On behalf of

DAISY BANK MILL MANAGEMENT COMPANY LTD

Drainage Asset Management Plan

Report Ref: D246/KGB/001
Rev 01

KGB Infrastructure Ltd
113 North Mersey Business Centre, Woodward Road
Kirkby, Liverpool, L33 4HS

Tel: +44 (0) 151 548 0402
email: info@kgbinfrastructure.com
web: www.kgbinfrastructure.com

DOCUMENT ISSUE RECORD

Issue Date	Issue No	Purpose of Issue	Originator	Checked	Approved
27.02.26	01	**Information**	K. Bradshaw	K. Bradshaw	K. Bradshaw

Amendments: To assist in identifying the amendments in the revised issue of this document, a vertical line is displayed in the left margin, adjacent to the revised text, applicable to this current issue only.

CONTENTS PAGE

1.0 EXECUTIVE SUMMARY 1

2.0 INTRODUCTION 2

3.0 MAINTENANCE OF SURFACE WATER DRAINAGE SYSTEM 3

4.0 MAINTENANCE PROGRAMME 4

5.0 APPENDICES 7

APPENDIX A Drainage Layout Drawings & Manhole / Pipe Schedules

APPENDIX B Drainage Standard Details

1.0 EXECUTIVE SUMMARY

The following document describes the outline Drainage Management & Maintenance Plan for works associated with the development of 18 residential dwellings on Terence Street, Manchester, formerly known as Daisy Bank Mill and has been produced to ensure that that a suitable level of maintenance is undertaken.

An appropriate level of maintenance will ensure that surface and foul water is not discharged from the site except to the designed drainage system, the risk of flooding is minimised, and the drainage systems and associated devices perform in accordance with the drainage design.

This document has been prepared for the use of Daisy Bank Mill Management Company Ltd in connection with this project. It is not intended for and should not be relied upon by any other third parties.

2.0 INTRODUCTION

KGB Infrastructure has been commissioned by Daisy Bank Mill Management Company Ltd
to produce a drainage asset management plan for their housing development in Terence Street, Manchester.

This proposed management plan is to assist the management company in maintaining the foul and surface water drainage assets within the site.

The objectives of this management & maintenance plan are to:

- To maintain existing drainage assets.
- To minimise the risk of flooding.
- To ensure the drainage assets perform in accordance with the drainage design.
- To ensure surface water is only discharged from the site via the designated connection to the public sewer system, as agreed with United Utilities.

This maintenance & management plan should be read in conjunction with drawing numbers:

- D246-KGB-00-XX-DR-D-0500-AB1_Terence Street_Proposed Drainage SW Layout
- D246-KGB-00-XX-DR-D-0501-AB1_Terence Street_Proposed Foul Drainage Layout
- D246-KGB-00-XX-DR-D-0502-AB1_Terence Street_ Drainage Schedules
- D246-KGB-00-XX-DR-D-0505-C01_Terence Street_Drainage Details Sheet 1
- D246-KGB-00-XX-DR-D-0506-C01_Terence Street_Drainage Details Sheet 2
- D246-KGB-00-XX-DR-D-0507-C01_Terence Street_Drainage Details Sheet 3

3.0 MAINTENANCE OF SURFACE WATER DRAINAGE SYSTEM

Daisy Bank Mill Management Company Ltd will possess the primary responsibility for overseeing and implementing the Management and Maintenance Plan, it will designate, where required, a person, or organisation, who will be responsible for the proper operation and maintenance of the Surface Water Drainage system.

This Management and Maintenance Plan shall be implemented to ensure that the Surface Water Drainage system functions as designed (in accordance with, Sewers for Adoption 7th Edition, Design Manual for Roads and Bridges and where applicable CIRIA C753 'The SuDS Manual' v2 2015).

This plan is intended to cover all on-site drainage systems, structures and associated installations connected to the system.

The drainage systems associated with the site shall remain in private ownership and maintenance of the systems will remain the responsibility of the Daisy Bank Mill Management Company Ltd.

In case of transfer of ownership, future owners shall be notified of the Surface Water Management system, and the requirements for proper implementation of the Management and Maintenance Plan.

4.0 MAINTENANCE PROGRAMME

Maintenance staff will conduct the operation and maintenance program shown in this document. The Manager will ensure that inspection and record keeping are timely and accurate and that cleaning and maintenance are performed as scheduled (Tables 1 & 2). It should also be ensured that maintenance works are undertaken alongside the implementation of suitable systems to ensure the protection of any downstream drainage systems. An Inspection and Maintenance Log shall be kept, to include records of the date of inspection, physical condition of the structures, depth of any sediment, any evidence of overtopping or debris blockage and maintenance required or performed on each structure/system. Where maintenance activities are unclear or additional guidance is required consult CIRIA C753 – The SuDS Manual, v2 2015.

Table 1 - Maintenance Schedule: FOUL WATER DRAINAGE

ELEMENT	REQUIRED ACTION	FREQUENCY
Manhole/ Chambers	Inspection	Quarterly
	Cleaning	Quarterly
	Replacement	As Required
Pipe Work	CCTV Inspection	As Required
	Jetting / Rodding	As Required
	Replacement	As Required

Table 2 - Maintenance Schedule: STORM WATER DRAINAGE

ELEMENT	REQUIRED ACTION	FREQUENCY
Surrounding Areas / Surfaces	Litter and Debris Collection	Fortnightly
	Surface Sweeping	Quarterly
Manholes / Chambers	Inspection	Quarterly
	Cleaning	Quarterly
	Replacement	As Required
Pipe Work	CCTV Inspection	As Required
	Jetting / Rodding	As Required
	Replacement	As Required
Gullies	Inspection	Quarterly
	Jetting / Rodding	Yearly / As Required
	Replacement	As Required
Hydrobrake / Flow Control	Inspection	Monthly
	Cleaning, Removal of Silt	Quarterly / As Required
	Replacement	As Required
Attenuation Tank / Pipe	Inspection	Monthly for first 3 months Annually after 3 months 48 hours after large storms
	Internal Tank Survey	Every 5 years / As Required
	Removal of sediment	Yearly / As Required
	Repair / Replacement	As Required
Permeable Parking Areas	Inspection	Quarterly / As Required
	Cleaning, Removal of Silt	Quarterly / As Required
	Repair / Replacement	As required

Table 3 – Anticipated Design Life of Key Drainage Elements

ELEMENT	ANTICIPATED DESIGN LIFE
Concrete Pipes, Gullies and Manholes / Chambers	120 years
Plastic Pipes, Gullies and Manholes / Chambers	50+ years
Cellular attenuation features / attenuation pipes	50+ years
Flow Controls, stainless steel	50+ years
Permeable parking bays	20+ years

5.0 APPENDICES

APPENDIX A – DRAINAGE LAYOUT DRAWINGS & MANHOLE / PIPE SCHEDULES

APPENDIX B – DRAINAGE STANDARD DETAILS

APPENDIX A

Drainage Layout Drawings & Manhole / Pipe Schedules

KEY

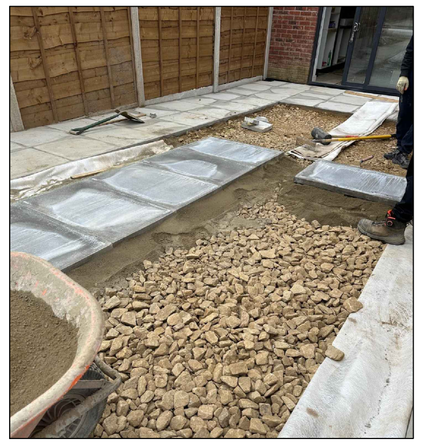
- NEW SW MANHOLE
- NEW SW DRAIN
- NEW SW INSPECTION CHAMBER
- PROPOSED RAIN WATER PIPE (RWP) & CONNECTION
- NEW SOIL VENTILATION PIPE (SVP) & CONNECTION
- PROPOSED FOUL MANHOLE
- PROPOSED FOUL INSPECTION CHAMBER
- PROPOSED FOUL DRAIN
- PROPOSED BACKDROP ON FOUL DRAIN
- PROPOSED DEMARCATION CHAMBER ON EXISTING OUTFALL
- PROPOSED ROAD GULLY
- PROPOSED PERMEABLE PAVING TO PARKING AREA
- PROPOSED PERMEABLE PAVING SUMP & OUTFALL

Porous Paving B2

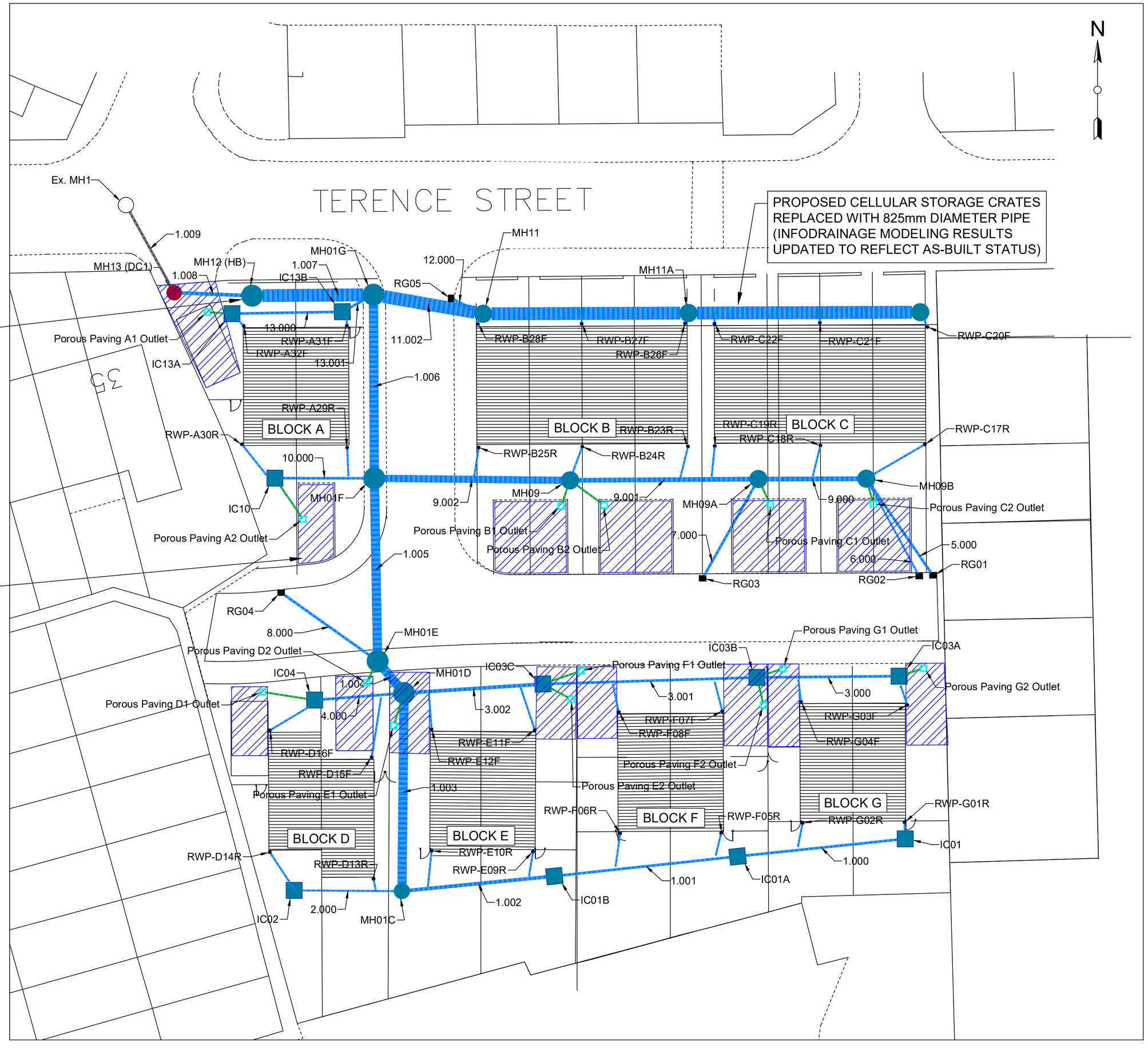
Dimensions	
Exceedance Level (m)	86.138
Depth (m)	0.300
Base Level (m)	85.838
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	0.01
Porosity (%)	30
Length (m)	5.992
Long. Slope (1:X)	500.00
Width (m)	5.997
Total Volume (m³)	2.230

AS-BUILT PHOTOGRAPHS

FLOW CONTROL CHAMBER



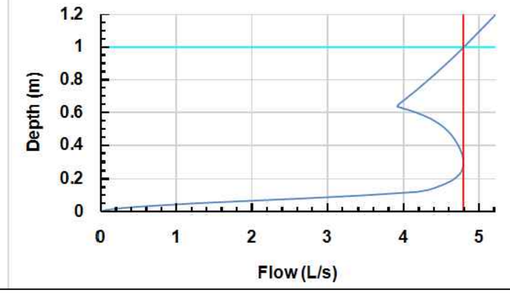
POROUS PAVING PARKING SPACE



FLOW-CONTROL DETAILS

MH12 (HB)

