PRIVATE SURFACE WATER

REF	COVER LEVEL(m)	INVERT LEVEL(m)	DEPTH TO INVERT(m)	MAIN PIPE DIA (mm)		MANHOLE TYPE	COVER TYPE	
F7	128.55	127.65	0.90	100		IC		
F6	127.96	126.96	1.00	100		IC		
F5	127.50	126.30	1.20	100		IC		
F4	127.00	125.80	1.20	100		IC		
F3	125.50	124.30	1.20	100		IC		
F1	124.50	123.30	1.20	100		IC		TO PACKAGE TREATMENT PLANT
F2	124.68	123.58	0.90	100		IC		
F9	124.85	123.95	0.90	100		IC		
F8	124.85	123.85	1.00	100		IC		

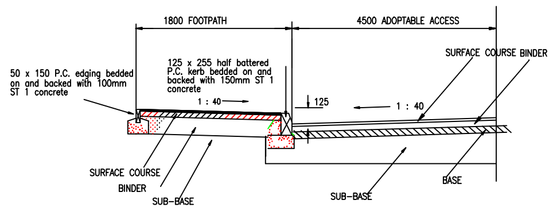
PRIVATE SURFACE WATER

REF	COVER LEVEL(m)	INVERT LEVEL(m)	DEPTH TO INVERT(m)	MAIN PIPE DIA (mm)		MANHOLE TYPE	COVER TYPE	
S6A	128.43	127.73	0.70	100		IC	LIGHT	
S6	128.00	127.20	0.80	100		IC	HEAVY	
S5	127.75	126.65	1.00	150		IC	HEAVY	CONCRETE SURROUND
S4	126.97	125.97	1.00	150		IC	HEAVY	CONCRETE SURROUND
S3	124.60	123.01	1.59	225		PCC	HEAVY	
S2	124.25	122.87	1.38	225		PCC	HEAVY	
S1	123.83	122.63	1.20	225		PCC	HEAVY	NEW MANHOLE ON EXISTING
S7	124.48	123.10	1.38	150		PCC	HEAVY	
S8	124.48	123.22	1.26	150		PCC	HEAVY	
S9	124.88	124.18	0.70	100		IC	LIGHT	
S10	124.88	124.08	0.80	100		IC	LIGHT	
S11	124.40	123.70	0.70	100		IC	LIGHT	

IC = POLYPROPYLENE INSPECTION CHAMBER

PCC = 1200mm DIAM PRECAST RINGS UNDER MAIN ACCESS ROAD

ALL COVER LEVELS (FOUL AND SURFACE WATER) TO BE CONFIRMED ON SITE
PROPOSED INVERTS MAY BE ADJUSTED ON SITE TO SUIT LOCAL CONDITIONS



TYPICAL SECTION THROUGH ADOPTABLE ACCESS (CROSSFALL)

ALL WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH WREXHAM C.B.C. GUIDELINES ON ADOPTABLE HIGHWAYS

ADOPTABLE ACCESS ROAD CONSTRUCTION DETAILS

	MATERIAL	B.S. EN 13108 Section REF.	NOMINAL AGGREGATE SIZE	THICKNESS OF LAYER (mm)	PSV
SURFACE COURSE	STONE MASTIC ASPHALT (SMA) surface 40/60	SECTION 5	10mm	40mm	60
OR	HOT ROLLED ASPHALT SEE NOTE 5	SECTION 4	14mm	45mm	60
BINDER COURSE	ASPHALT CONCRETE BINDER 100/150	SECTION 1	20mm	60mm	
BASE	ASPHALT CONCRETE BINDER 100/150	SECTION 1	32mm	100mm	
SUB-BASE	Granular Type 1	D.O.T. Clause 803	–	320mm	
CAPPING LAYER	Type 6F2	D.O.T.	–	240mm	
TOTAL THICKNESS (mm)				760/765mm	*

