MANHOLE SCHEDULE
Surface Water Sewer

MH No	Cover Level	Invert Level	MH type & Dia	Grade of MH cover	Co-ords
IDB SW 1	2.38	0.757	X 1500	D	2089.209E 4609.234N
IDB SW 2	2.45	0.788	Catchpit 1500	D	2082.875E 4623.950N
S1	2.56	0.915	X 1500	D	2074.864E 4648.994N
S2	2.64	1.040	X 1350	D	2068.035E 4668.283N
S1/1	2.38	1.135	X 1350	D	2101.194E 4658.818N
S1/2	2.48	1.218	X 1350	D	2129.829E 4674.993N

MANHOLE SCHEDULE
Foul Water Sewer

MH No	Cover Level	Invert Level	MH type & Dia	Grade of MH cover	Co-ords
F1	2.41	-0.144	B 1200	D	2083.869E 4614.325N
F2	2.57	0.119	B 1350	D	2071.121E 4650.551N
F3	2.66	0.257	B 1350	D	2064.680E 4669.601N
F2/1	2.41	0.319	B 1200	D	2099.277E 4660.016N
F2/2	2.46	0.526	B 1200	D	2125.515E 4675.831N
F2/3	2.56	0.746	B 1350	D	2146.586E 4683.159N

KEY

- Proposed SWS (Section 104)
- Proposed FWS (Section 104)
- Proposed IDB drain
- Proposed Pram Crossing(all require tactile paving)
- Proposed Gully
- Proposed Street Lighting
  5m column type 3M10 to APP 19/3
  with post top mounted lantern to APP 14/2
  (Residium FGS 224)

Existing Services

- Water
- BT
- Electricity

Routes of existing plant are taken from record drawings and exact location is to be verified on site in conjunction with statutory undertakings before works commence.

ALL WORKS TO BE CONSTRUCTED TO LATEST L.C.C SPEC.DATED 1999 TO WHICH THE CLAUSE NUMBERS ON THIS DRAWING REFER.

ALL HIGHWAY SIGNING/MARKINGS TO BE AGREED ON SITE BY DIVISIONAL HIGHWAYS MANAGER.

Rev. No.	REVISION	Date	Drawn By	Checked By
A	Emergency access/pedestrian link added	22.3.01	AJMB	AJMB
B	Street lighting scheme confirmed.plots 1-11 revised	24.4.01	AJMB	AJMB

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WORMALD, BURROWS PARTNERSHIP
Civil Engineering Consultants
12a & 14a Hitchin Street, Tel 01767 317244
Biggleswade, Beds SG18 8AX, U.K. Fax 315434

