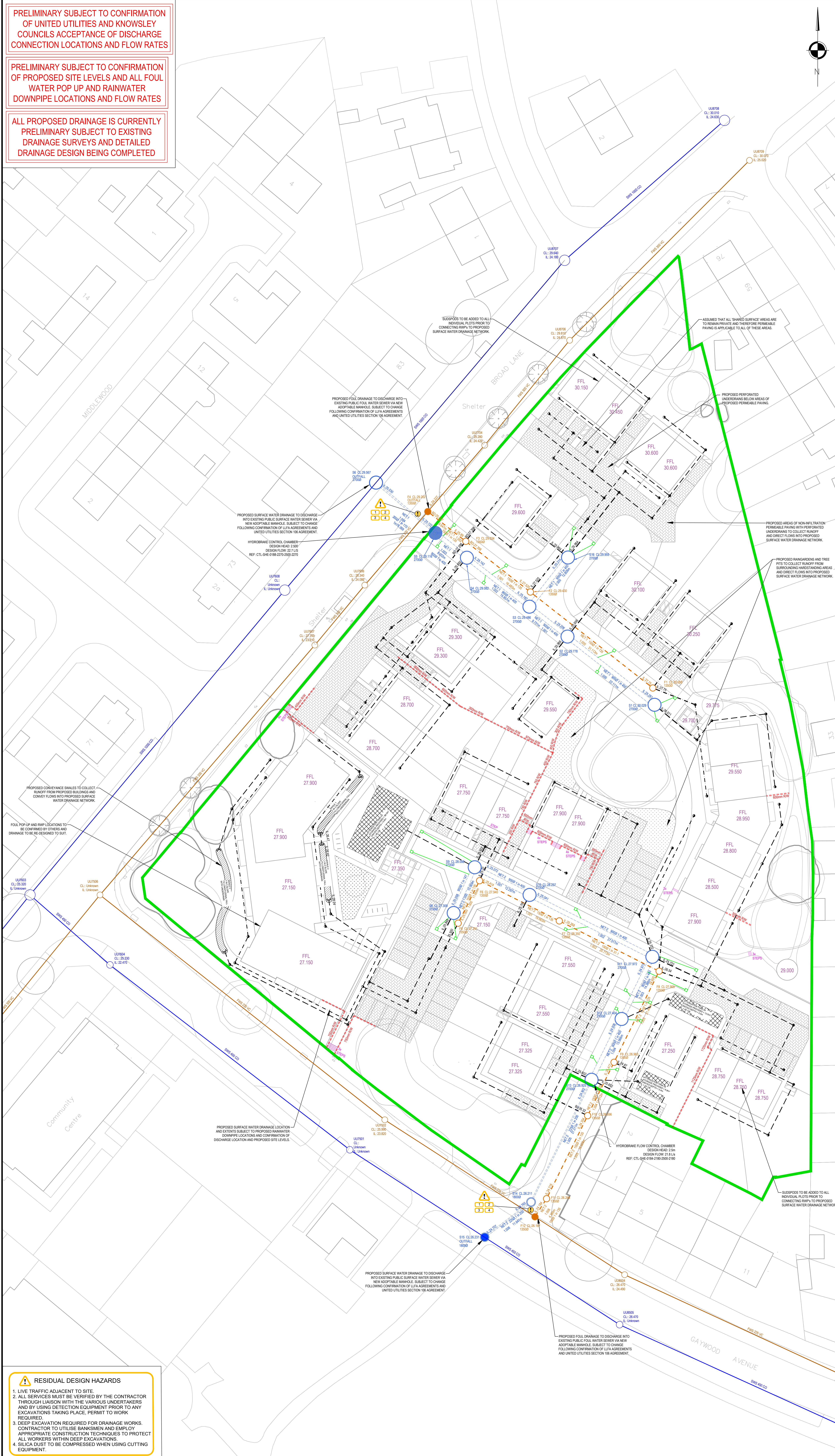


PRELIMINARY SUBJECT TO CONFIRMATION OF UNITED UTILITIES AND KNOWSLEY COUNCILS ACCEPTANCE OF DISCHARGE CONNECTION LOCATIONS AND FLOW RATES