Outlet	1.008	Hydro-Brake®
Invert Level (m)	84.583	
Design Depth (m)	1.000	
Design Flow (L/s)	4.8	
Objective	Minimise Upstream Storage Requirements	
Application	Surface Water Only	
Sump Available	☑	
Unit Reference	SHE-0103-4800-1000-4800	



GENERAL

1. ALL DIMENSIONS IN MILLIMETRES UNLESS STATED OTHERWISE.
2. ALL LEVELS AND DATUMS IN METRES UNLESS STATED OTHERWISE.
3. ALL DIMENSIONS, LEVELS AND DATUMS TO BE CONFIRMED ON SITE, PRIOR TO FABRICATION AND CONSTRUCTION.
4. ALL BUILDING WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE BUILDING REGULATIONS AND THE CIVIL, STRUCTURAL AND ARCHITECTURAL SPECIFICATIONS..
5. ALL EXTERNAL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE SPECIFICATION FOR HIGHWAY WORKS.
6. ROAD MARKINGS TO BE WHITE THERMOPLASTIC SCREEN IN ACCORDANCE WITH TRAFFIC SIGNS REGULATIONS & GENERAL DIRECTIONS 2016.
7. BOND COAT SHALL BE APPLIED BETWEEN CONSTRUCTION LAYERS IN ACCORDANCE WITH SPECIFICATION FOR HIGHWAY WORKS.
8. WHERE REQUIRED, EDGE OF CARRIAGEWAY REINSTATEMENT SHALL BE AGREED WITH LOCAL HIGHWAY AUTHORITY ENGINEER PRIOR TO COMPLETION.
9. EXISTING 3D SURFACE MODEL PRODUCED FROM TOPOGRAPHICAL SURVEY, DATED AUGUST 2012.
10. EXISTING TOPOGRAPHICAL SURVEY SHIFTED TO ORDNANCE SURVEY COORDINATES, THEN RAISED TO TEXT LEVELS.
11. FINISHED FLOOR LEVELS TAKEN FROM 04 JUNE, DOCUMENT 132 AND ADJUSTED TO TIE IN TO TOPOGRAPHICAL SURVEY LEVELS. (BLOCK E TBM WAS ASSUMED 100m AOD, NEW BLOCK E REDUCED LEVEL IS 87.000m AOD. ALL OTHER LEVELS RELATIVE TO NEW BLOCK E REDUCED LEVEL)
12. PROPOSED LAYOUT TAKEN FROM LES FOEY DRAWING, DATED APRIL 2016.
10. FOR DIMENSIONS OF ALL OTHER PERMEABLE PARKING BAYS, REFER TO INFODRAINAGE MODELING RESULTS.
11. CONNECTION TO THE PUBLIC SEWER SHALL BE SUBJECT TO A SECTION 106 AGREEMENT WITH UNITED UTILITIES.
12. HYDROBRAKE CHAMBER AND CELLULAR STORAGE SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
13. PEAK DISCHARGE HAS BEEN RESTRICTED TO 4.8 l/s, IN ACCORDANCE WITH SUSTAINABLE DRAINAGE STRATEGY DOCUMENT (FRA24 1029), DATED FEBRUARY 2024.
14. MAINTENANCE OF DRAINAGE INFRASTRUCTURE TO BE UNDERTAKEN IN ACCORDANCE WITH DMRB GUIDANCE AND MANUFACTURER'S RECOMMENDATIONS.

TO BE READ IN CONJUNCTION WITH DRAWING NUMBERS:-

D246-KGB-00-XX-DR-D-0501
PROPOSED DRAINAGE
FOUL DRAINAGE LAYOUT

D246-KGB-00-XX-DR-D-0502
PROPOSED DRAINAGE
MANHOLE & PIPE SCHEDULES

D246-KGB-00-XX-DR-D-0503
PROPOSED DRAINAGE LONG-SECTIONS
SHE ET 1 OF 2

D246-KGB-00-XX-DR-D-0504
PROPOSED DRAINAGE LONG-SECTIONS
SHEET 2 OF 2

D246-KGB-00-XX-DR-D-0505
PROPOSED DRAINAGE
STANDARD DETAILS, SHEET 1 OF 3

D246-KGB-00-XX-DR-D-0506
PROPOSED DRAINAGE
STANDARD DETAILS, SHEET 2 OF 3

D246-KGB-00-XX-DR-D-0507
PROPOSED DRAINAGE
STANDARD DETAILS, SHEET 3 OF 3

REV	DESCRIPTION	DRAWN	INITIALS	DATE	Dwg STATUS	CHECKED BY	DATE
P01	ISSUED FOR INFORMATION	CIVIL 3D	KB	16/08/24	Preliminary	KB	16/08/24
P02	NORTH POINT & NOTES ADDED. ISSUED FOR INFORMATION	CIVIL 3D	KB	19/08/24	Preliminary	KB	19/08/24
C01	ISSUED FOR CONSTRUCTION FOLLOWING DISCHARGE OF PLANNING CONDITION 5	CIVIL 3D	KB	23/10/24	Construction	KB	23/10/24
AB1	AS-BUILT DRAWING. ISSUED FOR INFORMATION.	CIVIL 3D	KB	19/01/26	As-built	KB	19/01/26

KGB Infrastructure
North Mersey Business Centre
Woodward Road
Knowsley Industrial Park
Kirkby, Liverpool
L33 7UY

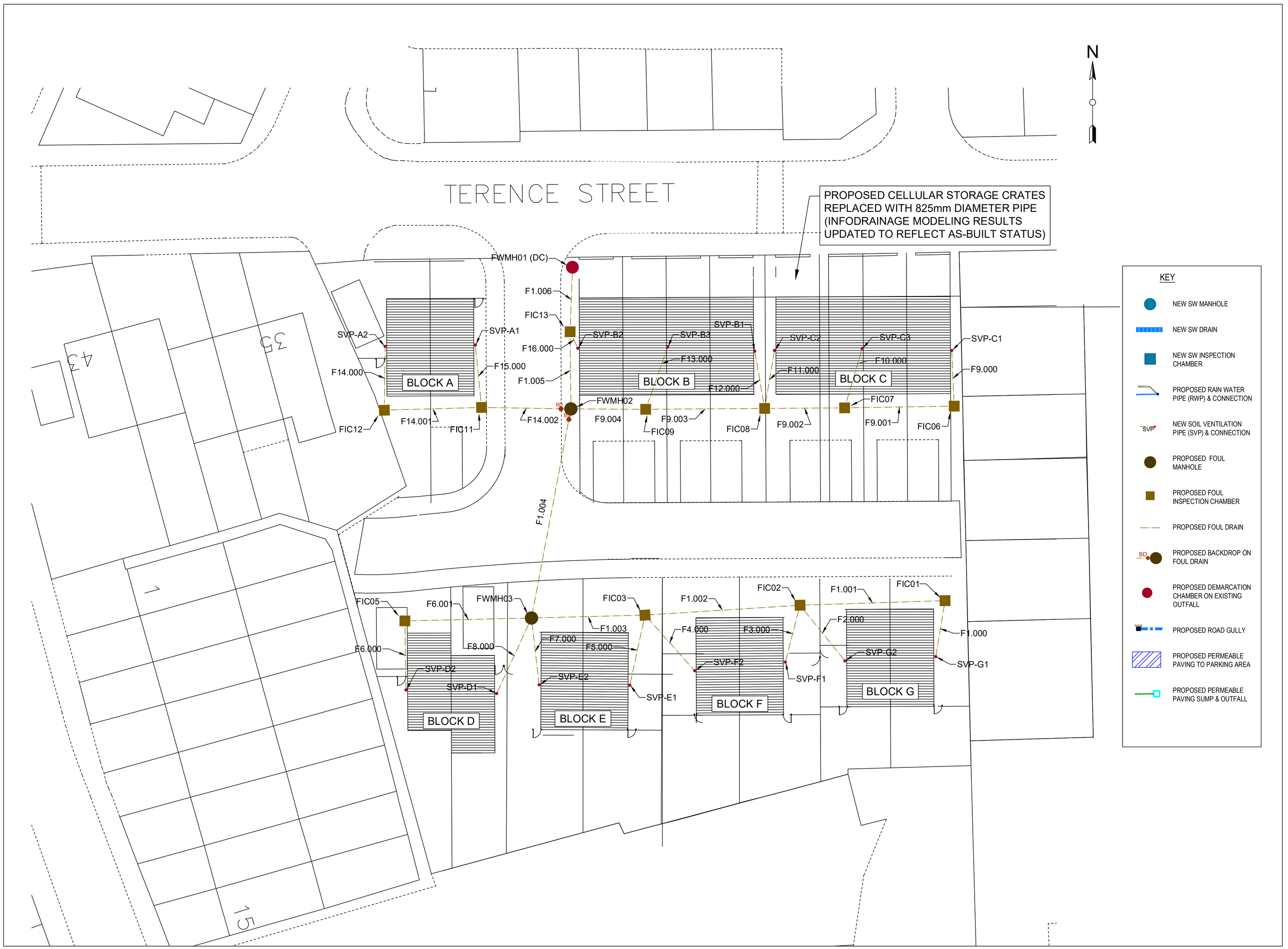
Tel: 0151 547 2508
Mobile: 07808 162 303
email: kgbinfrastructure@btinternet.com

JOB TITLE: **TERENCE STREET, NEWTON HEATH**

CLIENT: **SPLASH DEVELOPMENTS LTD**

DRAWING TITLE: **PROPOSED DRAINAGE SURFACE WATER LAYOUT**

SCALE	DRAWN BY	DATE	DRAWING No	REVISION
1:200 @ A1	KB	21/07/2024	D246-KGB-00-XX-DR-D-0500	AB1



GENERAL

1. ALL DIMENSIONS IN MILLIMETRES UNLESS STATED OTHERWISE.
2. ALL LEVELS AND DATUMS IN METRES UNLESS STATED OTHERWISE.
3. ALL DIMENSIONS, LEVELS AND DATUMS TO BE CONFIRMED ON SITE, PRIOR TO FABRICATION AND CONSTRUCTION.
4. ALL BUILDING WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE BUILDING REGULATIONS AND THE CIVIL, STRUCTURAL AND ARCHITECTURAL SPECIFICATIONS..
5. ALL EXTERNAL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE SPECIFICATION FOR HIGHWAY WORKS.
6. ROAD MARKINGS TO BE WHITE THERMOPLASTIC SCREEN IN ACCORDANCE WITH TRAFFIC SIGNS REGULATIONS & GENERAL DIRECTIONS 2016.
7. BOND COAT SHALL BE APPLIED BETWEEN CONSTRUCTION LAYERS IN ACCORDANCE WITH SPECIFICATION FOR HIGHWAY WORKS.
8. WHERE REQUIRED, EDGE OF CARRIAGEWAY REINSTATEMENT SHALL BE AGREED WITH LOCAL HIGHWAY AUTHORITY ENGINEER PRIOR TO COMPLETION.
9. EXISTING 3D SURFACE MODEL PRODUCED FROM TOPOGRAPHICAL SURVEY, DATED AUGUST 2012.
10. EXISTING TOPOGRAPHICAL SURVEY SHIFTED TO ORDNANCE SURVEY COORDINATES, THEN RAISED TO TEXT LEVELS.
11. FINISHED FLOOR LEVELS TAKEN FROM 04 JUNE, DOCUMENT 132 AND ADJUSTED TO TIE IN TO TOPOGRAPHICAL SURVEY LEVELS. (BLOCK E TBM WAS ASSUMED 100m AOD, NEW BLOCK E REDUCED LEVEL IS 87.000m AOD. ALL OTHER LEVELS RELATIVE TO NEW BLOCK E REDUCED LEVEL)
12. PROPOSED LAYOUT TAKEN FROM LES FOEY DRAWING, DATED APRIL 2016.
10. INVERT LEVELS OF EXISTING ADOPTED DRAINAGE TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION AND ANY DISCREPANCIES REPORTED TO THE ENGINEER.
11. MAINTENANCE OF DRAINAGE INFRASTRUCTURE TO BE UNDERTAKEN IN ACCORDANCE WITH DMRB GUIDANCE AND MANUFACTURER'S RECOMMENDATIONS.

