

SURFACE WATER MANHOLE SCHEDULE							
MANHOLE REFERENCE	CHAMBER DIMENSIONS	COVER LEVEL	INVERT LEVEL	DEPTH OF MANHOLE	COVER TYPE	CLEAR OPENING SIZE	REMARKS
S1	1200x750mm	49.950	49.405	0.545	B125	1200x675mm	
S2	1200x750mm	49.950	49.365	0.585	B125	1200x675mm	
S3	1200x675mm	49.900	49.300	0.600	B125	1200x675mm	
S4	1200x750mm	49.850	49.260	0.890*	B125	1200x675mm	MANHOLE FITTED WITH MD-SHE-0209-2100-0500-2100 HYDROBRAKE, 209mm ORIFICE, 0.5m DESIGN HEAD RESTRICTING FLOW TO MAXIMUM 21.0 L/S. *300mm SUMP
SSEXIST.	EXISTING	50.300	49.210	1.090	EXISTING	EXISTING	

KEY

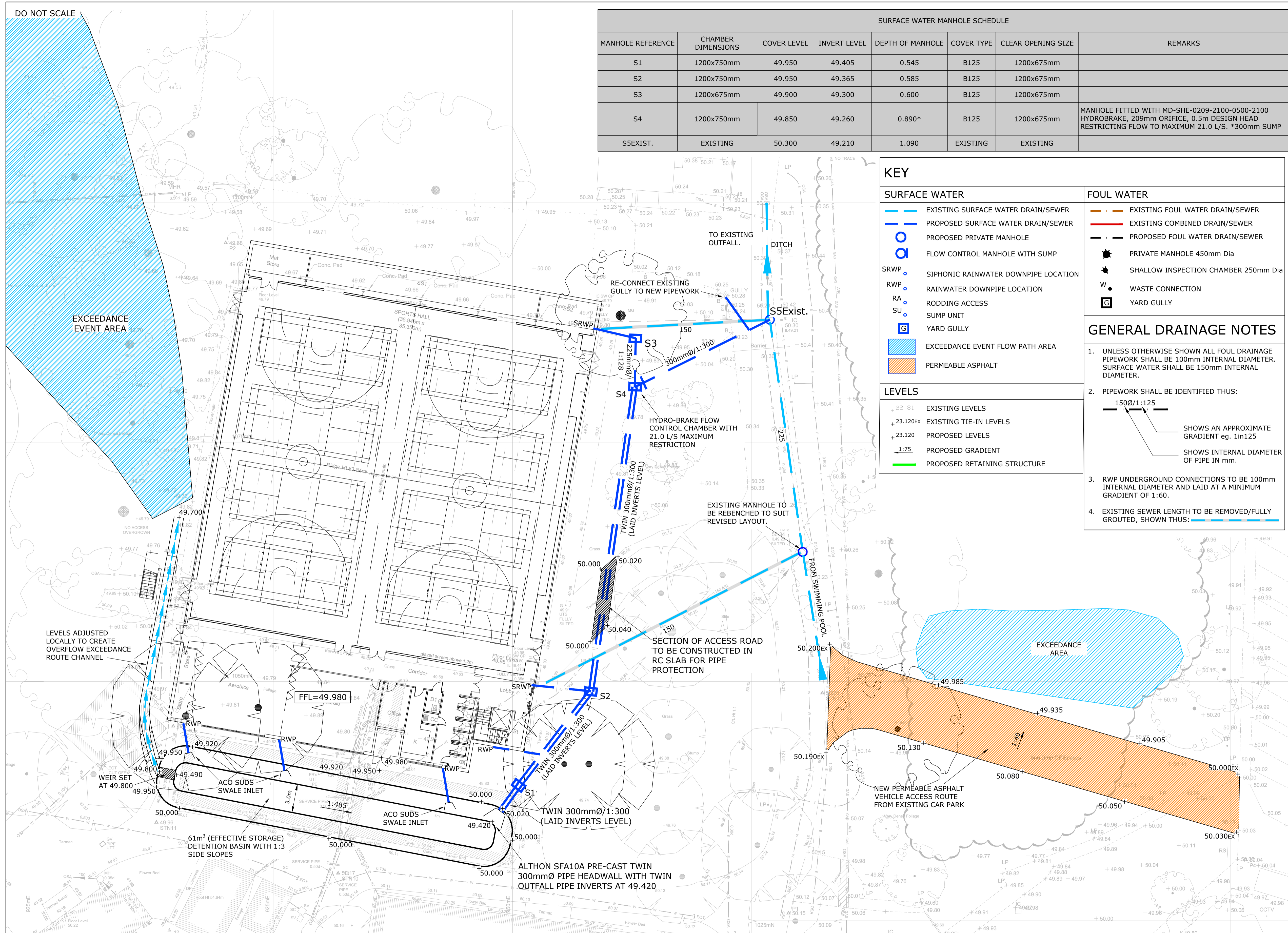
SURFACE WATER		FOUL WATER	
	EXISTING SURFACE WATER DRAIN/SEWER		EXISTING FOUL WATER DRAIN/SEWER
	PROPOSED SURFACE WATER DRAIN/SEWER		EXISTING COMBINED DRAIN/SEWER
	PROPOSED PRIVATE MANHOLE		PROPOSED FOUL WATER DRAIN/SEWER
	FLOW CONTROL MANHOLE WITH SUMP		PRIVATE MANHOLE 450mm Dia
	SIPHONIC RAINWATER DOWNPIPE LOCATION		SHALLOW INSPECTION CHAMBER 250mm Dia
	RAINWATER DOWNPIPE LOCATION		WASTE CONNECTION
	RODDING ACCESS		YARD GULLY
	SUMP UNIT		
	YARD GULLY		
	EXCEEDANCE EVENT FLOW PATH AREA		
	PERMEABLE ASPHALT		