Project
Proposed Development at:-
Backgate - Cowbit

SOUTH HOLLAND DC
HOUSING
16 AUG 2001
Ref: 0987/01

Drawing Description
Adoptable Roads & Sewers
Phase 1

Client
Swallow Homes Ltd
West Elloe Avenue
Spalding
Lincolnshire PE11 2BS

Drawing Number
E1333/2/B

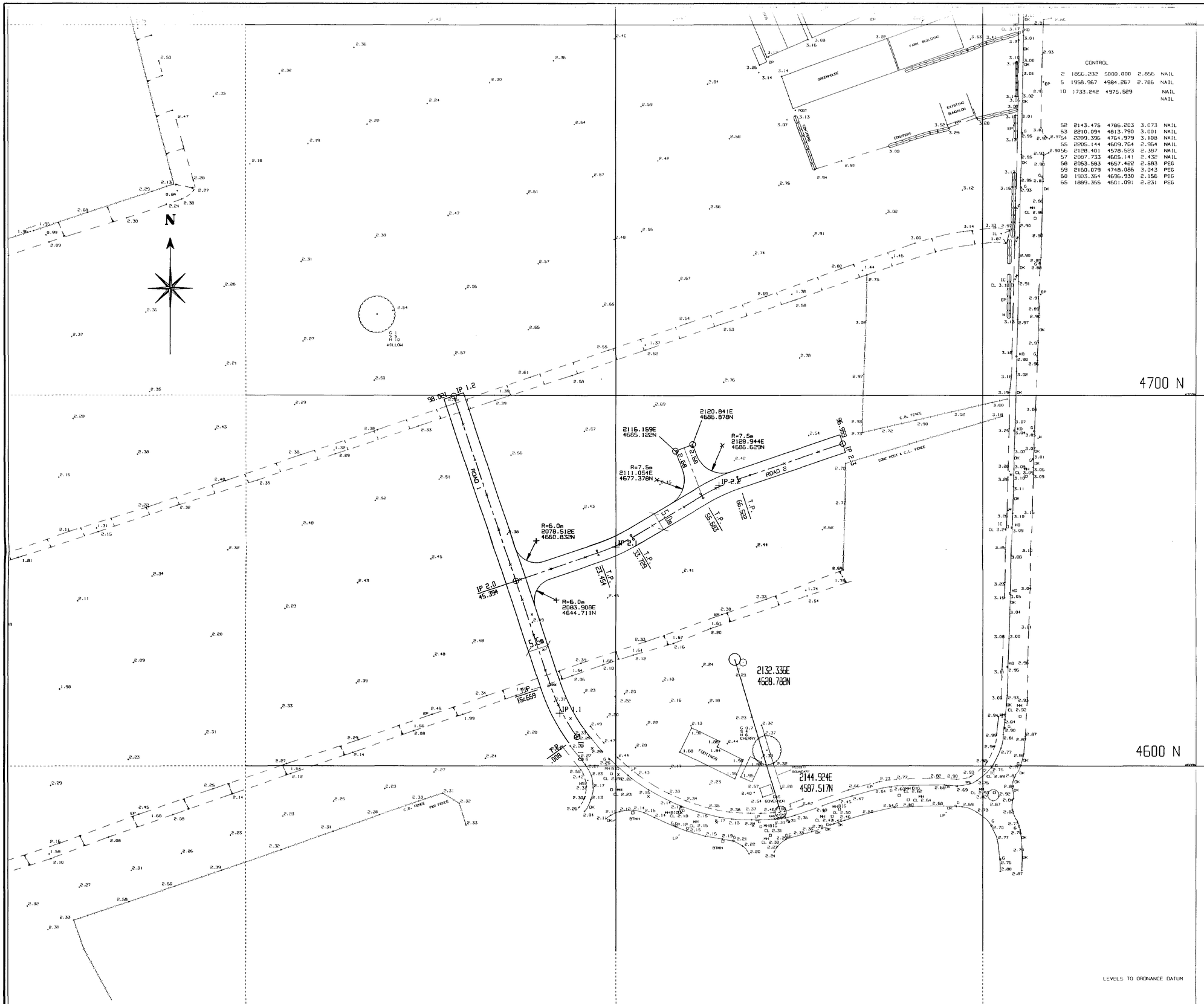
Drawn By WD
Date Feb.'01

Scale 1:500

Checked By AJMB
Date 20.3.01

Architect

Contractor to arrange for CCTV survey of existing sewers fronting Plots 1 - 4 to locate their extent & possible lateral connections. If laterals exist then then the line and level of these to be surveyed. Findings to be reported to Engineer prior to commencement of private drainage works.



LEVELS TO ORDNANCE DATUM

STATION	EASTINGS	NORTHINGS	RADIUS	TANGENT LENGTH	ARC LENGTH	INT. ANGLE
I.P. 1.0	2089.569	4607.906				
I.P. 1.1	2084.875	4614.260	49.942	7.890	15.651	17-57-19
C.P. 1.1	2129.729	4637.596				
I.P. 1.2	2056.225	4699.844				
I.P. 2.0	2072.931	4649.939				
I.P. 2.1	2100.000	4659.200	50.000	5.156	10.275	11-46-27
C.P. 2.1	2078.936	4704.839				
I.P. 2.2	2128.000	4675.800	50.000	5.441	10.838	12-25-11
C.P. 2.2	2148.819	4630.016				
I.P. 2.3	2162.075	4687.031				