TO BE READ IN CONJUNCTION WITH DRAWING NUMBERS:-

D246-KGB-00-XX-DR-D-0500
PROPOSED DRAINAGE
SURFACE WATER DRAINAGE LAYOUT

D246-KGB-00-XX-DR-D-0502
PROPOSED DRAINAGE
MANHOLE & PIPE SCHEDULES

D246-KGB-00-XX-DR-D-0503
PROPOSED DRAINAGE LONG-SECTIONS
SHE ET 1 OF 2

D246-KGB-00-XX-DR-D-0504
PROPOSED DRAINAGE LONG-SECTIONS
SHEET 2 OF 2

D246-KGB-00-XX-DR-D-0505
PROPOSED DRAINAGE
STANDARD DETAILS, SHEET 1 OF 3

D246-KGB-00-XX-DR-D-0506
PROPOSED DRAINAGE
STANDARD DETAILS, SHEET 2 OF 3

D246-KGB-00-XX-DR-D-0507
PROPOSED DRAINAGE
STANDARD DETAILS, SHEET 3 OF 3

REV	DESCRIPTION	DRAWN	INITIALS	DATE	Dwg STATUS	CHECKED BY	DATE
P01	ISSUED FOR INFORMATION	CIVIL 3D	KB	16/08/24	Preliminary	KB	16/08/24
P02	REVISED INVERT LEVELS UP/ST OF F1.004 ISSUED FOR INFORMATION	CIVIL 3D	KB	19/08/24	Preliminary	KB	19/08/24
C01	ISSUED FOR CONSTRUCTION FOLLOWING DISCHARGE OF PLANNING CONDITION 5	CIVIL 3D	KB	23/10/24	Construction	KB	23/10/24
AB1	AS-BUILT DRAWING. ISSUED FOR INFORMATION.	CIVIL 3D	KB	19/01/26	As-built	KB	19/01/26

KGB Infrastructure
North Mersey Business Centre
Woodward Road
Knowsley Industrial Park
Kirkby, Liverpool
L33 7UY

Tel: 0151 547 2508
Mobile: 07808 162 303
email: kgbinfrastructure@btinternet.com

JOB TITLE: **TERENCE STREET, NEWTON HEATH**
CLIENT: **SPLASH DEVELOPMENTS LTD**
DRAWING TITLE: **PROPOSED DRAINAGE FOUL DRAINAGE LAYOUT**

SCALE	DRAWN BY	DATE	DRAWING No	REVISION
1:200 @ A1	KB	21/07/2024	D246-KGB-00-XX-DR-D-0501	AB1

Proposed SW - Pipe Table

Pipe Name	Size (mm)	Plan Length (m)	Slope	Start Invert Level	End Invert Level
1.000	150	13.586	1:100	86.065	85.929
1.001	150	14.861	1:100	85.929	85.780
1.002	225	12.348	1:33	85.705	85.335
1.003	675	15.961	1:79	84.885	84.682
1.004	675	3.343	1:304	84.682	84.671
1.005	675	14.738	1:301	84.671	84.622
1.006	675	14.794	1:379	84.622	84.583
1.007	825	9.779	1:611	84.599	84.583
1.008	225	6.290	1:41	84.553	84.401
1.009	150	8.057	1:97	84.401	84.318
2.000	100	8.690	1:17	85.774	85.248
3.000	150	11.469	1:104	85.450	85.340
3.001	150	17.261	1:100	85.340	85.167
3.002	225	11.221	1:150	85.092	85.017
4.000	150	7.229	1:13	85.647	85.092
5.000	150	9.463	1:86	85.500	85.390
6.000	100	8.933	1:81	85.500	85.390
7.000	150	9.181	1:41	85.400	85.175
8.000	150	9.541	1:13	85.700	84.975
9.000	300	8.705	1:198	84.945	84.901
9.001	300	15.184	1:200	84.751	84.675
9.002	450	15.787	1:298	84.675	84.622
10.000	150	8.016	1:7	86.090	84.977
11.000	825	18.685	1:76	84.958	84.711
11.001	825	16.564	1:200	84.711	84.628
11.002	825	8.981	1:200	84.628	84.583
12.000	150	2.876	1:6	85.300	84.778
13.000	150	8.898	1:59	85.800	85.650
13.001	150	2.863	1:3	85.650	84.824

Proposed Foul - Pipe Table

Pipe Name	Size (mm)	Plan Length (m)	Slope	Start Invert Level	End Invert Level
F1.000	100	5.538	1:40	86.210	86.070
F1.001	100	14.157	1:40	86.070	85.715
F1.002	100	15.159	1:80	85.715	85.526
F1.003	100	11.074	1:80	85.526	85.388
F1.004	150	20.754	1:97	85.388	85.175
F1.005	150	7.527	1:31	84.705	84.465
F1.006	150	6.292	1:97	84.465	84.400
F2.000	100	6.979	1:24	86.000	85.715
F3.000	100	5.726	1:12	86.200	85.715
F4.000	100	7.279	1:11	86.200	85.526
F5.000	100	6.998	1:10	86.200	85.526
F6.000	100	6.735	1:34	86.000	85.800
F6.001	100	12.359	1:30	85.800	85.388
F7.000	100	6.561	1:9	86.000	85.288
F8.000	100	8.111	1:11	86.000	85.288
F9.000	100	5.431	1:39	85.470	85.330
F9.001	100	10.696	1:40	85.330	85.060
F9.002	100	7.801	1:74	85.060	84.955
F9.003	100	11.611	1:75	84.955	84.800
F9.004	100	7.298	1:77	84.800	84.705
F10.000	100	6.035	1:25	85.300	85.060
F11.000	100	5.735	1:17	85.300	84.955
F12.000	100	5.659	1:16	85.300	84.955
F13.000	100	6.430	1:39	84.965	84.800
F14.000	100	6.223	1:10	86.000	85.350
F14.001	100	9.490	1:41	85.580	85.350
F14.002	100	8.714	1:96	85.350	85.259
F15.000	100	6.130	1:9	86.000	85.350
F16.000	100	1.778	1:4	85.000	84.515

Proposed SW - Structure Table

Structure Name	Diameter	Depth	Cover Level	Easting	Northing	Connected Pipes
Ex. MH1	1.050m	1.781m	86.181	388623.197	400175.296	1.009, (150mm ∅) Inv. 84.318
IC01	0.600m	0.664m	86.729	388686.018	400124.217	1.000, (150mm ∅) Inv. 86.065
IC01A	0.600m	0.779m	86.708	388672.506	400122.801	1.000, (150mm ∅) Inv. 85.929 1.001, (150mm ∅) Inv. 85.929
IC01B	0.600m	1.135m	86.840	388657.730	400121.214	1.001, (150mm ∅) Inv. 85.780 1.002, (225mm ∅) Inv. 85.705
IC02	0.600m	1.300m	87.074	388636.751	400120.061	2.000, (100mm ∅) Inv. 85.774
IC03A	0.600m	0.931m	86.381	388685.531	400137.327	3.000, (150mm ∅) Inv. 85.450 G2 Outfall, (100mm ∅) Inv. 85.500
IC03B	0.600m	1.163m	86.503	388674.062	400137.227	3.000, (150mm ∅) Inv. 85.340 3.001, (150mm ∅) Inv. 85.340 G1 Outfall, (100mm ∅) Inv. 85.340 F2 Outfall, (100mm ∅) Inv. 85.340
IC03C	0.600m	1.668m	86.760	388656.809	400136.694	3.001, (150mm ∅) Inv. 85.167 3.002, (225mm ∅) Inv. 85.092 E2 Outfall, (100mm ∅) Inv. 85.217 F1 Outfall, (100mm ∅) Inv. 85.217
IC04	0.600m	1.260m	86.907	388638.404	400135.404	4.000, (150mm ∅) Inv. 85.647 D1 Outfall, (100mm ∅) Inv. 85.647
IC10	0.600m	0.529m	86.619	388635.201	400153.286	10.000, (150mm ∅) Inv. 86.090 A2 Outfall, (100mm ∅) Inv. 86.140
IC13A	0.600m	0.707m	86.507	388631.735	400166.547	13.000, (150mm ∅) Inv. 85.800 A1 Outfall, (100mm ∅) Inv. 85.800
IC13B	0.600m	0.787m	86.437	388640.632	400166.700	13.000, (150mm ∅) Inv. 85.650 13.001, (150mm ∅) Inv. 85.650
MH01C	1.050m	2.093m	86.978	388645.441	400120.002	1.002, (225mm ∅) Inv. 85.335 1.003, (675mm ∅) Inv. 84.885 2.000, (100mm ∅) Inv. 85.248
MH01D	1.500m	2.154m	86.836	388645.612	400135.962	1.003, (675mm ∅) Inv. 84.682 1.004, (675mm ∅) Inv. 84.682 3.002, (225mm ∅) Inv. 85.017 4.000, (150mm ∅) Inv. 85.092 E1 Outfall, (100mm ∅) Inv. 84.682
MH01E	1.500m	2.036m	86.707	388643.484	400138.541	1.004, (675mm ∅) Inv. 84.671 1.005, (675mm ∅) Inv. 84.671 8.000, (150mm ∅) Inv. 84.975 D2 Outfall, (100mm ∅) Inv. 84.671

Proposed Foul - Structure Table

Structure Name	Diameter	Depth	Cover Level	Easting	Northing	Connected Pipes
FIC01	0.180m	0.611m	86.681	388687.135	400135.973	F1.000, (100mm ∅) Inv. 86.070 F1.001, (100mm ∅) Inv. 86.070
FIC02	0.180m	1.013m	86.728	388672.984	400135.525	F1.001, (100mm ∅) Inv. 85.715 F1.002, (100mm ∅) Inv. 85.715 F3.000, (100mm ∅) Inv. 85.715 F2.000, (100mm ∅) Inv. 85.715
FIC03	0.180m	1.365m	86.891	388657.856	400134.561	F1.002, (100mm ∅) Inv. 85.526 F1.003, (100mm ∅) Inv. 85.526 F5.000, (100mm ∅) Inv. 85.526 F4.000, (100mm ∅) Inv. 85.526
FIC05	0.180m	1.250m	86.850	388634.430	400133.997	F6.000, (100mm ∅) Inv. 85.800 F6.001, (100mm ∅) Inv. 85.800
FIC06	0.180m	0.616m	85.946	388688.033	400154.946	F9.000, (100mm ∅) Inv. 85.330 F9.001, (100mm ∅) Inv. 85.330
FIC07	0.180m	1.074m	86.134	388677.338	400154.777	F9.001, (100mm ∅) Inv. 85.060 F9.002, (100mm ∅) Inv. 85.060 F10.000, (100mm ∅) Inv. 85.060
FIC08	0.180m	1.204m	86.159	388669.538	400154.720	F9.002, (100mm ∅) Inv. 84.955 F9.003, (100mm ∅) Inv. 84.955 F12.000, (100mm ∅) Inv. 84.955 F11.000, (100mm ∅) Inv. 84.955
FIC09	0.180m	1.564m	86.364	388657.927	400154.635	F9.003, (100mm ∅) Inv. 84.800 F9.004, (100mm ∅) Inv. 84.800 F13.000, (100mm ∅) Inv. 84.800
FIC11	1.050m	1.203m	86.553	388641.916	400154.816	F14.001, (100mm ∅) Inv. 85.350 F14.002, (100mm ∅) Inv. 85.350 F15.000, (100mm ∅) Inv. 85.350
FIC12	0.180m	1.417m	86.767	388632.430	400154.548	F14.000, (100mm ∅) Inv. 85.350 F14.001, (100mm ∅) Inv. 85.580
FIC13	0.180m	1.855m	86.320	388650.554	400162.200	F1.005, (150mm ∅) Inv. 84.465 F1.006, (150mm ∅) Inv. 84.465 F16.000, (100mm ∅) Inv. 84.515
FWMH01 (DC)	0.180m	0.611m	86.045	388650.783	400168.487	F1.006, (150mm ∅) Inv. 84.400
FWMH02	1.050m	1.723m	86.428	388650.629	400154.673	F1.004, (150mm ∅) Inv. 85.175 F1.005, (150mm ∅) Inv. 84.705 F14.002, (100mm ∅) Inv. 85.259 F9.004, (100mm ∅) Inv. 84.705
FWMH03	1.050m	1.625m	86.913	388646.786	400134.278	F1.003, (100mm ∅) Inv. 85.388 F1.004, (150mm ∅) Inv. 85.388 F6.001, (100mm ∅) Inv. 85.388 F7.000, (100mm ∅) Inv. 85.288 F8.000, (100mm ∅) Inv. 85.288
SVP-A1	0.180m	0.611m	86.611	388641.307	400160.916	F15.000, (100mm ∅) Inv. 86.000

