



- NOTE:**
ALL BELOW GROUND DRAINAGE BRANCH PIPES TO MAIN RUNS SHALL PASS BENEATH FOUNDATIONS UNLESS OTHERWISE STATED
- NOTE:**
DRAINAGE OUTSIDE OF ADOPTABLE HIGHWAY BOUNDARY BY OTHERS AS PART OF S278 WORKS PACKAGE
- NOTE:**
THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS.
- NOTE:**
THE COVERS SHALL BE SET TO SAME LEVEL AND FALL AS ADJACENT GROUND.
- NOTE:**
ALL GULLIES SHALL BE TRAPPED AND RODDABLE (REFER TO DETAILS).
- NOTE:**
DRAINAGE REQUIREMENTS FOR PLANTERS IS TO BE CONFIRMED
- NOTE:**
ADOPTABLE HIGHWAY BOUNDARY BY OTHERS
- NOTE:**
THE CONTRACTOR SHALL CHECK AND CONFIRM TO THE ENGINEER ASSUMED SIZES, DEPTHS, LEVELS AND LOCATIONS OF EXISTING SEWERS AND MANHOLES PRIOR TO CONSTRUCTION COMMENCING.
- NOTE:**
ALL CAST IRON DRAINAGE WITHIN CONCRETE SHALL BE AIR TESTED BEFORE CONCRETE IS POURED TO ENSURE THAT THE SYSTEM IS AIR TIGHT AND ADEQUATELY SEALED.
- NOTE:**
ALL DRAINAGE PIPES WITH LESS THAN 600mm COVER IN THE ROAD OR PRIVATE DRIVE SHALL BE PROTECTED WITH 150mm CONCRETE BED AND SURROUND.
- NOTE:**
REMOVABLE ACCESS PLATES TO BE PROVIDED ABOVE FFL FOR ALL RWP, SS AND SVP
- NOTE:**
SETTING OUT OF ALL RWP, STUB-STACK AND SVP POSITIONS BY ARCHITECT/M&E.
- NOTE:**
DRAWING IS SUBJECT TO ALTERATION PENDING RECEIPT OF REVISED ARCHITECTURAL GA/SECTIONS, FOUNDATION SOLUTION, FLOOD WATER POP-UPS / RWP LOCATIONS, POOL, BACKWASH DISCHARGE, CCTV SURVEY AND STATUTORY CONSULTANTS.
- NOTE:**
FOR EXTERNAL LEVELS INFORMATION REFER TO WYNNIE - WILLIAMS DRAWING WWA/1611/L1/105.
- NOTE:**
THIS DRAWING HAS BEEN BASED ON TOPOGRAPHICAL SURVEY PREPARED BY ENGINEERING LAND & BUILDING SURVEYS REF:87542_TOPO_rev3 DATED MAY 2010 WHICH SHOULD BE REFERRED TO FOR KEY INFORMATION.
- NOTE:**
ALL PIPEWORK NOT CAST WITHIN CONCRETE AND GREATER THAN 600mm BELOW SLABS SHALL BE uPVC IN ACCORDANCE WITH ALL RELEVANT MANUFACTURING STANDARDS, WITH A 150mm SHINGLE SURROUND, EXCEPT SEWER CONNECTIONS THAT SHALL BE VITRIFIED CLAY PIPES IN ACCORDANCE WITH BS EN 295.