Job : e1333

Road number : 1

Coordinates along road centre line at 10 metre intervals

Metrage	Easting	Northing	Curve/Straight
0.0000	2089.5690E	4607.9080N	Start
0.0082	2089.5641E	4607.9146N	Tangent Point
10.0000	2084.4666	4616.4889	Curve Radius 49.942
15.6588	2082.3704E	4621.7419N	Tangent Point
20.0000	2080.9923	4625.8585	Straight
30.0000	2077.8179	4635.3413	Straight
40.0000	2074.6434	4644.8241	Straight
50.0000	2071.4690	4654.3068	Straight
60.0000	2068.2945	4663.7896	Straight
70.0000	2065.1201	4673.2724	Straight
80.0000	2061.9456	4682.7551	Straight
90.0000	2058.7712	4692.2379	Straight
98.0210	2056.2250E	4699.8440N	End

Job : e1333

Road number : 2

Coordinates along road centre line at 10 metre intervals

Metrage	Easting	Northing	Curve/Straight
0.0000	2072.9312E	4649.9387N	Start
10.0000	2082.3928	4653.1759	Straight
20.0000	2091.8543	4656.4131	Straight
23.4537	2095.1220E	4657.5311N	Tangent Point
30.0000	2101.1597	4660.0490	Curve Radius 50.000
33.7285	2104.4348E	4661.8292N	Tangent Point
40.0000	2109.8235	4665.0275	Straight
50.0000	2118.4314	4670.1272	Straight
55.6833	2123.3201E	4673.0255N	Tangent Point
60.0000	2127.1237	4675.0640	Curve Radius 50.000
66.5217	2133.1671E	4677.5030N	Tangent Point
70.0000	2136.4706	4678.5919	Straight
80.0000	2145.9680	4681.7222	Straight
90.0000	2155.4654	4684.8525	Straight
96.9593	2162.0750E	4687.0310N	End

Rev. No.	REVISION	Date	Drawn By	Checked By
A	Spot levels added to turning head	21.3.01	AJMB	AJMB

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WORMALD, BURROWS PARTNERSHIP
Civil Engineering Consultants
12a & 14a Hitchin Street, Tel 01767 317244
Biggleswade, Beds SG18 8AX, U.K. Fax 315434