Proposed SW - Structure Table

Structure Name	Diameter	Depth	Cover Level	Easting	Northing	Connected Pipes
MH01F	1.500m	1.860m	86.482	388643.217	400153.277	1.005, (675mm ∅) Inv. 84.622 1.006, (675mm ∅) Inv. 84.622 9.002, (450mm ∅) Inv. 84.622 10.000, (150mm ∅) Inv. 84.977
MH01G	1.500m	1.670m	86.053	388643.146	400168.071	1.006, (675mm ∅) Inv. 84.583 1.007, (825mm ∅) Inv. 84.599 11.002, (825mm ∅) Inv. 84.583 13.001, (150mm ∅) Inv. 84.824
MH09	1.200m	1.618m	86.293	388659.003	400153.109	9.001, (300mm ∅) Inv. 84.675 9.002, (450mm ∅) Inv. 84.675 B1 Outfall, (100mm ∅) Inv. 85.275 B2 Outfall, (100mm ∅) Inv. 85.275
MH09A	1.200m	1.371m	86.122	388674.186	400153.213	9.000, (300mm ∅) Inv. 84.901 9.001, (300mm ∅) Inv. 84.751 C1 Outfall, (100mm ∅) Inv. 85.450 7.000, (150mm ∅) Inv. 85.175
MH09B	1.200m	1.148m	86.093	388682.891	400153.242	9.000, (300mm ∅) Inv. 84.945 C2 Outfall, (100mm ∅) Inv. 85.550 5.000, (150mm ∅) Inv. 85.390 6.000, (100mm ∅) Inv. 85.390
MH11	1.200m	1.657m	86.285	388651.994	400166.533	11.001, (825mm ∅) Inv. 84.628 11.002, (825mm ∅) Inv. 84.628 12.000, (150mm ∅) Inv. 84.778
MH11A	1.200m	1.625m	86.253	388668.558	400166.594	11.000, (825mm ∅) Inv. 84.711 11.001, (825mm ∅) Inv. 84.711
MH11B	1.200m	1.115m	86.073	388687.242	400166.663	11.000, (825mm ∅) Inv. 84.958
MH12 (HB)	1.500m	1.717m	86.196	388633.367	400167.991	1.007, (825mm ∅) Inv. 84.583 1.008, (225mm ∅) Inv. 84.553
MH13 (DC1)	1.200m	1.891m	86.292	388627.081	400168.238	1.008, (225mm ∅) Inv. 84.401 1.009, (150mm ∅) Inv. 84.401
RG01	0.450m	0.850m	86.052	388688.256	400145.446	5.000, (150mm ∅) Inv. 85.500
RG02	0.450m	0.850m	86.024	388687.149	400145.389	6.000, (100mm ∅) Inv. 85.500
RG03	0.450m	0.850m	86.128	388669.685	400145.211	7.000, (150mm ∅) Inv. 85.400
RG04	0.450m	0.850m	86.405	388635.703	400144.063	8.000, (150mm ∅) Inv. 85.700
RG05	0.450m	0.850m	85.964	388649.402	400167.779	12.000, (150mm ∅) Inv. 85.300

Proposed Foul - Structure Table

Structure Name	Diameter	Depth	Cover Level	Easting	Northing	Connected Pipes
FIC01	0.180m	0.611m	86.681	388687.135	400135.973	F1.000, (100mm ∅) Inv. 86.070 F1.001, (100mm ∅) Inv. 86.070
FIC02	0.180m	1.013m	86.728	388672.984	400135.525	F1.001, (100mm ∅) Inv. 85.715 F1.002, (100mm ∅) Inv. 85.715 F3.000, (100mm ∅) Inv. 85.715 F2.000, (100mm ∅) Inv. 85.715
FIC03	0.180m	1.365m	86.891	388657.856	400134.561	F1.002, (100mm ∅) Inv. 85.526 F1.003, (100mm ∅) Inv. 85.526 F5.000, (100mm ∅) Inv. 85.526 F4.000, (100mm ∅) Inv. 85.526
FIC05	0.180m	1.250m	86.850	388634.430	400133.997	F6.000, (100mm ∅) Inv. 85.800 F6.001, (100mm ∅) Inv. 85.800
FIC06	0.180m	0.616m	85.946	388688.033	400154.946	F9.000, (100mm ∅) Inv. 85.330 F9.001, (100mm ∅) Inv. 85.330
FIC07	0.180m	1.074m	86.134	388677.338	400154.777	F9.001, (100mm ∅) Inv. 85.060 F9.002, (100mm ∅) Inv. 85.060 F10.000, (100mm ∅) Inv. 85.060
FIC08	0.180m	1.204m	86.159	388669.538	400154.720	F9.002, (100mm ∅) Inv. 84.955 F9.003, (100mm ∅) Inv. 84.955 F12.000, (100mm ∅) Inv. 84.955 F11.000, (100mm ∅) Inv. 84.955
FIC09	0.180m	1.564m	86.364	388657.927	400154.635	F9.003, (100mm ∅) Inv. 84.800 F9.004, (100mm ∅) Inv. 84.800 F13.000, (100mm ∅) Inv. 84.800
FIC11	1.050m	1.203m	86.553	388641.916	400154.816	F14.001, (100mm ∅) Inv. 85.350 F14.002, (100mm ∅) Inv. 85.350 F15.000, (100mm ∅) Inv. 85.350
FIC12	0.180m	1.417m	86.767	388632.430	400154.548	F14.000, (100mm ∅) Inv. 85.350 F14.001, (100mm ∅) Inv. 85.580
FIC13	0.180m	1.855m	86.320	388650.554	400162.200	F1.005, (150mm ∅) Inv. 84.465 F1.006, (150mm ∅) Inv. 84.465 F16.000, (100mm ∅) Inv. 84.515
FWMH01 (DC)	0.180m	0.611m	86.045	388650.783	400168.487	F1.006, (150mm ∅) Inv. 84.400
FWMH02	1.050m	1.723m	86.428	388650.629	400154.673	F1.004, (150mm ∅) Inv. 85.175 F1.005, (150mm ∅) Inv. 84.705 F14.002, (100mm ∅) Inv. 85.259 F9.004, (100mm ∅) Inv. 84.705
FWMH03	1.050m	1.625m	86.913	388646.786	400134.278	F1.003, (100mm ∅) Inv. 85.388 F1.004, (150mm ∅) Inv. 85.388 F6.001, (100mm ∅) Inv. 85.388 F7.000, (100mm ∅) Inv. 85.288 F8.000, (100mm ∅) Inv. 85.288
SVP-A1	0.180m	0.611m	86.611	388641.307	400160.916	F15.000, (100mm ∅) Inv. 86.000

GENERAL

1. ALL DIMENSIONS IN MILLIMETRES UNLESS STATED OTHERWISE.
2. ALL LEVELS AND DATUMS IN METRES UNLESS STATED OTHERWISE.
3. ALL DIMENSIONS, LEVELS AND DATUMS TO BE CONFIRMED ON SITE, PRIOR TO FABRICATION AND CONSTRUCTION.
4. ALL BUILDING WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE BUILDING REGULATIONS AND THE CIVIL, STRUCTURAL AND ARCHITECTURAL SPECIFICATIONS..
5. ALL EXTERNAL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE SPECIFICATION FOR HIGHWAY WORKS.
6. ROAD MARKINGS TO BE WHITE THERMOPLASTIC SCREEN IN ACCORDANCE WITH TRAFFIC SIGNS REGULATIONS & GENERAL DIRECTIONS 2016.
7. BOND COAT SHALL BE APPLIED BETWEEN CONSTRUCTION LAYERS IN ACCORDANCE WITH SPECIFICATION FOR HIGHWAY WORKS.
8. WHERE REQUIRED, EDGE OF CARRIAGEWAY REINSTATEMENT SHALL BE AGREED WITH LOCAL HIGHWAY AUTHORITY ENGINEER PRIOR TO COMPLETION.
9. EXISTING 3D SURFACE MODEL PRODUCED FROM TOPOGRAPHICAL SURVEY, DATED AUGUST 2012.
10. EXISTING TOPOGRAPHICAL SURVEY SHIFTED TO ORDNANCE SURVEY COORDINATES, THEN RAISED TO TEXT LEVELS.
11. FINISHED FLOOR LEVELS TAKEN FROM 04 JUNE, DOCUMENT 132 AND ADJUSTED TO TIE IN TO TOPOGRAPHICAL SURVEY LEVELS. (BLOCK E TBM WAS ASSUMED 100m AOD, NEW BLOCK E REDUCED LEVEL IS 87.000m AOD. ALL OTHER LEVELS RELATIVE TO NEW BLOCK E REDUCED LEVEL)
12. PROPOSED LAYOUT TAKEN FROM LES FOEY DRAWING, DATED APRIL 2016.
10. INVERT LEVELS OF EXISTING ADOPTED DRAINAGE TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION AND ANY DISCREPANCIES REPORTED TO THE ENGINEER.

TO BE READ IN CONJUNCTION WITH DRAWING NUMBERS:-

D246-KGB-00-XX-DR-D-0500
PROPOSED DRAINAGE - SURFACE WATER LAYOUT

D246-KGB-00-XX-DR-D-0501
PROPOSED DRAINAGE - FOUL DRAINAGE LAYOUT

D246-KGB-00-XX-DR-D-0503
PROPOSED DRAINAGE LONG-SECTIONS - SHE ET 1 OF 2

D246-KGB-00-XX-DR-D-0504
PROPOSED DRAINAGE LONG-SECTIONS - SHEET 2 OF 2

D246-KGB-00-XX-DR-D-0505
PROPOSED DRAINAGE - STANDARD DETAILS, SHEET 1 OF 3

D246-KGB-00-XX-DR-D-0506
PROPOSED DRAINAGE - STANDARD DETAILS, SHEET 2 OF 3

D246-KGB-00-XX-DR-D-0507
PROPOSED DRAINAGE - STANDARD DETAILS, SHEET 3 OF 3

D246 Terence ST_RWPs - Structure Table

Structure Name	Easting	Northing	Cover Level	Connected Pipes
RWP-A29R	388641.031	400155.744	88.095	A29R-outfall Inv. 86.150
RWP-A30R	388632.538	400156.018	86.761	A30R-outfall Inv. 86.150
RWP-A31F	388641.009	400165.585	86.400	A31F-outfall Inv. 86.150
RWP-A32F	388632.688	400165.563	86.400	A32F-outfall Inv. 86.150
RWP-B23R	388668.507	400155.841	86.400	B23R-outfall Inv. 85.800
RWP-B24R	388659.984	400155.827	86.419	B24R-outfall Inv. 85.800
RWP-B25R	388651.635	400155.745	86.418	B25R-outfall Inv. 85.455
RWP-B26F	388668.269	400165.763	86.400	B26F-outfall Inv. 85.634
RWP-B27F	388659.937	400165.736	86.400	B27F-outfall Inv. -0.766
RWP-B28F	388651.562	400165.710	86.400	B28F-outfall Inv. 85.634
RWP-C17R	388687.598	400156.002	86.376	C17R-outfall Inv. 85.765
RWP-C18R	388679.184	400155.921	86.306	C18R-outfall Inv. 85.695
RWP-C19R	388670.663	400155.882	86.144	C19R-outfall Inv. 85.800
RWP-C20F	388687.804	400165.473	86.211	C20F-outfall Inv. 85.600
RWP-C21F	388679.136	400165.819	86.121	C21F-outfall Inv. -0.766
RWP-C22F	388670.644	400165.736	86.129	C22F-outfall Inv. -0.766
RWP-D13R	388643.155	400120.986	87.137	D13R-outfall Inv. 86.100
RWP-D14R	388634.791	400123.137	87.140	D14R-outfall Inv. 86.700
RWP-D15F	388643.006	400130.798	87.057	D15F-outfall Inv. -0.766
RWP-D16F	388634.792	400132.958	87.128	D16F-outfall Inv. 86.200
RWP-E09R	388656.011	400123.187	86.992	E09R-outfall Inv. -0.766
RWP-E10R	388647.827	400123.242	86.993	E10R-outfall Inv. 85.600
RWP-E11F	388656.155	400132.999	86.992	E11F-outfall Inv. -0.766
RWP-E12F	388647.830	400133.055	86.992	E12F-outfall Inv. -0.766
RWP-F05R	388671.179	400124.685	86.889	F05R-outfall Inv. -0.766
RWP-F06R	388663.039	400124.660	86.890	F06R-outfall Inv. -0.766
RWP-F07F	388671.273	400134.519	86.878	F07F-outfall Inv. -0.766
RWP-F08F	388662.924	400134.437	86.884	F08F-outfall Inv. -0.766
RWP-G01R	388685.971	400125.551	86.741	G01R-outfall Inv. 86.130
RWP-G02R	388677.738	400125.485	86.689	G02R-outfall Inv. -0.766
RWP-G03F	388686.191	400135.005	86.611	G03F-outfall Inv. 86.000
RWP-G04F	388677.624	400135.257	86.683	G04F-outfall Inv. -0.766

REV	DESCRIPTION	DRAWN	INITIALS	DATE	Dwg STATUS	CHECKED BY	DATE
P01	ISSUED FOR INFORMATION	CIVIL 3D	KB	16/08/24	Preliminary	KB	16/08/24
P02	REVISED INVERT LEVELS UP/ST OF F1.004 ISSUED FOR INFORMATION	CIVIL 3D	KB	19/08/24	Preliminary	KB	19/08/24
C01	ISSUED FOR CONSTRUCTION FOLLOWING DISCHARGE OF PLANNING CONDITION 5	CIVIL 3D	KB	23/10/24	Construction	KB	23/10/24
AB1	AS-BUILT DRAWING. ISSUED FOR INFORMATION.	CIVIL 3D	KB	19/01/26	As-built	KB	19/01/26

KGB Infrastructure
North Mersey Business Centre
Woodward Road
Knowsley Industrial Park
Kirkby, Liverpool
L33 7UY