- NOTES**
1. DO NOT SCALE THIS DRAWING ON PRINT OR ELECTRONICALLY WORK FROM FIGURED DIMENSIONS ONLY.
2. No deviation from the details shown on this drawing is allowed without CampbellReith's prior permission in writing.
3. Read this drawing with all Architects, Services Engineers and CampbellReith's relevant details and drawings. All setting out dimensions are per the Architect's drawings and procedures.
4. All work is to be in accordance with the relevant specifications issued by CampbellReith, British Standard Codes of Practice, Statutory requirements and the Contract Documents.
5. DRAWING STATUS
- P: PRELIMINARY - Evolving drawings for approvals, Tenders, Billings, etc.
- C: CONSTRUCTION - Fully developed drawings issued under instruction for construction.
- ONLY STATUS C DRAWINGS TO BE USED FOR CONSTRUCTION**
6. SUITABILITY CODE
- WORK IN PROGRESS
- 88 - Work in progress
- SHARED (NON-CONTRACTUAL)
- S1 - For coordination, S2 - For information, S3 - For internal review and comment, S4 - For construction reference
- DOCUMENTATION (FOR CONTRACTOR PURPOSES)
- D1 - For co-ordinating, D2 - For Tender, D3 - For contractor design, D4 - For construction / Implementation
- CONSTRUCTION
- 1 - For construction, 2 - For construction but with comments (i.e. areas in grey/white), 3 - Comprehensive revisions required.
6. Existing details shown on this drawing including kerbstones, sewerage pop-ups, stub connections, levels & areas etc. Must be confirmed on site by the contractor for their accuracy. If any discrepancies occur the engineer must be informed.
7. The proposed building outlines shown on this drawing are indicative only. Refer to architects layouts for exact external outline of proposed buildings.
8. External site water pipes, & internal water, gas, oil & floor gully locations/connections etc. Shown on this drawing are approximate/indicative only. Refer to archs drg for their exact locations & types.
9. All external adaptable storm pipework & lateral connections shown falls of 1:120 unless stated otherwise.
10. All external private storm pipework & lateral connections shown on this drawing are to be 1000 & are to have a minimum fall of 1:100 unless stated otherwise. All external private foul pipework & lateral connections shown on this drg are to be 1000 & are to have minimum falls of 1:80 unless stated otherwise.
11. Existing adopted/drop-down adopted storm & foul water mains & sewers which have been made redundant by new identified systems, shall be abandoned/removed. Existing sewers & manholes are to be abandoned/removed in compliance with L.A. specifications.
12. Cover levels shown on this drawing are approximate & are to be adjusted to suit finished pavement levels on site by contractor. Covers shall be orientated to suit pavement finishes.
- UNDESIRABLE DRAINAGE CONNECTIONS**
- a) All undesirable foul connections upto first external inspection chamber manhole are to be 600 & are to have a minimum fall of 1:40 unless stated otherwise. After first external inspection chamber manhole connections are to be 1000 & have a minimum fall of 1:80 unless stated otherwise.
- b) All undesirable storm connections upto first external inspection chamber manhole are to be 1000 & are to have a minimum fall of 1:40 unless stated otherwise. After first external inspection chamber manhole connections are to be 1000 & have a minimum fall of 1:100 unless stated otherwise.
- c) Final orientation & position of first external chambers receiving underside connections are to be determined on site by contractor.
- d) Bends along underside connections are to be long radius 5.45° Bends at bottom of structural steel pipes are to be long radius 90°.
- e) All under slab drainage connections are to be clear of unit foundations unless unavoidable. Refer to CRH structural drawings for exact location of unit foundations.
- f) Finished underside drainage route connections in. Bend & straight connections are to be determined on site to suit the number of bends in each connection is to be kept to a minimum.
14. All adaptable storm sewerage runs to be laid soft to suit unless stated otherwise. All Adaptable foul sewerage runs to be laid soft to suit unless stated otherwise. All non-adaptable storm/foul sewerage to be laid soft to suit unless stated otherwise.
15. External rainwater pipes are to be rodable above ground (refer to details).
16. All works are non-adaptable unless stated otherwise.
17. Adaptable pipe work to be concrete or unglazed clay.
18. Class Z concrete encasement required where vertical clearance between two pipes is less than 300mm.
19. For the provision of land drainage if required refer to landscape architect for details/specification.
20. At least one soil pipe at the head of each run shall vent to the atmosphere.
21. All adaptable drainage shown on this drawing shall be constructed in accordance with water authorities association sewers for adoption 7th edition.

LEGEND

PROPOSED STORM WATER SEWER

PROPOSED STORM WATER MANHOLE AND SEWER

PROPOSED RAIN WATER PIPE

PROPOSED STORM WATER INSPECTION CHAMBER

PROPOSED STORM WATER GULLY

PROPOSED STORM WATER PIPE INVERT LEVEL MARKER

PROPOSED LINEAR CHANNEL AND SUMP

PROPOSED COMBINED WATER MANHOLE AND SEWER

STORAGE TANK

PIPE INFO

DIRECTION OF FLOW/PIPE FALL OF PIPE LENGTH

EXISTING THAMES COMBINED WATER SEWER WITH 6m WIDE EASEMENT

EXTENT OF BUILDING BASEMENT

PROPOSED SITE BOUNDARY

ALTERNATIVE COMBINED WATER SEWER ROUTE

*CIPC - DENOTES CAST IN PILE CAP

*CIGB - DENOTES CAST IN GROUND BEAM

*CIGS - DENOTES CUT THROUGH GROUND BEAM AND CELLCORE LOCALLY REMOVED

NOTE:

ALL PIPES TO PASS BENEATH GROUND BEAMS AND PILECAPS UNLESS NOTED OTHERWISE

P3	ISSUED FOR TENDER	01.12.16	ST
P2	ISSUED FOR TENDER	28.06.16	MG
P1	ISSUED FOR INFORMATION	24.03.16	MG
Issue No	Description	Date	By

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Job Title	GREENWOOD CENTRE
Client	KIER

PROPOSED STORM WATER DRAINAGE LAYOUT

Drawn	MG	Date	JUN16	Scale @ A0	1:100	CI checked	RAI	CR Project No	12291
Orig No.	12291-CRH-GC-XX-DR-C-5055	D2	Stability	Stake/Revision	P3				