Project
Proposed Development at:-
Backgate - Cowbit

Drawing Description
Horizontal Alignment

SOUTH HOLLAND DC
HOUSING & PLANNING
16 AUG 2001
Ref: 0987/01

Client
Swallow Homes Ltd
West Elloe Avenue
Spalding
Lincolnshire
PE11 2BS

Drawing Number
E1333/1/A

Drawn By WD Date 14.3.01
Scale 1:500
Checked By AJMB Date 20.3.01

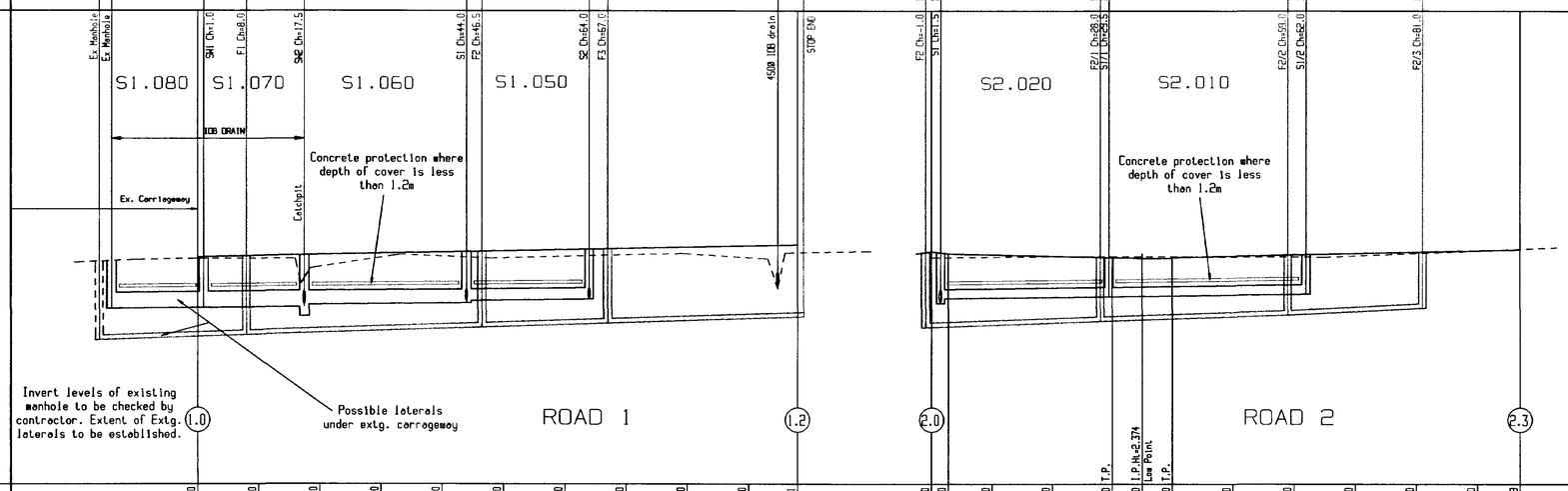
Architect

Roy Roberts F.Inst.C.E.S.
Land Surveyor
26 Eastgate, Deeping St. James
Peterborough. PE6 8HJ
Telephone: 01778 342755

JOB TITLE
SITE SURVEY
STONEGATE & BACKGATE
COWBIT

SCALE 1/500
DATE 1/3/01, 8/11/99, 31/10/00

MANHOLE COVER LEVELS (approx)	2.28 · 2.36 · 2.4 · 2.39 · 2.64 · 2.65 · 2.49 · 2.5
FOUL WATER SEWER INVERT LEVELS	-0.311 · 150ø 1/150 L=25m · -0.144 · 150ø 1/150 L=38.5m · 0.119 · 150ø 1/150 L=20m · 0.252 · 150ø 1/150 L=32m · 0.455 · 0.119 · 150ø 1/150 L=30m · 0.319 · 150ø 1/150 L=31m · 0.545 · 150ø 1/100 L=22m · 0.746
SURFACE WATER SEWER INVERT LEVELS	0.728 · 525ø 1/516.7 L=15m · 0.757 · 525ø 1/516.7 L=16m · 0.788 · 0.823 · 450ø 1/500 L=26m · 0.915 · 0.950 · 375ø 1/400 L=20m · 1.040 · 1.514 · 1.065 · 300ø 1/400 L=28m · 1.135 · 300ø 1/400 L=33m · 1.218
MANHOLE DIAMETER	1200 · 1500 · 1200 · 1500 · 1500 · 1350 · 1350 · 1350 · 1500 · 1200 · 1350 · 1200 · 1350