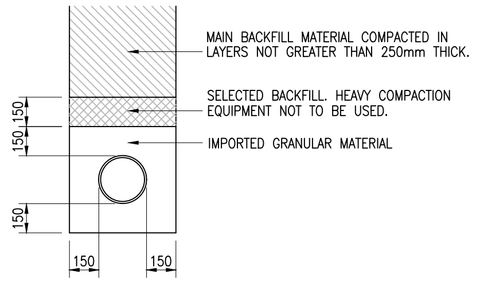
Tel: 0151 547 2508
Mobile: 07808 162 303
email: kgbinfrastructure@btinternet.com

JOB TITLE: TERENCE STREET, NEWTON HEATH
CLIENT: SPLASH DEVELOPMENTS LTD
DRAWING TITLE: PROPOSED DRAINAGE MANHOLE & PIPE SCHEDULE

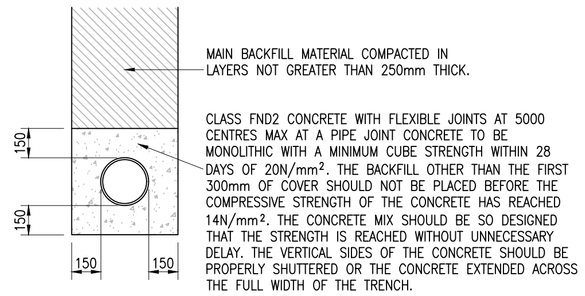
SCALE	DRAWN BY	DATE	DRAWING No	REVISION
1:200 @ A1	KB	21/07/2024	D246-KGB-00-XX-DR-D-0502	AB1

APPENDIX B

Drainage Standard Details



GRANULAR SURROUND WHERE COVER EXCEEDS 1200mm TYPE "S"



CONCRETE SURROUND WHERE COVER IS LESS THAN 1200 TYPE "Z"

NOMINAL SIZE OF PIPES (mm)	MAXIMUM PARTICLE SIZE (mm)	IMPORTED GRANULAR MATERIAL TO BS 882
100	10	10mm NOMINAL SINGLE-SIZE
OVER 100 TO 150	15	10 OR 14mm NOMINAL SINGLE-SIZE OR 14 TO 5mm GRADED
OVER 150 TO 300	20	10,14 OR 20mm NOMINAL SINGLE-SIZE OR 14 TO 5mm GRADED OR 20 TO 5mm GRADED
OVER 300 TO 600	20	14 OR 20mm NOMINAL SINGLE-SIZE OR 14 TO 5mm GRADED OR 20 TO 5mm GRADED

Pipe ø	Joint thickness
< 450	18mm
450–1200	36mm
1200 >	54mm

COMPRESSIBLE FILLER TABLE

(BITUMEN IMPREGNATED INSULATING BOARD TO BS 1142: PART 3)

TRENCH WIDTHS

PIPE I.D	OVERALL TRENCH WIDTH
100	550
150	600
225	700
300	850
375	1050
450	1150
525	1200
600	1350
675	1450
750	1500
825	1600
900	1900
1050	2100
1200	2300
1350	2500
1500	2700
1800	3100

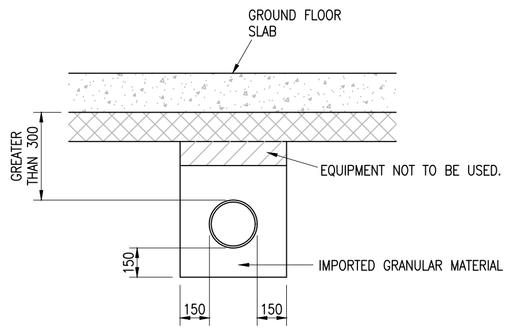
BS EN 1610:1997 ANNEX B TABLE B.15
COARSE AGGREGATE - PIPE BEDDING

SIEVE SIZE (mm)	PERCENTAGE BY MASS PASSING BS SIEVES FOR NOMINAL SIZES						
	GRADED AGGREGATE (mm)			SINGLE-SIZED AGGREGATE (mm)			
	40 to 5	20 to 5	14 to 5	40	20	14	10
50.0	100	-----	-----	100	-----	-----	-----
37.5	90 - 100	100	-----	85 - 100	100	-----	-----
20.0	35 - 70	90 - 100	100	0 - 25	85 - 100	100	-----
14.0	-----	-----	90 - 100	-----	-----	85 - 100	100
10.0	10 - 40	30 - 60	50 - 85	0 - 5	0 - 25	0 - 50	85 - 100
5.0	0 - 5	0 - 10	0 - 10	-----	0 - 5	0 - 10	0 - 25
2.36	-----	-----	-----	-----	-----	-----	0 - 5

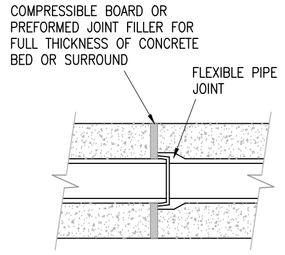
RIGID PIPES BEDDING GRADING

BASED ON BS EN 1610 : 1997 TABLE B.15 FOR RIGID PIPES THE BEDDING SHOULD BE SINGLE SIZE MATERIAL OR GRADED MATERIAL FROM 5mm UP TO A MAX SIZE OF 10mm FOR 100mm PIPES; 14mm FOR 150mm PIPES; 20mm FOR 225mm TO 600mm PIPES; mm FOR OVER 675mm PIPES

CHALK/LIMESTONE SHALL NOT BE USED AS BEDDING MATERIAL IN GROUND WHERE THE PH <7



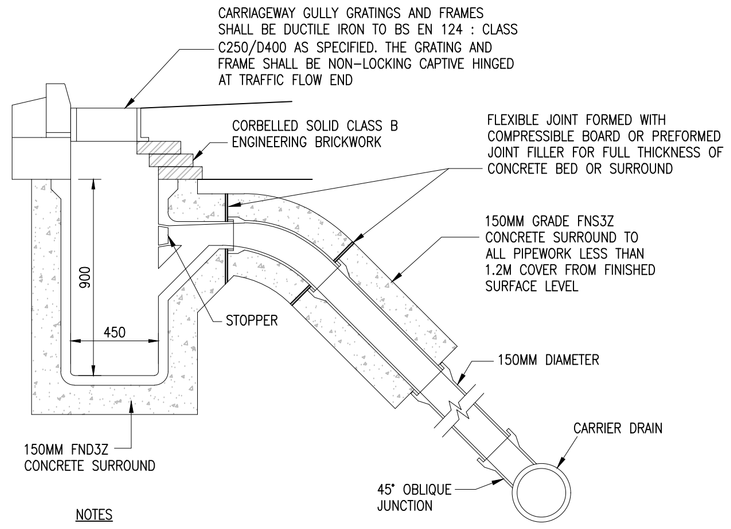
PIPE BELOW SLAB



JOINTS FOR CONCRETE SURROUND TO PIPES

(TO OCCUR AT EACH PIPE JOINT)

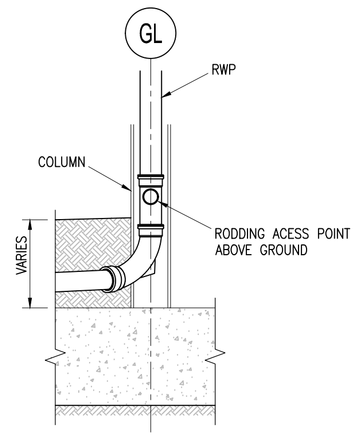
PIPE BEDDING DETAILS



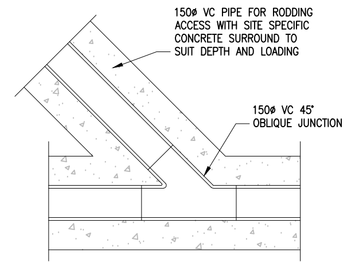
NOTES

1. GULLY POT TO BE 95 LITRES MIN CAPACITY
2. MAXIMUM TRENCH WIDTH FOR 150MM GULLY LEAD IS 600MM NUMBER OF BENDS MAY VARY DUE TO SITE DIFFERENCES.
3. CONCRETE SURROUND TO PIPES SHALL ALWAYS FINISH AT A JOINT

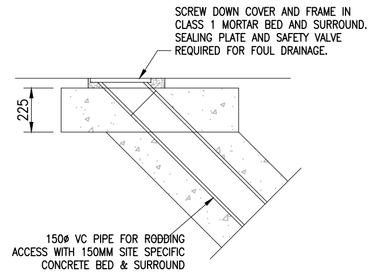
GULLY DETAIL WITH CONNECTION TO CARRIER DRAIN



TYPICAL RWP RODDING POINT



ONLINE RODDING BASE DETAIL



RODDING ACCESS DETAIL FOR PEDESTRIAN AREAS

GENERAL

1. ALL DIMENSIONS IN MILLIMETRES UNLESS STATED OTHERWISE.
2. ALL LEVELS AND DATUMS IN METRES UNLESS STATED OTHERWISE.
3. ALL DIMENSIONS, LEVELS AND DATUMS TO BE CONFIRMED ON SITE, PRIOR TO FABRICATION AND CONSTRUCTION.
4. ALL BUILDING WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE BUILDING REGULATIONS AND THE CIVIL, STRUCTURAL AND ARCHITECTURAL SPECIFICATIONS..
5. ALL EXTERNAL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE SPECIFICATION FOR HIGHWAY WORKS.
6. ROAD MARKINGS TO BE WHITE THERMOPLASTIC SCREEN IN ACCORDANCE WITH TRAFFIC SIGNS REGULATIONS & GENERAL DIRECTIONS 2016.
7. BOND COAT SHALL BE APPLIED BETWEEN CONSTRUCTION LAYERS IN ACCORDANCE WITH SPECIFICATION FOR HIGHWAY WORKS.
8. WHERE REQUIRED, EDGE OF CARRIAGEWAY REINSTATEMENT SHALL BE AGREED WITH LOCAL HIGHWAY AUTHORITY ENGINEER PRIOR TO COMPLETION.
9. EXISTING 3D SURFACE MODEL PRODUCED FROM TOPOGRAPHICAL SURVEY, DATED AUGUST 2012.
10. EXISTING TOPOGRAPHICAL SURVEY SHIFTED TO ORDNANCE SURVEY COORDINATES, THEN RAISED TO TEXT LEVELS.
11. FINISHED FLOOR LEVELS TAKEN FROM 04 JUNE, DOCUMENT 132 AND ADJUSTED TO TIE IN TO TOPOGRAPHICAL SURVEY LEVELS. (BLOCK E TBM WAS ASSUMED 100m AOD, NEW BLOCK E REDUCED LEVEL IS 87.000m AOD. ALL OTHER LEVELS RELATIVE TO NEW BLOCK E REDUCED LEVEL)
12. PROPOSED LAYOUT TAKEN FROM LES FOEY DRAWING, DATED APRIL 2016.
10. INVERT LEVELS OF EXISTING ADOPTED DRAINAGE TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION AND ANY DISCREPANCIES REPORTED TO THE ENGINEER.

TO BE READ IN CONJUNCTION WITH DRAWING NUMBERS:-

D246-KGB-00-XX-DR-D-0500
PROPOSED DRAINAGE
SURFACE WATER LAYOUT

D246-KGB-00-XX-DR-D-0501
PROPOSED DRAINAGE
FOUL DRAINAGE LAYOUT

D246-KGB-00-XX-DR-D-0502
PROPOSED DRAINAGE
MANHOLE & PIPE SCHEDULES

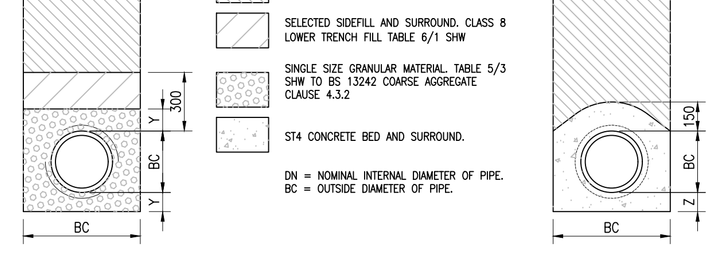
D246-KGB-00-XX-DR-D-0503
PROPOSED DRAINAGE
LONG-SECTIONS
SHEET 1 OF 2

D246-KGB-00-XX-DR-D-0504
PROPOSED DRAINAGE
LONG-SECTIONS
SHEET 2 OF 2

D246-KGB-00-XX-DR-D-0505
PROPOSED DRAINAGE
STANDARD DETAILS
SHEET 1 OF 3

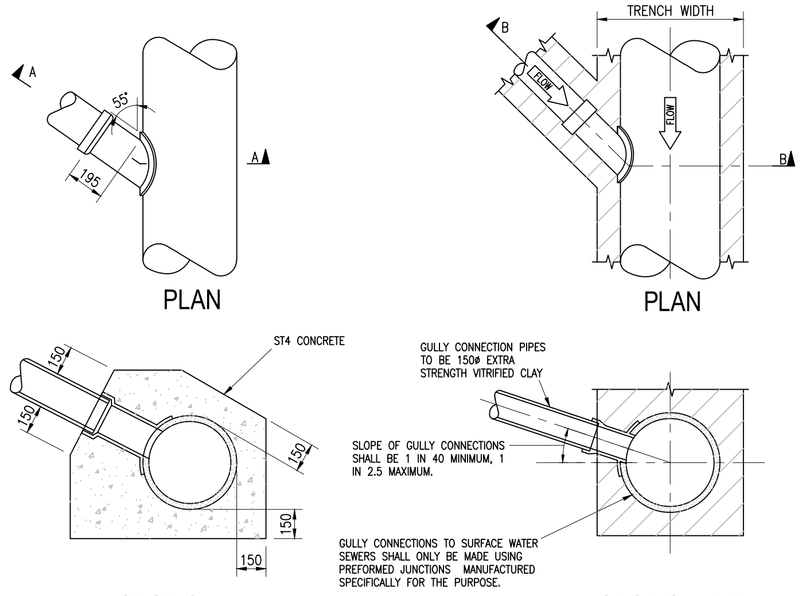
D246-KGB-00-XX-DR-D-0507
PROPOSED DRAINAGE
STANDARD DETAILS
SHEET 3 OF 3

