HEAVY DUTY HINGED COVER REF: 5212 ON BRICK UPSTAND
SOAKAWAY	COVER	INVERT	NOTES	COVERS
SK 1	6.86	2.70	SOAKAWAY CONSISTING OF PRECAST CONCRETE RINGS 1.8m DIA & 2.1m DEEP FROM HEPWORTH'S CONC. PRODUCT	GLYNWED BRICKHOUSE BRISTOL SINGLE SEAL COVER ON BRICK UPSTAND TO ADJ. LEVEL
ROAD GULLEY	COVER	INVERT	NOTES	COVERS
RG 1	6.75	EXIST.	EXISTING GULLEY, CLEAN OUT & ROD TO MANHOLE ADJACENT.	USE EXISTING ROAD GRATING RE-LEVEL AS NECESSARY TO NEW ROAD LEVELS.
RG 2	6.725	EXIST.	AS ABOVE	AS ABOVE.
RG 4	6.775	5.805	HEPWORTH POLYPROPYLENE ROAD GULLEY (MRP1/1) & GULLEY TRAP (MPT) CAST IN LEAN MK. CONCRETE	GLYNWED BRICKHOUSE HEAVY DUTY GRATING & FRAME REF: 5810M, BUILT ON BRICK UPSTAND
RG 5	6.750	6.065	AS ABOVE	AS ABOVE.

NOTES

MANHOLES
 THIS TO CONSIST OF BRICK BUILT. FOR FULL DETAILS SEE DRAWING RR11/9/104. ALL MANHOLES TO BE 1200 X 750mm INTERNAL. ALL CHANNEL SECTIONS & SLIPPER SEALS TO BE TERRAIN UPVC BURIED DRAIN SYSTEM REF: 1800

PIPEWORK
 SURFACE WATER DRAINS TO CONSIST OF TERRAIN UPVC PIPEWORK INSTALLED IN ACCORDANCE TO MANUFACTURERS' RECOMMENDATIONS. SIZES OF PIPES INDICATED ON DRAWING. (MAIN LINE - 150mm DIA, BRANCH LINE - 100mm DIA.)

ANY PIPEWORK LESS THAN 950mm FROM ROAD SURFACE LEVEL, TO BE CAST IN REINFORCED CONCRETE TO CURRENT CODE OF PRACTICE.

DRAINAGE CHANNEL
 THIS TO CONSIST OF 'KASKADE' KD100 SYSTEM WITH 'HEELSAFE' GRATING COVER. THIS SYSTEM TO INCLUDE FOR ALL CONNECTIONS, END CAP OUTLETS, SUITABLE CONNECTION TO 150mm DIA. PIPEWORK. CHANNEL SYSTEM TO INCLUDE FOR BUILT-IN FALLS Laid IN ACCORDANCE WITH MANUFACTURERS' INSTRUCTIONS (SEE PAGE 65 OF KASKADE TECHNICAL MANUAL).

PETROL INTERCEPTOR
 THIS TO CONSIST OF CONDOR BYPASS SEPARATOR, 1500mm LONG & 1200mm WIDE, TYPE BC1/22/150. INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS. TANK TO BE BED IN A CONCRETE SURROUND (SEE CONDOR DWG. No. DWG 18/5/1-3/01). ACCESS COVER TO INTERCEPTOR AS PER SCHEDULE, BEDDED ON CLASS 'B' ENGINEERING BRICK UPSTAND, TO MATCH TO ADJACENT GROUND LEVELS.

SOAKAWAYS
 THIS TO CONSIST OF PERFORATED CONCRETE RINGS 1.8m DIA, EACH & AT LEAST 2.1m DEEP FROM LOWEST PIPE INVERT. (SEE SCHEDULE). CONCRETE RINGS OBTAINED FROM HEPWORTH'S CONCRETE DRAINAGE PRODUCTS (OR SIMILAR APPROVED). PRECAST CONCRETE COVER SLAB TO INCORPORATE 600x600mm OPENING, ACCESS COVER TO SOAKAWAY AS PER SCHEDULE, BEDDED ON CLASS 'B' ENGINEERING BRICK UPSTAND, TO MATCH TO ADJACENT GROUND LEVELS. FOR DETAILS OF SOAKAWAY INSTALLATION SEE HEPWORTH'S BULLET HEPWORTH CONCRETE DRAINAGE FIG. No. 7, PAGE 65.

ROAD GULLEYS
 THIS TO BE HEPWORTH'S PLASTICS ROAD GULLEY & TRAP, INSTALLED IN ACCORDANCE WITH MANUFACTURERS' INSTRUCTIONS (SEE SUPERSEDE TECH. PRODUCT DETAIL No. 45, PAGE 28).