DATUM -5.000M.AOD ▽	
METRAGE ON CENTRELINE	0.000 · 10.000 · 20.000 · 30.000 · 40.000 · 50.000 · 60.000 · 70.000 · 80.000 · 90.000 · 96.021 · 0.000 · 2.750 · 10.000 · 20.000 · 30.000 T.P. · 35.000 I.P. Ch=2.374 Low Point · 40.000 I.P. · 50.000 · 60.000 · 70.000 · 80.000 · 90.000 · 96.959
LEVELS ON CENTRELINE OF CARRIAGEWAY	2.400 · 2.442 · 2.483 · 2.525 · 2.567 · 2.608 · 2.650 · 2.692 · 2.733 · 2.775 · 2.808 · 2.588 · 2.520 · 2.487 · 2.442 · 2.396 · 2.385 · 2.396 · 2.442 · 2.487 · 2.533 · 2.578 · 2.624 · 2.655
LEVELS ON LEFT HAND CHANNEL	2.331 · 2.373 · 2.414 · 2.456 · 2.498 · 2.539 · 2.581 · 2.623 · 2.664 · 2.706 · 2.739 · 2.424 · 2.379 · 2.333 · 2.322 · 2.333 · 2.379 · 2.424 · 2.470 · 2.515 · 2.561 · 2.592
LEVELS ON RIGHT HAND CHANNEL	2.331 · 2.373 · 2.414 · 2.456 · 2.498 · 2.539 · 2.581 · 2.623 · 2.664 · 2.706 · 2.739 · 2.424 · 2.379 · 2.333 · 2.322 · 2.333 · 2.379 · 2.424 · 2.470 · 2.515 · 2.561 · 2.592
VERTICAL DESIGN ON CARRIAGEWAY CENTRELINE	GRADIENT .417% (1 in 240) · GRADIENT -.455% (-1 in 220) · SAG R=1100m · GRADIENT .455% (1 in 220)
HORIZONTAL DESIGN ON CARRIAGEWAY CENTRELINE	R.H. CURVE · STRAIGHT · STRAIGHT · L.H. CVE. · STRAIGHT · R.H. CVE. · STRAIGHT
EXISTING LEVELS	2.229 · 2.319 · 2.359 · 2.350 · 2.540 · 2.060 · 2.490 · 2.380 · 2.530 · 2.380 · 2.330 · 2.550 · 2.600 · 2.400 · 2.440 · 2.420 · 2.620 · 2.730

MANHOLE COVER LEVELS	
FOUL WATER SEWER INVERT LEVELS	
SURFACE WATER SEWER INVERT LEVELS	
MANHOLE DIAMETER	
DATUM ▽	
METRAGE ON CENTRELINE	
LEVELS ON CENTRELINE OF CARRIAGEWAY	
LEVELS ON LEFT HAND CHANNEL	
LEVELS ON RIGHT HAND CHANNEL	
VERTICAL DESIGN ON CARRIAGEWAY CENTRELINE	
HORIZONTAL DESIGN ON CARRIAGEWAY CENTRELINE	
EXISTING LEVELS	

1. All foul water sewers shall be Extra Strength Clayware to BS 65.
2. All 150-300mm surface water sewers shall be Extra Strength Clayware to BS 65. All surface water sewers of 375mm or greater shall be Concrete Class M to BS 5911.
3. All pipe bedding shall be Class S, 6FM 2.2), unless otherwise stated.

Rev. No.	REVISION	Date	Drawn By	Checked By
A	Gradient between SW2 - Ex94 amended.	9.4.01	AJMB	AJMB

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Civil Engineering Consultants
12a & 14a Hitchin Street, Tel 01767 317244
Biggleswade, Beds SG18 8AX, U.K. Fax 315434

Project

Proposed Development at:-
Backgate- Cowbit

Drawing Description

Longitudinal Sections
Phase 1

HOUSING
16 AUG 2001
Ref: 0987/01

Client

Swallow Homes Ltd
West Elloe Avenue
Spalding
Lincolnshire
PE11 2BS

Drawing Number

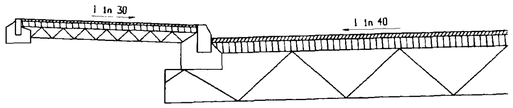
E1333/3/A

Drawn By
WD
Date 15.3.01

Scale
1:100 Vert
1:500 Horz

Checked By
AJMB
Date 20.3.01

Architect

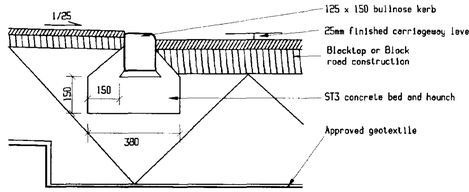


BLACKTOP CARRIAGEWAY

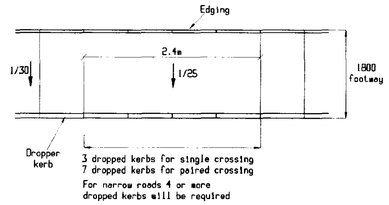
FOOTWAY CONSTRUCTION

WEARING COURSE - 25mm of 6mm nominal DBM Clause 9.4
BASE COURSE - 50mm of 20mm nominal DBM Clause 9.1
SUB BASE - 100mm of Type 1 material Clause 1.2

Typical Cross Section



SECTION



PLAN

Vehicle Crossing (D.B.M.)