PIPE BEDDING DETAILS

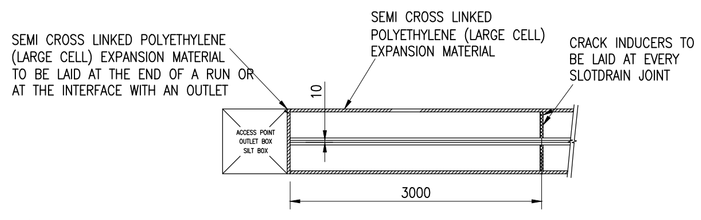


CLASS S GRANULAR SURROUND WHERE COVER EXCEEDS 900mm

CLASS Z CONCRETE SURROUND WHERE COVER IS LESS THAN 900

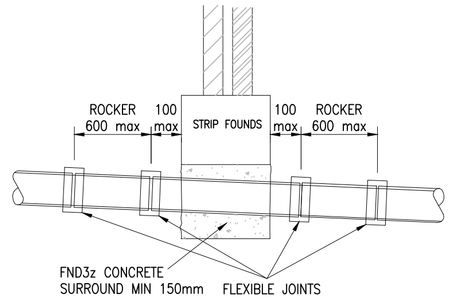


GULLY CONNECTIONS

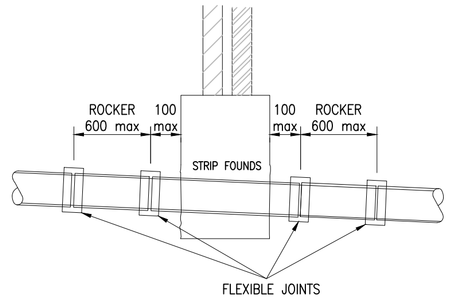


NOTE: BSI CERTIFIED TO D400 LOADING WITHOUT ADDITIONAL CONCRETE REINFORCEMENT.

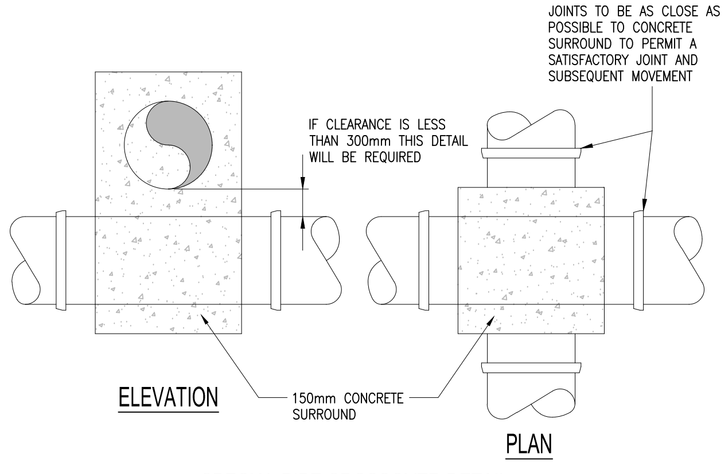
150Ø SLOT DRAIN TYPICAL PLAN DETAIL



PIPES UNDER FOUNDATIONS

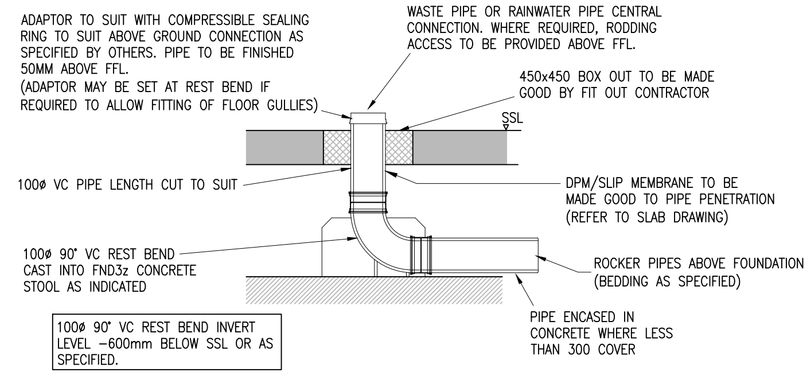


PIPES PASSING THROUGH FOUNDATIONS



SPECIAL PIPE CROSSOVER DETAIL

REQUIRED IF CLEARANCE BETWEEN PIPES CROSSING EACH OTHER IS LESS THAN 300MM



100Ø BELOW GROUND PIPE CONNECTION

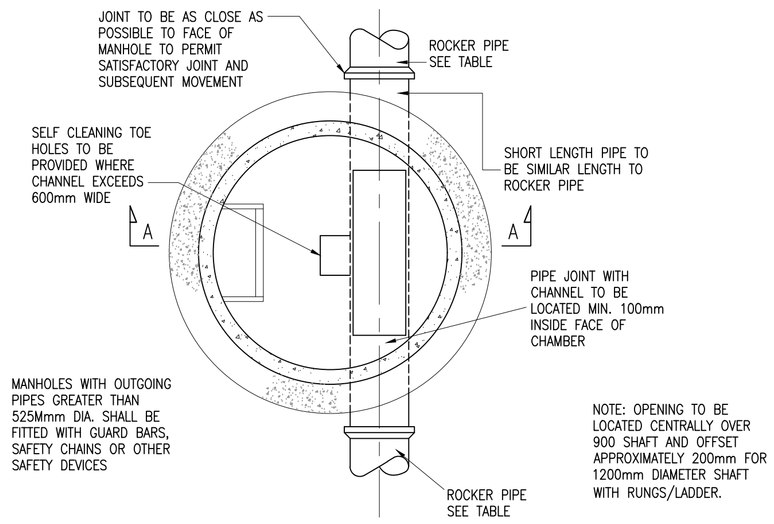
NOTE: 100ø 90° VC REST BEND INVERT LEVELS AS SPECIFIED.
BRANCH CONNECTIONS OFF FOUNDATIONS MAY BE SET DEEPER TO ALLOW FOR CONNECTION TO MAIN DRAIN RUN.
ALTERNATIVELY, THE 100ø 90° VC REST BEND MAY BE REPLACED BY 45°/30°/15° BENDS TO ALLOW FOR STEEP BRANCH CONNECTIONS.

REV	DESCRIPTION	DRAWN	INITIALS	DATE	Dwg STATUS	CHECKED BY	DATE
P01	ISSUED FOR INFORMATION	CIVIL 3D	KB	16/08/24	Preliminary	KB	16/08/24
C01	ISSUED FOR CONSTRUCTION FOLLOWING DISCHARGE OF PLANNING CONDITION 5	CIVIL 3D	KB	23/10/24	Construction	KB	23/10/24

KGB Infrastructure
North Mersey Business Centre
Woodward Road
Knowsley Industrial Park
Kirkby, Liverpool
L33 7UY
Tel: 0151 547 2508
Mobile: 07808 162 303
email: kgbinfrastructure@btinternet.com

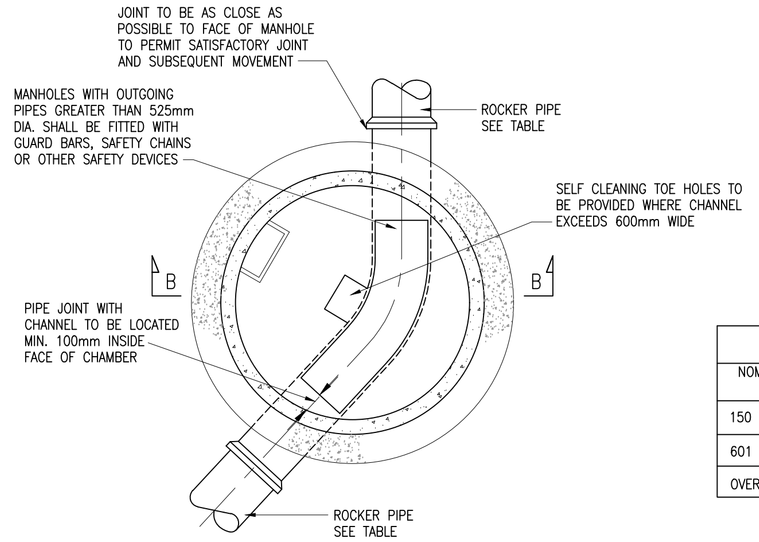
JOB TITLE: TERENCE STREET, NEWTON HEATH
CLIENT: SPLASH DEVELOPMENTS LTD
DRAWING TITLE: PROPOSED DRAINAGE STANDARD DETAILS SHEET 2 of 3

SCALE	DRAWN BY	DATE	DRAWING No	REVISION
NTS	KB	16/08/2024	D246-KGB-00-XX-DR-D-0508	C01



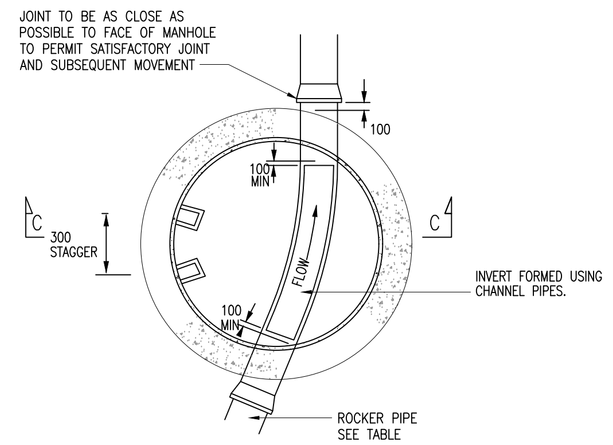
NOTE: OPENING TO BE LOCATED CENTRALLY OVER 900 SHAFT AND OFFSET APPROXIMATELY 200mm FOR 1200mm DIAMETER SHAFT WITH RUNGS/LADDER.

TYPICAL MANHOLE DETAIL TYPE A
DEPTH TO SOFFIT OF PIPE 3m - 6m



TYPICAL MANHOLE DETAIL TYPE B
DEPTH TO SOFFIT OF PIPE 1.5m TO 3.0m

ROCKER PIPE LENGTHS	
NOMINAL DIA. (mm)	EFFECTIVE LENGTH (m)
150 TO 600	0.6
601 TO 750	1.0
OVER 750	1.25



TYPICAL MANHOLE DETAIL TYPE E
DEPTH TO SOFFIT OF PIPE 1.5m TO 3.0m

GENERAL

1. ALL DIMENSIONS IN MILLIMETRES UNLESS STATED OTHERWISE.
2. ALL LEVELS AND DATUMS IN METRES UNLESS STATED OTHERWISE.
3. ALL DIMENSIONS, LEVELS AND DATUMS TO BE CONFIRMED ON SITE, PRIOR TO FABRICATION AND CONSTRUCTION.
4. ALL BUILDING WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE BUILDING REGULATIONS AND THE CIVIL, STRUCTURAL AND ARCHITECTURAL SPECIFICATIONS..
5. ALL EXTERNAL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE SPECIFICATION FOR HIGHWAY WORKS.
6. ROAD MARKINGS TO BE WHITE THERMOPLASTIC SCREEN IN ACCORDANCE WITH TRAFFIC SIGNS REGULATIONS & GENERAL DIRECTIONS 2016.
7. BOND COAT SHALL BE APPLIED BETWEEN CONSTRUCTION LAYERS IN ACCORDANCE WITH SPECIFICATION FOR HIGHWAY WORKS.
8. WHERE REQUIRED, EDGE OF CARRIAGEWAY REINSTATEMENT SHALL BE AGREED WITH LOCAL HIGHWAY AUTHORITY ENGINEER PRIOR TO COMPLETION.
9. EXISTING 3D SURFACE MODEL PRODUCED FROM TOPOGRAPHICAL SURVEY, DATED AUGUST 2012.
10. EXISTING TOPOGRAPHICAL SURVEY SHIFTED TO ORDNANCE SURVEY COORDINATES, THEN RAISED TO TEXT LEVELS.
11. FINISHED FLOOR LEVELS TAKEN FROM 04 JUNE, DOCUMENT 132 AND ADJUSTED TO TIE IN TO TOPOGRAPHICAL SURVEY LEVELS. (BLOCK E TBM WAS ASSUMED 100m AOD, NEW BLOCK E REDUCED LEVEL IS 87.000m AOD. ALL OTHER LEVELS RELATIVE TO NEW BLOCK E REDUCED LEVEL)
12. PROPOSED LAYOUT TAKEN FROM LES FOEY DRAWING, DATED APRIL 2016.