PRELIMINARY SUBJECT TO CONFIRMATION OF PROPOSED SITE LEVELS AND ALL FOUL WATER POP UP AND RAINWATER DOWNPIPE LOCATIONS AND FLOW RATES

ALL PROPOSED DRAINAGE IS CURRENTLY PRELIMINARY SUBJECT TO EXISTING DRAINAGE SURVEYS AND DETAILED DRAINAGE DESIGN BEING COMPLETED



GENERAL NOTES

- SETTING OUT SHALL BE UNDERTAKEN USING ONLY THE INFORMATION GIVEN. DISTANCES SHOULD NOT BE SCALED FROM THIS DRAWING.
- ALL SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SEWERS FOR ADOPTION 6TH EDITION AND UNITED UTILITIES DETAILS & GUIDELINES.
- THE MINIMUM GRAVITY PIPE DIAMETER UNDER ADAPTABLE HIGHWAYS SHALL BE 150mm.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL INFORMATION GIVEN WITH REGARDS TO EXISTING SERVICES AND DRAINAGE CONNECTIONS ETC. PRIOR TO COMMENCING THE WORKS. THE RATES SHALL INCLUDE FOR HANDING AROUND SERVICES WHERE NECESSARY. THE CONTRACTOR SHALL ADHERE TO THE CEM REGULATIONS AT ALL TIMES.
- THE OUTSIDER OF ALL SEWERS SHALL BE A MINIMUM OF 1.0m FROM KERB LINES AND THE OUTSIDE OF MANHOLES SHALL BE A MINIMUM OF 0.5m FROM KERB LINES.
- EXISTING FLOWS IN WATERCOURSES, SEWERS AND LAND DRAINS SHALL BE MAINTAINED AT ALL TIMES.
- ONLY TRAINED PERSONNEL SHALL BE PERMITTED TO ENTER CONFINED SPACES.
- ALL MATERIALS TO BEAR THE RELEVANT B & WITENMARK AND COMPLY FULLY WITH THE SPECIFICATIONS. ALL CONCRETE & CONCRETE PRODUCTS MUST USE SULPHATE RESISTANT CEMENT UNLESS THE SITE INVESTIGATION REPORT PROVES THAT SULPHATE ATTACK FROM SOILS AND GROUNDWATER WILL NOT OCCUR TO WITHSTAND A CLASS.
- ALL OPENING NOTICES ETC. AS REQUIRED UNDER HIGHWAYS ACTS ETC. ARE TO BE OBTAINED PRIOR TO COMMENCEMENT OF WORKS. ALL WORKS ARE TO BE INSPECTED BY L.A., NBOC OR THE NETWORK OPERATOR AS APPLICABLE.
- WHERE "ULTRA RIB" UPVC PIPES (OR SIMILAR APPROVED) ARE USED IN ADAPTABLE DRAINAGE THEY SHALL STILL BE HANDLED AND LAD IN ACCORDANCE WITH THE SPECIFICATION AND GUIDANCE ISSUED BY THE HIGH PERFORMANCE PIPE ASSOCIATION.
- A CLASS 8 BED AND SURROUND MUST BE USED FOR SUCH PIPES. TRENCH BACKFILL IN HIGHWAYS TO WITHIN 1M OF HIGHWAY SHALL AS DIRECTED BY THE HIGHWAY AUTHORITY BE A SUITABLE GRANULAR MATERIAL ALL IN ACCORDANCE WITH SEWERS FOR ADOPTION CL. 4.3.4.
- SUB LEVELS SHALL NOT BE VARIED WITHOUT REFERENCE TO THE ENGINEER FOR GUIDANCE.
- DOMESTIC DRAINAGE SHALL BE TO BUILDING REGULATIONS APPROVED DOCUMENT H. 110mm UPVC PIPES LAD TO THE FOLLOWING MINIMUM FALLS UNLESS OTHERWISE SHOWN.

