

- DO NOT SCALE THIS DRAWING. ALL DIMENSIONS MUST BE VERIFIED ON SITE. IF IN DOUBT ASK.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS.
- ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL LEVELS IN METRES UNLESS NOTED OTHERWISE.
- ANY DISCREPANCIES NOTED ON SITE ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY.
- THE BASE SPECIFICATION FOR DRAINAGE WORKS SHALL BE THE WATER AUTHORITY ASSOCIATION "SEWERS FOR ADOPTION" (LATEST EDITION).
- FOR DETAILS OF GROUND CONDITIONS REFER TO THE GROUND INVESTIGATION REPORT.
- THE FOLLOWING PIPE STRENGTHS SHALL BE ADOPTED UNLESS NOTED OTHERWISE:-
PIPES UP TO AND INCLUDING 150mm Ø TO BE PVC-U TO BS EN 1329, OR CLAYWARE TO BS EN 295 CLASS 160.
PIPES 150mm Ø UP TO AND INCLUDING 225mm Ø TO BE CLAYWARE TO BS EN 295 CLASS 160
300mm Ø TO BE CLAYWARE TO BS EN 295 CLASS 160 OR CONCRETE TO BS 5911 CLASS M.
PIPES OVER 300mm Ø TO BE CONCRETE TO BS 5911 CLASS M.
- ALL PIPE RUNS TO BE LAID WITH FLEXIBLE JOINTS.
- ALL PIPES ENTERING AND EXITING MANHOLES ARE TO BE CONNECTED WITH PIPE SOFFITS LEVEL UNLESS NOTED OTHERWISE.
- BEDDING AND SURROUND TO BE AS FOLLOWS :-

LOCATION	COVER TO SOFFIT	BEDDING
ROADS	>1.2m	CLASS "S" GRANULAR BED & SURROUND
	<1.2m	CLASS "Z" CONCRETE SURROUND
HARD AND SOFT LANDSCAPING	>0.6m	CLASS "S" GRANULAR BED & SURROUND
	<0.6m	CLASS "Z" CONCRETE SURROUND

12. THE FOLLOWING CONCRETE MIXES ARE TO BE USED (ALL IN ACCORDANCE WITH BS 8500) :-

LOCATION	MIX REFERENCE	(WHERE APPLICABLE)
CONCRETE SURROUND TO PIPES	GEN 3	
CONCRETE BASE & SURROUND TO MANHOLES	GEN 3	

- ALL PRECAST CONCRETE PRODUCTS (IE PIPES, MANHOLES RINGS ETC.) SHALL BE OF SUITABLE CONCRETE MIX TO CATER FOR CLASS 2 SULPHATES.
- PRE-FORMED CHANNELS ARE TO BE USED IN MANHOLES WHERE APPLICABLE.
- GRAVELITHIC CONCRETE BECHING TO BE USED IN MANHOLES TO A DENSE SMOOTH FACE NEATLY SHAPED AND FINISHED TO ALL BRANCH CONNECTIONS AND LAID IN ACCORDANCE WITH THE SPECIFICATION.
- ALL CONNECTIONS TO BE TURNED IN DIRECTION OF FLOW USING PIPE BENDS.
- MANHOLE COVERS AND FRAMES TO BE DUCTILE IRON MEDIUM DUTY GRADE B125 CIRCULAR OR RECTANGULAR TO BS EN124 POSITIONS OUTSIDE VEHICULAR TRAFFICKED AREAS.
- MANHOLE COVERS AND FRAMES TO BE DUCTILE IRON MEDIUM DUTY GRADE A15 COVERS IN SOFT LANDSCAPING, E600 IN SERVICE YARD.
- FIRST FLEXIBLE JOINT IN PIPES ADJACENT TO A MANHOLE SHALL BE A MAXIMUM OF 600mm FROM INSIDE FACE OF MANHOLE, CONNECTING TO ROCKER PIPE.