10. INVERT LEVELS OF EXISTING ADOPTED DRAINAGE TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION AND ANY DISCREPANCIES REPORTED TO THE ENGINEER.

TO BE READ IN CONJUNCTION WITH DRAWING NUMBERS:-

D246-KGB-00-XX-DR-D-0500
PROPOSED DRAINAGE - SURFACE WATER LAYOUT

D246-KGB-00-XX-DR-D-0501
PROPOSED DRAINAGE - FOUL DRAINAGE LAYOUT

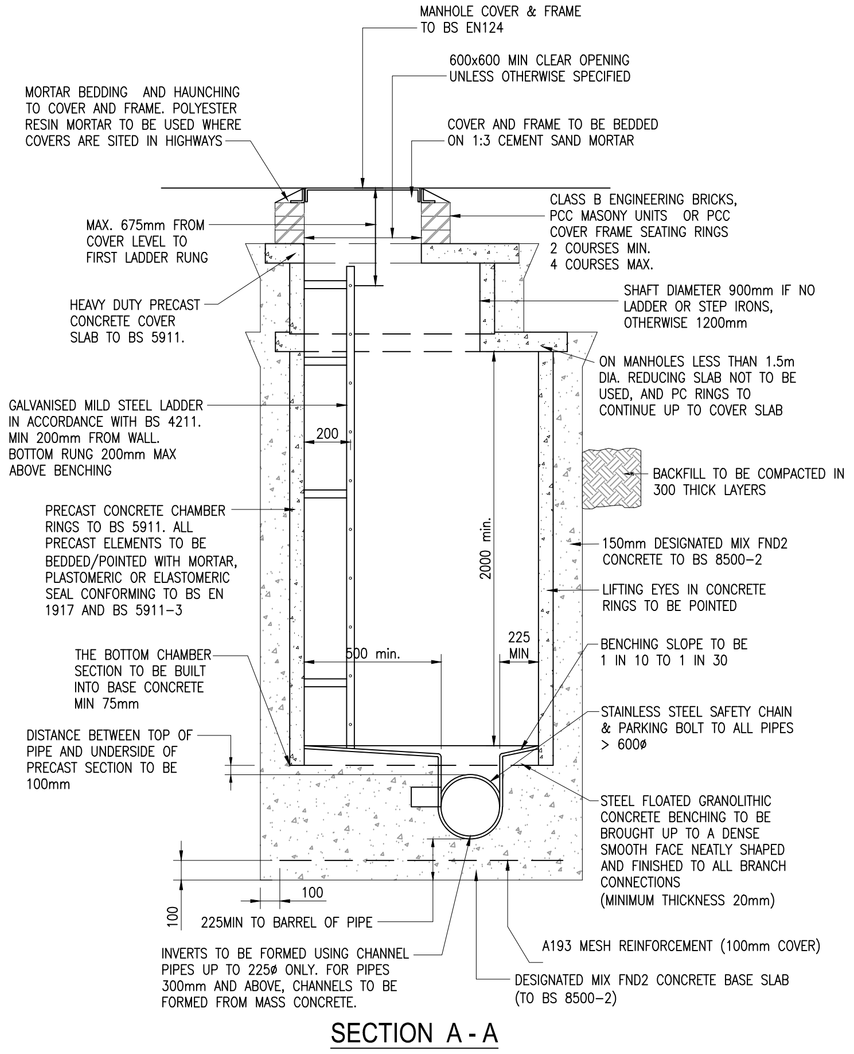
D246-KGB-00-XX-DR-D-0502
PROPOSED DRAINAGE - MANHOLE & PIPE SCHEDULES

D246-KGB-00-XX-DR-D-0503
PROPOSED DRAINAGE - LONG-SECTIONS - SHEET 1 OF 2

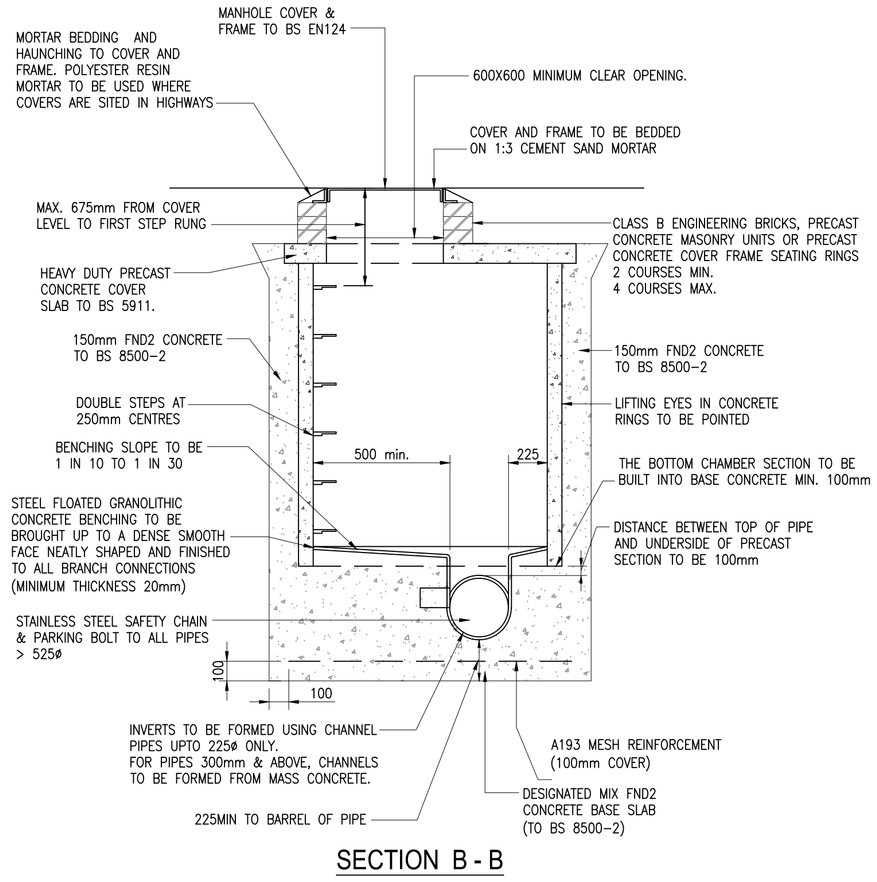
D246-KGB-00-XX-DR-D-0504
PROPOSED DRAINAGE - LONG-SECTIONS - SHEET 2 OF 2

D246-KGB-00-XX-DR-D-0506
PROPOSED DRAINAGE - STANDARD DETAILS, SHEET 2 OF 3

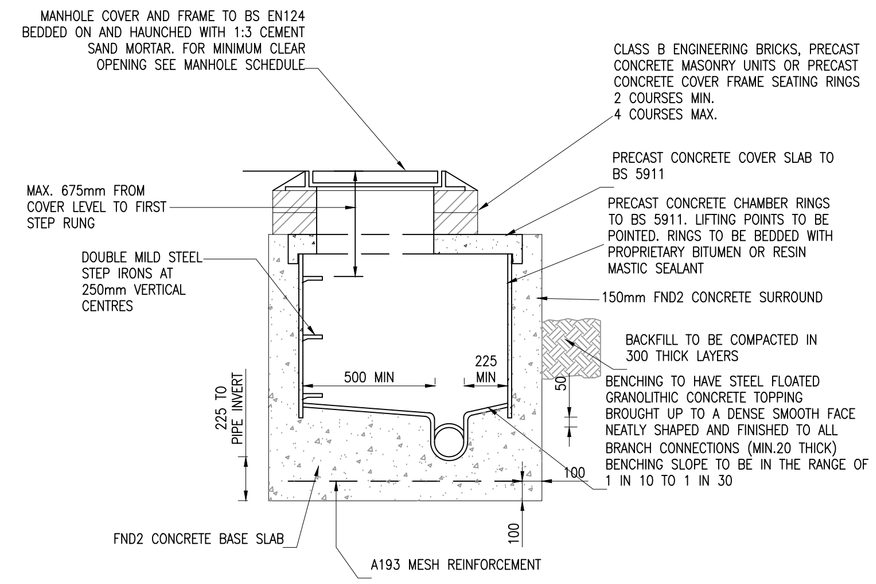
D246-KGB-00-XX-DR-D-0507
PROPOSED DRAINAGE - STANDARD DETAILS, SHEET 3 OF 3



SECTION A - A

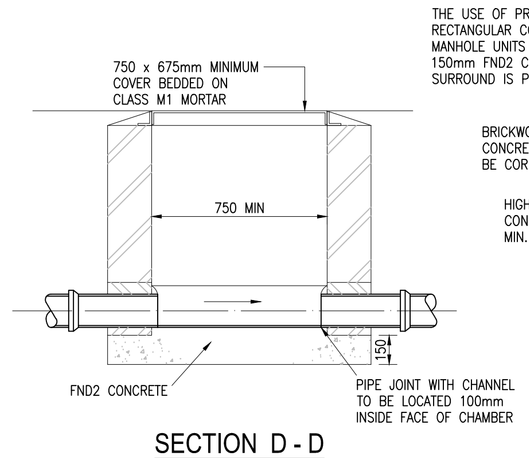


SECTION B - B

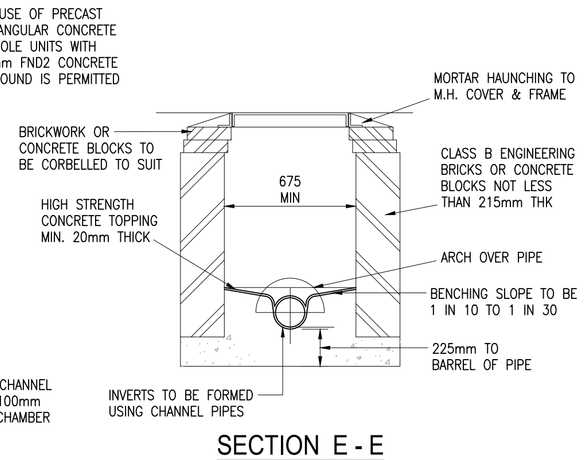


SECTION C - C

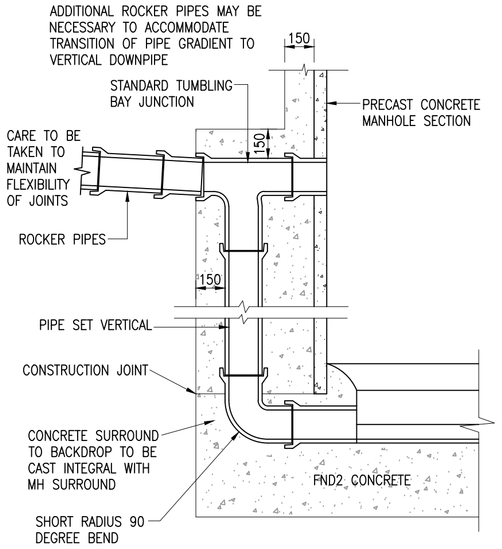
TYPICAL MANHOLE DETAIL TYPE D
DEPTH TO SOFFIT LESS THAN 1.0m AND PIPE Ø UP TO 150



SECTION D - D

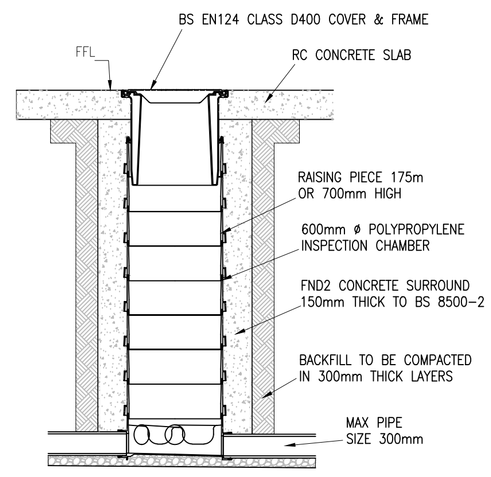


SECTION E - E



TYPICAL VERTICAL BACKDROP DETAIL

NOTE : WHERE THE DROP IS NOT EXCESSIVE A 45° DROP PIPE MAY BE USED



HEPWORTH 'TEGRA' NON MAN ENTRY REDUCED ACCESS INSPECTION CHAMBER MAX DEPTH 5.0m

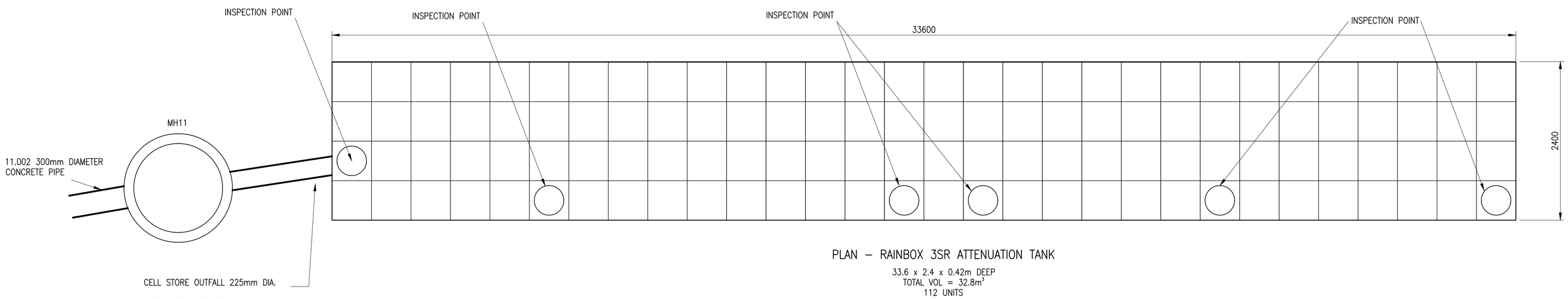
FOR MAINTENANCE, ANY MANHOLE CONSTRUCTED WITHOUT DOUBLE STEPS OR A LADDER SHALL BE ACCESSED BY WINCH ONLY.