FOUL	S.W.
1 IN 40	1 IN 60
1 IN 80	1 IN 100
ELSEWHERE	
- ALL GULLY CONNECTIONS TO BE 150mm VITRIFIED CLAY UNLESS OTHERWISE SPECIFIED.
- MINIMUM COVER TO DRAINAGE SPOFF LEVEL:

LANDSCAPING	TRAFFICKED AREAS	HIGHWAYS
0.60m	0.90m	1.20m

• CLASS 9 BEDDING AND SURROUND TO BE USED WHERE MINIMUM COVER IS ACHIEVED.
• WHERE MINIMUM COVER IS NOT ACHIEVED CLASS 2 BEDDING AND SURROUND (CONCRETE ENCASEMENT) IS TO BE USED.

REFER TO UNITED UTILITIES STANDARD DRAWINGS FOR CONSTRUCTION DETAILS

- STND/19/001 - TYPE 1 MANHOLE
- STND/19/002 - TYPE 2 MANHOLE & INVERT ACCESS DETAIL
- STND/19/003 - SHALLOW MANHOLE DETAIL FOR SMALL DIAMETER PIPES
- STND/19/004 - SHALLOW SW MANHOLE DETAIL
- STND/19/007 - EXTERNAL AND INTERNAL BACKDROPS
- STND/19/008 - PIPE EMBEDMENT DETAILS
- STND/19/010 - VARIABLE MANHOLE GUIDANCE NOTES

LEGEND

	PROPOSED SURFACE WATER DRAINAGE
	PROPOSED FOUL WATER DRAINAGE
	PROPOSED ADOPTABLE SURFACE WATER MANHOLE
	PROPOSED ADOPTABLE FOUL WATER MANHOLE
	PROPOSED VORTEX FLOW CONTROL CHAMBER
	PROPOSED HIGHWAY GULLY
	PROPOSED AREAS OF PERMEABLE PAVING
	PROPOSED AREAS OF RAIN GARDENS AND TREE PITS
	PROPOSED OFF-LINE ATTENUATION BASIN
	PROPOSED CONVEYANCE SWALES
	EXISTING PUBLIC SURFACE WATER DRAINAGE
	EXISTING PUBLIC FOUL WATER DRAINAGE
	SITE BOUNDARY

PS4	03.10.2020	PRELIMINARY ISSUE - UPDATED TO SUIT REVISED SITE PLAN	J.A.J.	KOB	KOB
PS3	06.09.2020	PRELIMINARY ISSUE - UPDATED TO SUIT REVISED SITE PLAN	J.A.J.	JSB	KOB
PS2	20.07.2020	PRELIMINARY ISSUE - UPDATED TO SUIT LATEST SITE PLAN	J.A.P.	JSB	KOB
PS1	10.02.2020	PRELIMINARY ISSUE	LS	JSB	KOB
REV	DATE	DESCRIPTION	BY	CHK	APP

DRAWING STATUS:

PRELIMINARY

CLIENT:

LIV HOUSING GROUP

ARCHITECT:

GWP ARCHITECTS

PROJECT:

GAYWOOD GREEN
KIRKBY
LIVERPOOL

TITLE:

PRELIMINARY DRAINAGE STRATEGY

STATUS:	PROJECT NO:	PROJECT	ORIGINATOR	COLLUSION	LEVEL	TYPE	ROLE	DRAWING NO.	REV
S2	223-068	GWG - AJP - XX - 00 - DR - C - 0900						P04	

SCALE @ A1:	DESIGNED	DRAWN	CHECKED	APPROVED	DATE
1:250	LS	LS	KOB	KOB	FEB 2023

consulting engineers
0151 227 1462 69info@ajpjt.co.uk 91 Dale Street, Liverpool, L2 2ET

RESIDUAL DESIGN HAZARDS

- LIVE TRAFFIC ADJACENT TO SITE.
- ALL SERVICES MUST BE VERIFIED BY THE CONTRACTOR THROUGH LIAISON WITH THE VARIOUS UNDERTAKERS AND BY USING DETECTION EQUIPMENT PRIOR TO ANY EXCAVATIONS TAKING PLACE. PERMIT TO WORK REQUIRED.
- DEEP EXCAVATION REQUIRED FOR DRAINAGE WORKS. CONTRACTOR TO UTILISE BANKSMEN AND EMPLOY APPROPRIATE CONSTRUCTION TECHNIQUES TO PROTECT ALL WORKERS WITHIN DEEP EXCAVATIONS.
- SILICA DUST TO BE COMPRESSED WHEN USING CUTTING EQUIPMENT.