LEVELS

	EXISTING LEVELS
	EXISTING TIE-IN LEVELS
	PROPOSED LEVELS
	PROPOSED GRADIENT
	PROPOSED RETAINING STRUCTURE

GENERAL DRAINAGE NOTES

- UNLESS OTHERWISE SHOWN ALL FOUL DRAINAGE PIPEWORK SHALL BE 100mm INTERNAL DIAMETER. SURFACE WATER SHALL BE 150mm INTERNAL DIAMETER.
- PIPEWORK SHALL BE IDENTIFIED THUS:
 150Ø/1:125
 SHOWS AN APPROXIMATE GRADIENT eg. 1in125
 SHOWS INTERNAL DIAMETER OF PIPE IN mm.
- RWP UNDERGROUND CONNECTIONS TO BE 100mm INTERNAL DIAMETER AND LAID AT A MINIMUM GRADIENT OF 1:60.
- EXISTING SEWER LENGTH TO BE REMOVED/FULLY GROUTED, SHOWN THUS:



- NOTES.**
- TOPOGRAPHICAL SURVEY UNDERTAKEN BY SITE VISION SURVEYS LIMITED, NAMED DRAWING 0117-RJC-10117.DWG. ALL LEVELS RELATE TO ORDINANCE DATUM.
 - REFER TO ARCHITECT'S DRAWINGS FOR ABOVE-GROUND DRAINAGE LOCATIONS.
 - THE CONTRACTOR SHALL, BEFORE COMMENCING THE WORKS, VERIFY ALL EXISTING OUTFALL CHAMBER INVERT LEVELS AND SITE AND SETTING OUT DIMENSIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TRUE AND PROPER SETTING OUT OF THE WORKS AND FOR THE CORRECTNESS OF THE POSITION, LEVELS, DIMENSIONS, AND ALIGNMENT OF ALL PARTS OF THE WORKS.
 - ALL EARTHWORKS TO BE UNDERTAKEN IN ACCORDANCE WITH THE SPECIFICATION FOR HIGHWAY WORKS, INCLUDING LAYING, TOLERANCES, COMPACTION, SITE PREPARATION AND MATERIAL SELECTION AND GRADING.
 - CBR TESTS TO BE UNDERTAKEN AT FORMATION LEVEL AND CONFIRMED TO RICHARD JACKSON LTD.
 - CONNECTION PIPEWORK TO PUBLIC SEWERS TO BE CLAY OR CONCRETE.