BLOCK B INTERNAL BASEMENT LEVEL 5.600

BLOCK A INTERNAL BASEMENT LEVEL 5.010

NOTE: WHERE DRAINAGE PASSES THROUGH EXISTING, THEN, PIPES TO BE SEPARATED FROM FOUNDATIONS AS PER SECTION H1, DIAGRAM A1, OF THE BUILDING REGULATIONS.

THIS DRAWING SUPERSEDES DWG. RR11/9/110.

ISSUED FOR CONSTRUCTION

NOTES AND REVISIONS

RICHMOND, TWICKENHAM AND ROEHAMPTON HEALTHCARE N.H.S. TRUST

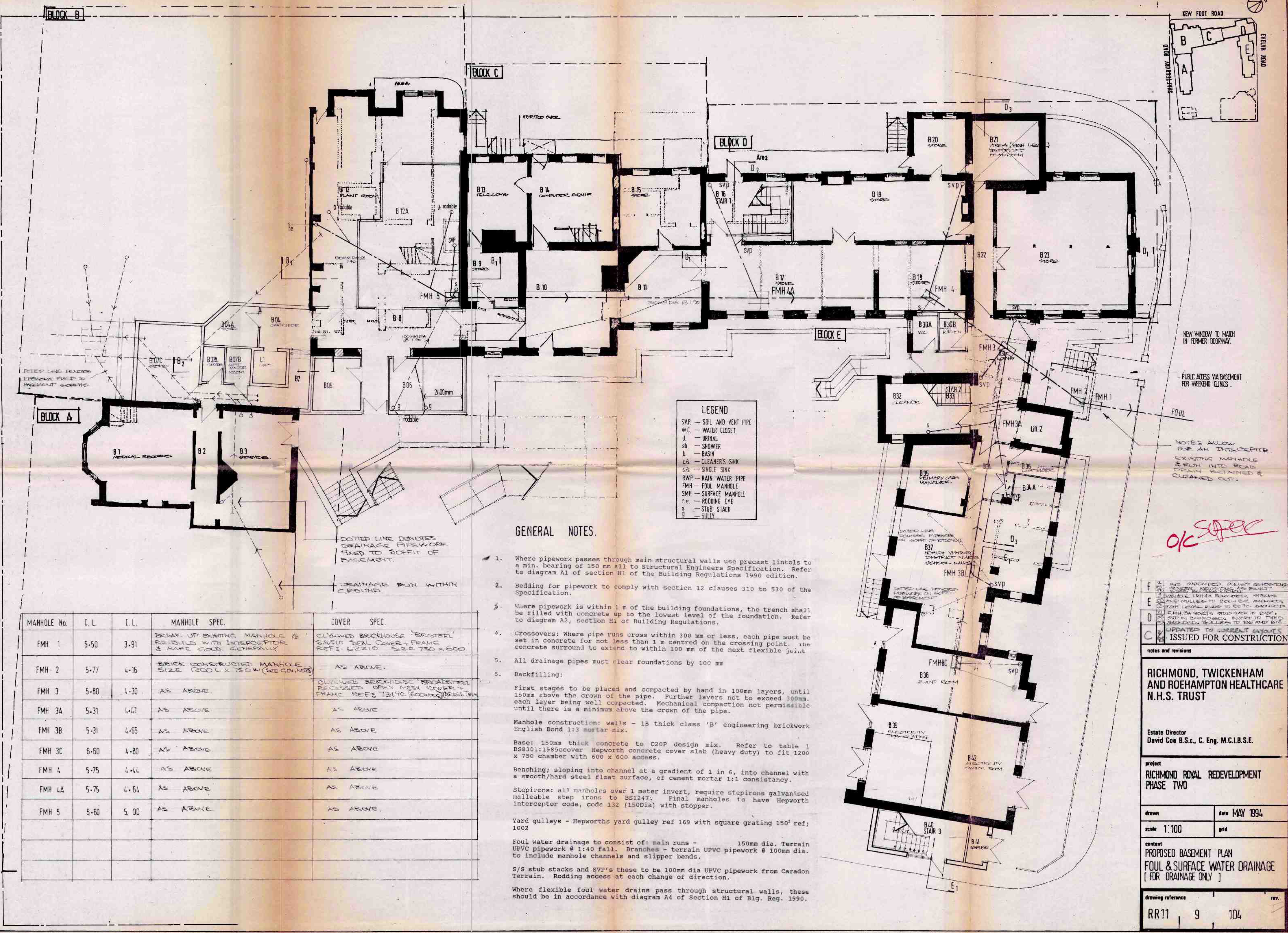
Estate Director
 David Coe B.Sc., C. Eng. M.C.I.B.S.E.