THE LENGTH OF ROCKER PIPE IS AS FOLLOWS:-

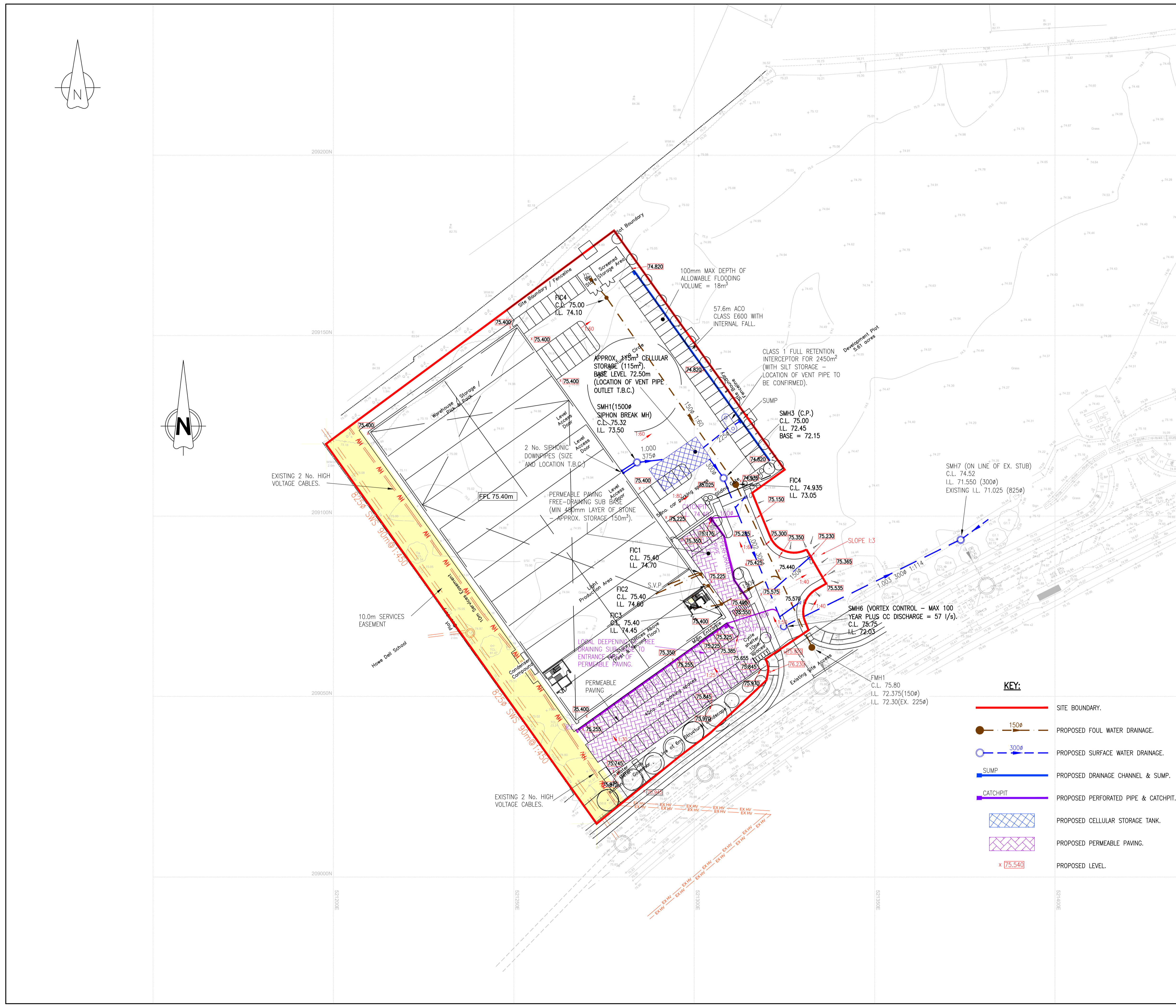
PIPE DIAMETER	LENGTH OF ROCKER PIPE
150mm - 600mm	600mm
675mm - 750mm	1000mm
825mm & OVER	1250mm

- MANHOLES WITH OUTGOING PIPES GREATER THAN 600mm Ø SHALL BE FITTED WITH GUARD BARS, SAFETY CHAINS OR OTHER SAFETY DEVICES.
- THE PRINCIPLE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE EXISTING LINE AND INVERT LEVELS OF ANY CONNECTION POINTS FOR BOTH THE FOUL AND SURFACE WATER SYSTEMS, PRIOR TO UNDERTAKING INSTALLATION OF ANY NEW DRAINAGE WORKS. ANY DEVIATION TO THE LEVELS AND POSITIONS INDICATED ON THE DRAWING SHOULD BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE PROJECT ENGINEER.
- ALL INVERTS SPECIFIED ARE OUTGOING (EXCEPT BACKDROP).
- ALL PIPE ARE TO BE LAID SOFFITS LEVELS UNLESS NOTED OTHERWISE.
- ALL FOUL CONNECTIONS TO BE 100mm Ø LAID AT A MINIMUM GRADIENT OF 1/40 UNLESS NOTED OTHERWISE. ALL SURFACE WATER PIPE TO BE 150mm Ø UNLESS NOTED OTHERWISE.
- ALL CONNECTIONS TO BE MADE BY PURPOSE-MADE JUNCTIONS AS FAR AS PRACTICABLE.
- LOCATION OF CELLULAR SOAKAWAYS VENT PIPES TO BE CONFIRMED AT DETAIL DESIGN BY MANUFACTURER.
- PROPOSED SITE LAYOUT TAKEN FROM A.J.A. ARCHITECTS DRAWING No. 605-033 SITE LAYOUT PLAN (DATED 28/02/2017).
- SIPHONIC ROOF WATER DRAINAGE SYSTEM DISCHARGE PIPES/FLOWS/OVER FLOWS TO BE CONFIRMED.
- THIS DRAWING IS SUBJECT TO DETAIL DESIGN AND IS FOR PLANNING SUBMISSION ONLY.

FOR PLANNING

KEY:

- SITE BOUNDARY.
- 150ø PROPOSED FOUL WATER DRAINAGE.
- 300ø PROPOSED SURFACE WATER DRAINAGE.
- SUMP
- PROPOSED DRAINAGE CHANNEL & SUMP.
- CATCHPIT
- PROPOSED PERFORATED PIPE & CATCHPIT.
- PROPOSED CELLULAR STORAGE TANK.
- PROPOSED PERMEABLE PAVING.
- x 75.540 PROPOSED LEVEL.



Rev	Date	Description	By	Chkd By
B	21/03/17	ARCHITECT'S LAYOUT UPDATED. LEVELS REVISED.	GH	N.S.B.
A	01/03/17	ARCHITECT'S LAYOUT UPDATED. DRAINAGE UPDATED.	P.T.	N.S.B.

Revision Schedule

Project Title	Project Engineer
HATFIELD BUSINESS PARK PLOT 5000	N.S.B.
Drawing Title	Project Engineer
PROPOSED CAR PARKING AND DRAINAGE STRATEGY PLAN	N.S.B.
Drawn by K.M.	Checked by P.T.
Date FEB 2017	Scale 1:500
Project No 12313	Drawing No 106
Rev B	

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