- ALL BUILDING DRAINAGE TO BE INSTALLED AND TESTED IN COMPLIANCE WITH THE BUILDING REGULATIONS 2000 DRAINAGE AND WASTE DISPOSAL, APPROVED DOCUMENT H, 2002 EDITION.
- ALL COMPONENTS AND MATERIALS ARE TO BE MANUFACTURED AND SUPPLIED IN ACCORDANCE WITH THE RELEVANT BRITISH STANDARDS, LAID AND BACKFILLED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND THE RELEVANT BRITISH STANDARDS.
- INSITU CONCRETE FOR USE IN GENERAL DRAINAGE WORKS SHALL BE IN ACCORDANCE WITH BS-8500, THE RECOMMENDATIONS OF THE SITE INVESTIGATION REPORT AND BRE DIGEST 1 "CONCRETE IN AGGRESSIVE GROUND" TO MEET ANY EXPECTED SULPHATE CONDITIONS.
- ALL GULLIES, CHANNELS AND MANHOLE COVERS ARE TO BE SET 5mm LOWER THAN INDICATED ON THE DRAWING (I.E. 5mm LOWER THAN THE ADJACENT SURFACE). ALL DRAIN AND SEWER PIPES ARE TO BE LAID SOFFIT TO SOFFIT, UNLESS SHOWN OTHERWISE.

- ALL ABOVE-GROUND DRAINAGE TO INCORPORATE RODDING ACCESS FACILITIES.
- ALL MANHOLE COVERS AND FRAMES SHALL BE MANUFACTURED FROM DUCTILE IRON AND COMPLY WITH BSEN:124 AND BE MARKED 'FW' OR 'SW'. THEY SHALL BE NON-VENTILATING TYPE AND HAVE CLOSED KEYWAYS. THE MINIMUM FRAME DEPTH SHALL BE 100mm. MANHOLE COVERS IN TRAFFICKED AREAS TO BE D400 GRADE, C250 GRADE TO BE USED IN PEDESTRIAN ONLY LOCATIONS.
- SMALL LIGHTWEIGHT ACCESS COVERS SHOULD BE SECURED (E.G. WITH SCREWS) TO DETER UNAUTHORISED ACCESS.
- INSPECTION CHAMBERS AND MANHOLES IN BUILDINGS TO HAVE MECHANICALLY FIXED AIRTIGHT COVERS UNLESS THE DRAIN ITSELF HAS WATERTIGHT ACCESS COVERS.
- MANHOLES DEEPER THAN 1M TO HAVE GALVANISED STEEL STEP IRONS OR FIXED LADDERS.
- MANHOLE COVERS WITHIN BLOCK PAVED AREAS ARE TO BE RECESSED WITH BLOCK PAVING TO MATCH.

- ALL DRAINAGE CHANNELS AND GULLIES TO INCLUDE 'HEELGUARD' GRATING.
- CONTRACTOR TO UNDERTAKE A PRE-CONSTRUCTION CCTV DRAINAGE SURVEY TO CONFIRM THAT NO EXISTING THIRD PARTY CONNECTIONS REQUIRE MAINTAINING OR DIVERTING THROUGH THE DEVELOPMENT SITE.

REV	DATE	DESCRIPTION	DRAWN	CHKD
REVISIONS				

This drawing is to be read in conjunction with all other Engineer's drawings and all other project information. Any discrepancy between the Engineer's drawings and other project information is to be reported to the Engineer immediately.



Project
QUEENSWOOD SCHOOL, HATFIELD

Title
SURFACE WATER DRAINAGE STRATEGY

Client
BALL HALL (PROJECT MANAGEMENT) LTD.

Scale	Drawn	Date
1:200 @ A1	CYF	30/10/2017
Job Manager	Checked	Approved
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Drawing Status
 INFORMATION APPROVAL COSTING
 TENDER CONSTRUCTION AS CONSTRUCTED