Project
 RICHMOND ROYAL REDEVELOPMENT PHASE TWO

drawn PL date FEB. 1996
 scale 1:100 grid

content
 PROPOSED EXTERNAL DRAINAGE COURTYARD SIDE

drawing reference	rev
RR 11 9	111 C



LEGEND

- SVP. — SOIL AND VENT PIPE
- W.C. — WATER CLOSET
- U. — URINAL
- sh. — SHOWER
- b. — BASIN
- c/s — CLEANER'S SINK
- s/s — SINGLE SINK
- RWP. — RAIN WATER PIPE
- FMH — FOUL MANHOLE
- SMH — SURFACE MANHOLE
- r.e. — RODDING EYE
- s. — STUB STACK
- g. — GULLY

GENERAL NOTES.

1. Where pipework passes through main structural walls use precast lintols to a min. bearing of 150 mm all to Structural Engineers Specification. Refer to diagram A1 of section H1 of the Building Regulations 1990 edition.
2. Bedding for pipework to comply with section 12 clauses 310 to 530 of the Specification.
3. Where pipework is within 1 m of the building foundations, the trench shall be filled with concrete up to the lowest level of the foundation. Refer to diagram A2, section H1 of Building Regulations.
4. Crossovers: Where pipe runs cross within 300 mm or less, each pipe must be set in concrete for not less than 1 m centred on the crossing point. The concrete surround to extend to within 100 mm of the next flexible joint.
5. All drainage pipes must clear foundations by 100 mm
6. Backfilling:
 First stages to be placed and compacted by hand in 100mm layers, until 150mm above the crown of the pipe. Further layers not to exceed 300mm, each layer being well compacted. Mechanical compaction not permissible until there is a minimum above the crown of the pipe.
 Manhole construction: walls - 1B thick class 'B' engineering brickwork English Bond 1:3 mortar mix.
 Base: 150mm thick concrete to C20P design mix. Refer to table 1 BS8301:1985 cover Hephworth concrete cover slab (heavy duty) to fit 1200 x 750 chamber with 600 x 600 access.
 Benching: sloping into channel at a gradient of 1 in 6, into channel with a smooth/hard steel float surface, of cement mortar 1:1 consistency.
 Stepiroons: all manholes over 1 meter invert, require stepirons galvanised malleable step irons to BS1247. Final manholes to have Hephworth interceptor code, code 132 (150Dia) with stopper.
 Yard gulleys - Hephworths yard gully ref 169 with square grating 150° ref; 1002
 Foul water drainage to consist of: main runs - 150mm dia. Terrain UPVC pipework @ 1:40 fall. Branches - terrain UPVC pipework @ 100mm dia. to include manhole channels and slipper bends.
 S/S stub stacks and SVP's these to be 100mm dia UPVC pipework from Caradon Terrain. Rodding access at each change of direction.
 Where flexible foul water drains pass through structural walls, these should be in accordance with diagram A4 of Section H1 of Bldg. Reg. 1990.

MANHOLE No.	C. L.	I. L.	MANHOLE SPEC.	COVER SPEC.
FMH 1	5.50	3.91	BREAK UP EXISTING MANHOLE & RE-BUILD WITH INTERCEPTOR & MAKE GOOD GENERALLY	CLIMBED BRICKHOUSE BRISTEEL SINGLE SEAL COVER + FRAME REF: 62210 SIZE 750 X 600
FMH 2	5.77	4.16	BRICK CONSTRUCTED MANHOLE SIZE 1200 L X 750 W (SEE GEN. NOTES)	AS ABOVE.
FMH 3	5.80	4.30	AS ABOVE.	CLIMBED BRICKHOUSE BRISTEEL RECESSED OPEN MESH COVER + FRAME REF: 7347C (600x600) (BRISTEEL)
FMH 3A	5.31	4.47	AS ABOVE.	AS ABOVE
FMH 3B	5.31	4.65	AS ABOVE.	AS ABOVE
FMH 3C	6.60	4.80	AS ABOVE.	AS ABOVE
FMH 4	5.75	4.44	AS ABOVE.	AS ABOVE
FMH 4A	5.75	4.64	AS ABOVE.	AS ABOVE
FMH 5	5.60	5.00	AS ABOVE.	AS ABOVE.

notes and revisions

RICHMOND, TWICKENHAM AND ROEHAMPTON HEALTHCARE N.H.S. TRUST

Estate Director
David Coe B.Sc., C. Eng. M.C.I.B.S.E.

project
RICHMOND ROYAL REDEVELOPMENT PHASE TWO

drawn _____ date MAY 1994

scale 1:100 grid

content
PROPOSED BASEMENT PLAN FOUL & SURFACE WATER DRAINAGE [FOR DRAINAGE ONLY]

drawing reference RR11 9 104

OK SPEC

9/104



Appx E. **Below Ground Drainage Strategy**