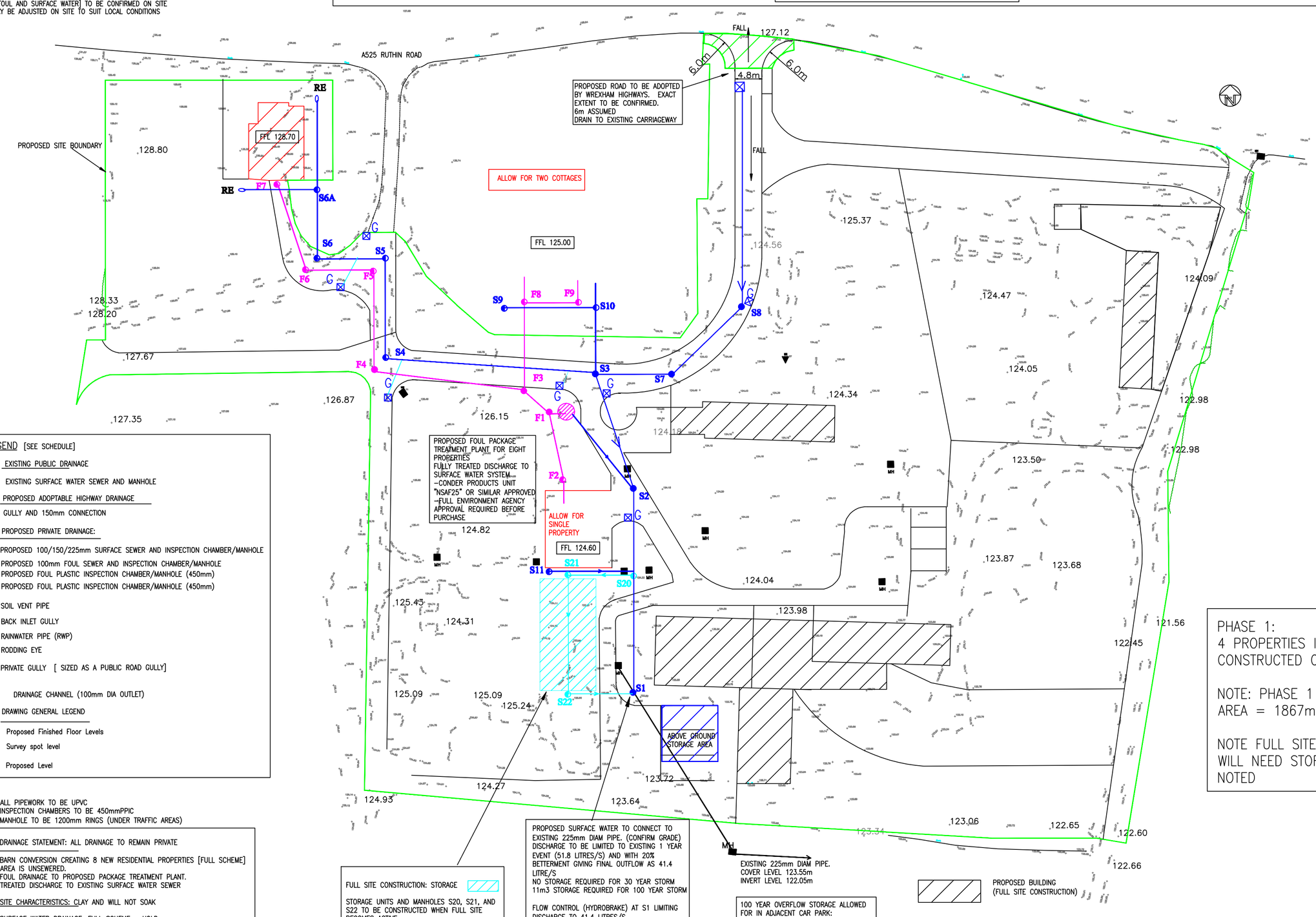
* If CBR value is LESS than 2% , subbase thickness = 150mm capping layer = 600mm
If CBR value is GREATER than 5%, subbase thickness = 245mm. no capping layer