REV	DESCRIPTION	DRAWN	INITIALS	DATE	Dwg STATUS	CHECKED BY	DATE
P01	ISSUED FOR INFORMATION	CIVIL 3D	KB	16/08/24	Preliminary	KB	16/08/24
C01	ISSUED FOR CONSTRUCTION FOLLOWING DISCHARGE OF PLANNING CONDITION 5	CIVIL 3D	KB	23/10/24	Construction	KB	23/10/24

KGB Infrastructure
North Mersey Business Centre
Woodward Road
Knowsley Industrial Park
Kirkby, Liverpool
L33 7UY

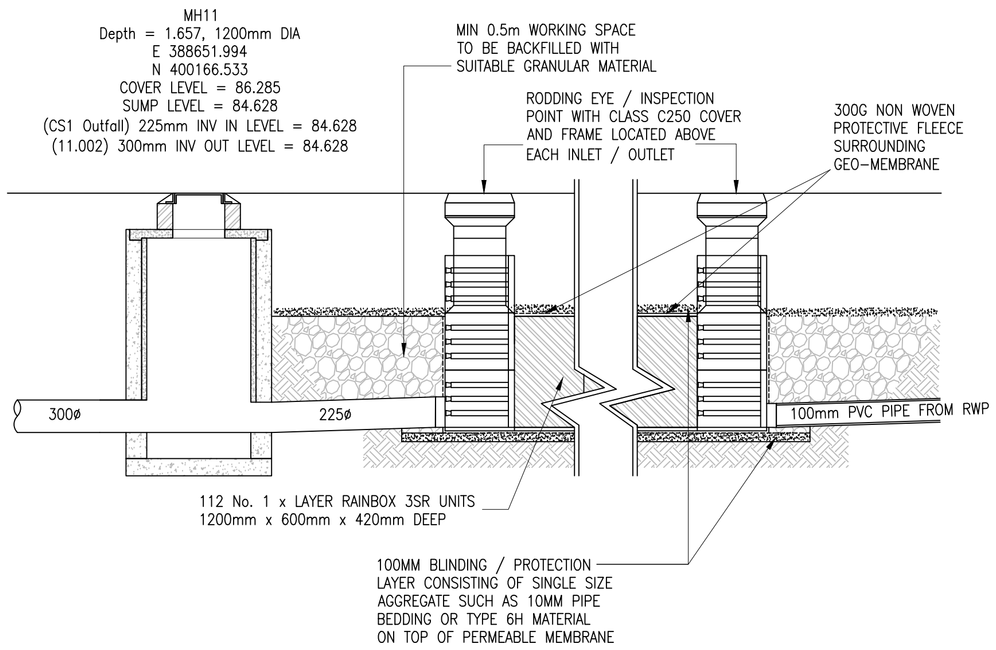
Tel: 0151 547 2508
Mobile: 07808 162 303
email: kgbinfrastructure@btinternet.com

JOB TITLE: **TERENCE STREET, NEWTON HEATH**
CLIENT: **SPLASH DEVELOPMENTS LTD**
DRAWING TITLE: **PROPOSED DRAINAGE STANDARD DETAILS SHEET 1 of 3**
SCALE: **NTS** | DRAWN BY: **KB** | DATE: **16/08/2024** | DRAWING No: **D246-KGB-00-XX-DR-D-0505** | REVISION: **C01**



PLAN – RAINBOX 3SR ATTENUATION TANK

33.6 x 2.4 x 0.42m DEEP
TOTAL VOL = 32.8m³
112 UNITS
(33.6 x 2.4 x 0.42m DEEP)
INVERT LEVEL = 84.628



TYPICAL LONG-SECTION THROUGH 24x14m ATTENUATION TANK

GENERAL

1. ALL DIMENSIONS IN MILLIMETRES UNLESS STATED OTHERWISE.
2. ALL LEVELS AND DATUMS IN METRES UNLESS STATED OTHERWISE.
3. ALL DIMENSIONS, LEVELS AND DATUMS TO BE CONFIRMED ON SITE, PRIOR TO FABRICATION AND CONSTRUCTION.
4. ALL BUILDING WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE BUILDING REGULATIONS AND THE CIVIL, STRUCTURAL AND ARCHITECTURAL SPECIFICATIONS..
5. ALL EXTERNAL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE SPECIFICATION FOR HIGHWAY WORKS.
6. ROAD MARKINGS TO BE WHITE THERMOPLASTIC SCREEN IN ACCORDANCE WITH TRAFFIC SIGNS REGULATIONS & GENERAL DIRECTIONS 2016.
7. BOND COAT SHALL BE APPLIED BETWEEN CONSTRUCTION LAYERS IN ACCORDANCE WITH SPECIFICATION FOR HIGHWAY WORKS.
8. WHERE REQUIRED, EDGE OF CARRIAGEWAY REINSTATEMENT SHALL BE AGREED WITH LOCAL HIGHWAY AUTHORITY ENGINEER PRIOR TO COMPLETION.
9. EXISTING 3D SURFACE MODEL PRODUCED FROM TOPOGRAPHICAL SURVEY, DATED AUGUST 2012.
10. EXISTING TOPOGRAPHICAL SURVEY SHIFTED TO ORDNANCE SURVEY COORDINATES, THEN RAISED TO TEXT LEVELS.
11. FINISHED FLOOR LEVELS TAKEN FROM 04 JUNE, DOCUMENT 132 AND ADJUSTED TO TIE IN TO TOPOGRAPHICAL SURVEY LEVELS. (BLOCK E TBM WAS ASSUMED 100m AOD, NEW BLOCK E REDUCED LEVEL IS 87.000m AOD. ALL OTHER LEVELS RELATIVE TO NEW BLOCK E REDUCED LEVEL)
12. PROPOSED LAYOUT TAKEN FROM LES FOEY DRAWING, DATED APRIL 2016.
10. INVERT LEVELS OF EXISTING ADOPTED DRAINAGE TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION AND ANY DISCREPANCIES REPORTED TO THE ENGINEER.

TO BE READ IN CONJUNCTION WITH DRAWING NUMBERS:-

D246-KGB-00-XX-DR-D-0500
PROPOSED DRAINAGE
SURFACE WATER LAYOUT

D246-KGB-00-XX-DR-D-0501
PROPOSED DRAINAGE
FOUL DRAINAGE LAYOUT

D246-KGB-00-XX-DR-D-0502
PROPOSED DRAINAGE
MANHOLE & PIPE SCHEDULES

D246-KGB-00-XX-DR-D-0503
PROPOSED DRAINAGE
LONG-SECTIONS - SHEET 1 OF 2

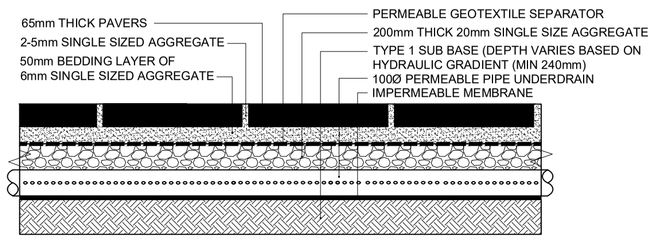
D246-KGB-00-XX-DR-D-0504
PROPOSED DRAINAGE
LONG-SECTIONS - SHEET 2 OF 2

D246-KGB-00-XX-DR-D-0505
PROPOSED DRAINAGE
STANDARD DETAILS, SHEET 1 OF 3

D246-KGB-00-XX-DR-D-0506
PROPOSED DRAINAGE
STANDARD DETAILS, SHEET 2 OF 3

Permeable Paving Outfalls - Structure Table						
Structure Name	Diameter	Depth	Cover Level	Easting	Northing	Connected Pipes
Porous Paving A1 Outlet	0.100m	0.300m	86.500	388629.756	400166.669	A1 Outfall, (100mm ∅) Inv. 86.238
Porous Paving A2 Outlet	0.100m	0.300m	86.503	388637.477	400149.971	A2 Outfall, (100mm ∅) Inv. 86.187
Porous Paving B1 Outlet	0.100m	0.300m	86.220	388658.278	400151.046	B1 Outfall, (100mm ∅) Inv. 85.918
Porous Paving B2 Outlet	0.100m	0.300m	86.160	388661.745	400151.105	B2 Outfall, (100mm ∅) Inv. 85.838
Porous Paving C1 Outlet	0.100m	0.300m	86.110	388675.128	400151.166	C1 Outfall, (100mm ∅) Inv. 85.779
Porous Paving C2 Outlet	0.100m	0.300m	86.060	388683.454	400151.211	C2 Outfall, (100mm ∅) Inv. 85.800
Porous Paving D1 Outlet	0.100m	0.300m	86.797	388634.203	400136.054	D1 Outfall, (100mm ∅) Inv. 86.600
Porous Paving D2 Outlet	0.100m	0.300m	86.800	388642.593	400136.824	D2 Outfall, (100mm ∅) Inv. 86.476
Porous Paving E1 Outlet	0.100m	0.300m	86.930	388644.773	400133.335	E1 Outfall, (100mm ∅) Inv. 86.435
Porous Paving E2 Outlet	0.100m	0.300m	86.832	388659.095	400135.478	E2 Outfall, (100mm ∅) Inv. 86.303
Porous Paving F1 Outlet	0.100m	0.300m	86.619	388659.888	400137.766	F1 Outfall, (100mm ∅) Inv. 86.226
Porous Paving F2 Outlet	0.100m	0.300m	86.765	388674.604	400134.991	F2 Outfall, (100mm ∅) Inv. 86.140
Porous Paving G1 Outlet	0.100m	0.300m	86.386	388676.143	400137.951	G1 Outfall, (100mm ∅) Inv. 86.213
Porous Paving G2 Outlet	0.100m	0.300m	86.264	388687.470	400137.971	G2 Outfall, (100mm ∅) Inv. 86.026

Permeable Paving Outfalls - Pipe Table				
Pipe Name	Size (mm)	Plan Length (m)	Slope	End Invert Connection
A1 Outfall	100	1.983	1:5	IC13A
A2 Outfall	100	4.021	1:85	IC10
B1 Outfall	100	2.187	1:3	MH09
B2 Outfall	100	3.397	1:6	MH09
C1 Outfall	100	2.252	1:7	MH09A
C2 Outfall	100	2.107	1:8	MH09B
D1 Outfall	100	4.251	1:4	IC04
D2 Outfall	100	1.934	1:1	MH01E
E1 Outfall	100	2.758	1:2	MH01D
E2 Outfall	100	2.589	1:2	IC03C
F1 Outfall	100	3.260	1:3	IC03C
F2 Outfall	100	2.301	1:3	IC03B
G1 Outfall	100	2.203	1:3	IC03B
G2 Outfall	100	2.043	1:4	IC03A



TYPICAL PERMEABLE PAVING - CAR PARKING

REV	DESCRIPTION	DRAWN	INITIALS	DATE	Dwg STATUS	CHECKED BY	DATE
P01	ISSUED FOR INFORMATION	CIVIL 3D	KB	16/08/24	Preliminary	KB	16/08/24
C01	ISSUED FOR CONSTRUCTION FOLLOWING DISCHARGE OF PLANNING CONDITION 5	CIVIL 3D	KB	23/10/24	Construction	KB	23/10/24

KGB Infrastructure
North Mersey Business Centre
Woodward Road
Knowsley Industrial Park
Kirkby, Liverpool
L33 7UY

Tel: 0151 547 2508
Mobile: 07808 162 303
email: kgbinfrastructure@btinternet.com

JOB TITLE: **TERENCE STREET, NEWTON HEATH**
CLIENT: **SPLASH DEVELOPMENTS LTD**
DRAWING TITLE: **PROPOSED DRAINAGE STANDARD DETAILS SHEET 3 of 3**

SCALE	DRAWN BY	DATE	DRAWING No	REVISION
NTS	KB	16/08/2024	D246-KGB-00-XX-DR-D-0507	C01