

SHEET PLAN
NOT TO SCALE

KEY

HIGHWAYS DRAINAGE

- HMH MANHOLE TYPE 1
- HMH MANHOLE TYPE 2
- HMHN MANHOLE TYPE 3
- HIGHWAYS DRAINAGE CARRIER DRAIN
- ROAD GULLY (PRECAST TO HCD DWG F13)
- GULLY CONNECTION (150Ø UNLESS OTHERWISE STATED)
- COMBINED KERB AND DRAINAGE SYSTEM (CKDS). REFER TO NOTE 6 AND APPENDIX 5/5.
- GO CKDS GULLY OUTLET
- RP CKDS ACCESS POINT

HIGHWAYS FORMATION DRAINAGE

- FILTER DRAIN TYPE H TO HIGHWAY CONSTRUCTION DETAILS (HCD) DWG F2. TO BE GEOTEXTILE WRAPPED. (150Ø pipe)
- NARROW FILTER DRAIN TYPE 9 TO HCD DWG F18. (100Ø pipe)
- CARRIER DRAIN (DIAMETER TO MATCH FILTER DRAIN)
- FCP CATCHPIT TYPE 8 TO HCD DWG F12.
- DIRECTION OF FALL
- DITCH /GRIP
- - EARTHWORKS DRAINAGE (REFER TO DRAWING SERIES 06)

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS AND APPENDIX 5 OF THE SPECIFICATION.
2. FOR SURFACE AND FOUL WATER DRAINAGE DETAILS SUBJECT TO UNITED UTILITIES ADOPTION REFER TO DRAWINGS A044703_21_D SERIES.
3. FOR HIGHWAYS DRAINAGE DETAILS REFER TO DRAWINGS A044703_21_C_H_SD05 SERIES.
4. FOR STANDARD DETAILS OF HIGHWAYS DRAINAGE REFER TO DRAWINGS A044703_21_C_H_SD05 SERIES.
5. FOR HIGHWAYS DRAINAGE CARRIER DRAIN LONG SECTIONS REFER TO DRAWINGS A044703_21_H_05-009 - 013.
6. THE COMBINED KERB AND DRAINAGE SYSTEM (CKDS) SHOWN ON THIS DRAWING IS INDICATIVE OF A TYPICAL DESIGN. THE "CKDS" IS TO DESIGNED BY THE CONTRACTOR UPON SELECTION OF A PRODUCT AND MANUFACTURER. THE CONTRACTOR IS TO SUBMIT HIS NOMINATED MANUFACTURER WITHIN 2 WEEKS OF THE CONTRACT AWARD FOR APPROVAL BY THE PROJECT MANAGER, WITH THE DESIGN AND CALCULATIONS WITHIN 6 WEEKS OF RECEIVING APPROVAL.
7. TRENCH AND BEDDING DETAILS FOR THE HIGHWAYS DRAINAGE CARRIER DRAINS TO BE TO HIGHWAYS CONSTRUCTION DETAILS DRAWING A044703_21_C_H_SD05.
8. HIGHWAYS DRAINAGE MANHOLE TYPE 2 AND 3 IS A NON TYPICAL ARRANGEMENT, FOR PIPES IN VERGES ADJACENT TO SUB SURFACE DRAINAGE PIPES, REFER TO A044703_21_C_H_SD05 SERIES FOR DETAILS.
9. TEMPORARY DITCHES TO FALL TOWARDS OUTFALL TO BE DEEPENED THROUGH UNDULATIONS.

REV	DESCRIPTION	BY	CHK	APP	DATE
T2	GENERAL UPDATE.	CL	MJ	MJ	04.08.08

DESIGN PARAMETERS

	VALUE	STANDARD USED	COMMENTS / INFO.
GULLY SPACING DESIGN			
FLOW WIDTH	0.5m		ADJACENT TO FOOTWAYS.
	0.75m		ADJACENT TO FOOTCYCLEWAYS WITH 2m VERGE TO CARRIAGEWAY
DESIGN STORM PERIOD	5 yrs	HA 102/00	
CRITICAL STORM DURATION	4-7 mins	HA 102/00	
RAINFALL DEPTH	3.5mm	HA 102/00	TAKEN FROM FIGURE 3
MAINTENANCE FACTOR	1	HA 102/00	WELL MAINTAINED URBAN ROADS
GULLY GRATINGS	R	HA 103/00	TABLE B2 Gd VALUE 60
HIGHWAYS DRAINAGE			
RAINFALL INTENSITY	VARIES		INTENSITY TO MATCH GULLY DESIGN

CDM / H&S NOTE

THE DESIGNERS WOULD DRAW THE READERS ATTENTION TO THE KEY RESIDUAL HEALTH AND SAFETY RISKS THAT HAVE NOT BEEN ELIMINATED FROM THE DESIGNS SHOWN ON THIS DRAWING BY THE DESIGN PROCESS. THESE KEY RESIDUAL RISKS ARE IDENTIFIED BELOW.

1	POOR GROUND CONDITIONS AND HIGH WATER TABLE. FLOODING, DROWNING
2	MADE AND CONTAMINATED GROUND
3	DEEP EXCAVATIONS
4	PROPOSED AND EXISTING SERVICES
5	HEAVY CKDS KERB UNITS

ANY CONSTRUCTION PERSONNEL INCLUDING OPERATIVES INTENDING TO CONSTRUCT THE DESIGNS SHOWN ON THIS DRAWING SHOULD ENSURE THAT THEY HAVE BEEN REGULARLY AND THOROUGHLY BRIEFED BY THE PRINCIPAL CONTRACTOR ON ALL HEALTH AND SAFETY MATTERS AND HAVE HAD SIGHT OF:

1	THE FULL DESIGNERS AND CONTRACTORS RISK ASSESSMENTS AND RISK REGISTERS.
2	THE DEVELOPED CONSTRUCTION HEALTH AND SAFETY PLAN.
3	THE CONTRACTORS CONSTRUCTION METHOD STATEMENTS.

TENDER ISSUE

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Project:
KINGSWAY PHASE 3
ROCHDALE

Drawing Title:
HIGHWAYS DRAINAGE
PHASE 3 SITE PLAN
SHEET 4 OF 5

Scale	Drawn	Date	Checked	Date	Approved	Date
1:500	CL	09/07/08	MJR	23.07.08	AW	23.07.08

Project No.	Office	Type	Drawing No.	Revision
A044703	21	C	H-05-004	T2

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SHEET SIZE : A1 LANDSCAPE

0 5 10 15 20 25 m
SCALE 1:500

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