Based upon a CBR value at road formation level of 3%
CBR TO BE CONFIRMED

FOOTPATH CONSTRUCTION DETAILS: 1.8m WIDTH

LAYER	MATERIAL	B.S. EN 13108 Section REF.	NOMINAL AGGREGATE SIZE	THICKNESS OF LAYER (mm) FOOTPATH	THICKNESS OF LAYER (mm) VEHICLE CROSSOVERS
SURFACE COURSE	ASPHALT CONCRETE BINDER 160/220	SECTION 1	6mm	20mm	20mm
BINDER COURSE	ASPHALT CONCRETE BINDER 160/220	SECTION 1	20mm	40mm	60mm
SUB-BASE	Granular Type 1	D.O.T. Clause 803	–	100mm	150mm
TOTAL THICKNESS (mm)				160mm	230mm

Note : 3 No. minimum dropped kerbs to be used at vehicular crossings.



DRAINAGE LEGEND [SEE SCHEDULE]

EXISTING PUBLIC DRAINAGE
MH EXISTING SURFACE WATER SEWER AND MANHOLE
PROPOSED ADOPTABLE HIGHWAY DRAINAGE
G GULLY AND 150mm CONNECTION
PROPOSED PRIVATE DRAINAGE:
S1 PROPOSED 100/150/225mm SURFACE SEWER AND INSPECTION CHAMBER/MANHOLE
F1 PROPOSED 100mm FOUL SEWER AND INSPECTION CHAMBER/MANHOLE
PROPOSED FOUL PLASTIC INSPECTION CHAMBER/MANHOLE (450mm)
PROPOSED FOUL PLASTIC INSPECTION CHAMBER/MANHOLE (450mm)
SOIL VENT PIPE
BACK INLET GULLY
RAINWATER PIPE (RWP)
RE RODDING EYE
G1 PRIVATE GULLY [SIZED AS A PUBLIC ROAD GULLY]
DRAINAGE CHANNEL (100mm DIA OUTLET)
DRAWING GENERAL LEGEND
FFL 153.00 Proposed Finished Floor Levels
124.82 Survey spot level
^82.80 Proposed Level

ALL PIPEWORK TO BE UPVC
INSPECTION CHAMBERS TO BE 450mmPPIC
MANHOLE TO BE 1200mm RINGS (UNDER TRAFFIC AREAS)

DRAINAGE STATEMENT: ALL DRAINAGE TO REMAIN PRIVATE

BARN CONVERSION CREATING 8 NEW RESIDENTIAL PROPERTIES [FULL SCHEME]
AREA IS UNSEWERED.
FOUL DRAINAGE TO PROPOSED PACKAGE TREATMENT PLANT.
TREATED DISCHARGE TO EXISTING SURFACE WATER SEWER

SITE CHARACTERISTICS: CLAY AND WILL NOT SOAK

SURFACE WATER DRAINAGE: FULL SCHEME HOLD

100-YEAR SURFACE WATER [PLUS 30% CLIMATE CHANGE]
APPROX, 100m3: TO BE STORED IN SITE IN LOW AREAS / BUNDED AREAS

HIGHWAY STATEMENT:
FIRST 6m (APPROX.) TO BE ADOPTED BY WREXHAM COUNTY COUNCIL.
REMAINDER TO BE PRIVATE

FULL SITE CONSTRUCTION: STORAGE

STORAGE UNITS AND MANHOLES S20, S21, AND S22 TO BE CONSTRUCTED WHEN FULL SITE BECOMES ACTIVE.
PROPOSED DISCHARGE LIMITED TO 41.4 LITRES/S AS WITH THE SMALLER SCHEME

PROPOSED STORAGE = CELLULAR BLOCKS
20m X 10m x 1m DEPTH LAID AT 1:300

	INVERT LEVEL
S20	122.77
S21	122.73
S22	122.66

PROPOSED SURFACE WATER TO CONNECT TO EXISTING 225mm DIAM PIPE. (CONFIRM GRADE)
DISCHARGE TO BE LIMITED TO EXISTING 1 YEAR EVENT (51.8 LITRES/S) AND WITH 20% BETTERMENT GIVING FINAL OUTFLOW AS 41.4 LITRE/S
NO STORAGE REQUIRED FOR 30 YEAR STORM
11m3 STORAGE REQUIRED FOR 100 YEAR STORM

FLOW CONTROL (HYDROBRAKE) AT S1 LIMITING DISCHARGE TO 41.4 LITRES/S

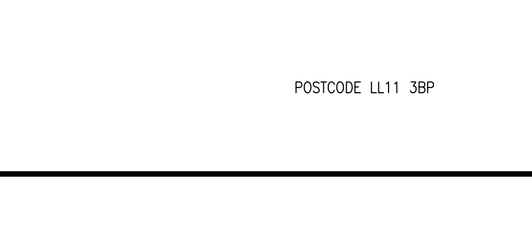
100 YEAR OVERFLOW STORAGE ALLOWED FOR IN ADJACENT CAR PARK:
100m2 SURFACE AREA.
EXACT DETAIL PENDING DETAILED DESIGN

PHASE 1:
4 PROPERTIES IN RED TO BE CONSTRUCTED ONLY

NOTE: PHASE 1 IMPERMEABLE AREA = 1867m2

NOTE FULL SITE CONSTRUCTION WILL NEED STORAGE UNITS, AS NOTED

INTERNAL ROAD DETAIL



IN-SITE ACCESS ROADS CONSTRUCTION: (ALL AREAS EXCEPT ADOPTABLE ZONE AT ENTRANCE)
-RESIN BOUND GRAVEL-COLOUR TO BE AGREED TO BE LAID ON EITHER:
40mm DBM WEARING COURSE
BINDER/BASE/SUB-BASE/CAPPING AS ADOPTABLE:
OR
ON EXISTING CONCRETE SURFACING, WITH A "GLASSTEX" or SIMILAR, GEOTEXTILE OVERLAY.
THIS METHOD IS DEPENDANT ON EXISTING SURFACING AND SUB-BASE BEING OF ADEQUATE CONSTRUCTION

PROPOSED ROADS, FOUL AND SURFACE WATER LAYOUT: PRELIMINARY

POSTCODE LL11 3BP

NOTES:
ALL INFORMATION (AREAS, LAYOUT, EXISTING MANHOLES,) APPROXIMATE.

ALL DRAINAGE TO REMAIN PRIVATE

SOME EXISTING IN-SITE DRAINAGE MAY BE RE-USABLE. CURRENT DESIGN ONLY ALLOWS FOR RE-USING LAST LENGTH

DRAINAGE NOTE:
ALL PROPOSED RAINWATER RUN-OFF TO BE COLLECTED BY THE PROPOSED DRAINAGE SYSTEM

REFER TO CALCULATIONS
"1292-SURFACE WATER RUN-OFF"
"1292-SURFACE WATER STORAGE"

NOTE:

SHOULD THE FULL DEVELOPMENT PROCEED, THE LARGER STORAGE/ATTENATION SYSTEM WILL BE REQUIRED. WREXHAM COUNCIL DRAINAGE APPROVAL WILL BE REQUIRED FOR THIS SCHEME

LAYOUT, GULLY LOCATIONS, FINISHED FLOOR LEVELS, AND OUTFALL TO BE CONFIRMED

Rev	Description	Date	Drwn	Chkd
E	FULL SITE STORAGE ADDED	12:4:16	AK	AK
	PRELIMINARY			
D	OUTFALL DISCHARGE AMENDED	29:3:16	AK	AK
C	SCHEDULE ADDED	16:3:16	AK	AK
B	ADOPTABLE AREA, GULLY REVISED	11:3:16	AK	AK
A	INTERNAL ROAD DETAIL ADDED	2:3:16	AK	AK

KANE DESIGN
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Gresford
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LL12 8HH
Tel: 01 978 855888

Client
STRUTT and PARKER

Project
PROPOSED DEVELOPMENT at PLAS POWER ESTATE, WREXHAM

Title
DRAINAGE FEASIBILITY SMALLER SCHEME

DRAWING NUMBER	SCALE	1:500	@ A1
1292/101	DATE	01:03.16	REVISION E
	DRAWN	AK	
	CHECKED	A.K	