ALL WORKS TO BE CONSTRUCTED TO LATEST L.C.C SPEC.DATED 1999 TO WHICH THE CLAUSE NUMBERS ON THIS DRAWING REFER.

ALL HIGHWAY SIGNING/MARKINGS TO BE AGREED ON SITE BY DIVISIONAL HIGHWAYS MANAGER.

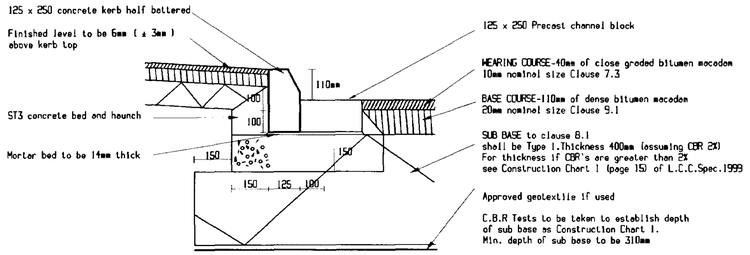
VEHICLE CROSSING CONSTRUCTION

WEARING COURSE - 25mm of 6mm nominal DBM Clause 9.4
BASE COURSE - 100mm of 20mm nominal DBM Clause 9.1
SUB BASE - 150mm of Type 1 material Clause 1.2

Where CBR less then 2% on approved Geosynthetic layer to Clause 6.7 will be required

EMERGENCY ACCESS/PEDESTRIAN LINK CONSTRUCTION

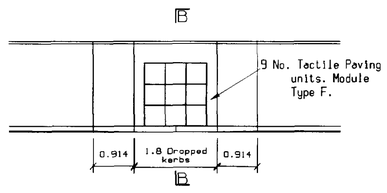
TO BE AS VEHICLE CROSSING SPECIFICATION WITH FOOTPATH EDGINGS BOTH SIDES, 15MM UPSTAND ON LOW SIDE. CROSSFALL TO BE 1 IN 40.



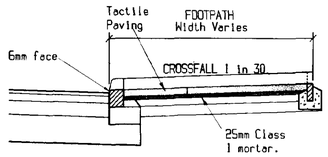
Carriageway and Kerb Detail- up to 5.5m (construction chart 1) (Blacktop Construction)

NOTE: 'C.B.R.test results from a NAMAS accredited laboratory & construction depths must be approved by the Highway Authority prior to commencement of any works on site'.

Channel blocks will be provided where the carriageway longitudinal gradient is less than 1 in 150 & the channel blocks will need to be laid to 'false falls' where the longitudinal gradient is less than 1 in 250.



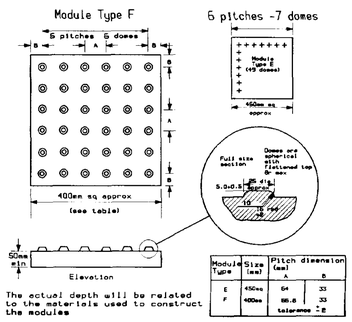
FOOTPATH CONSTRUCTION :- As footway detail except that tactile paving set into 50mm lean concrete under 25mm Class 1 mortar.



Section B-B

PRAM CROSSING DETAILS

Tactile Surface Pattern for use at Pram Crossings

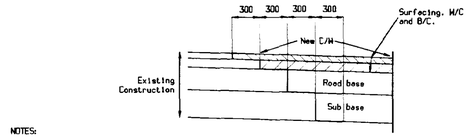


The actual depth will be related to the materials used to construct the modules

NOTES 1) Colour Buff or contrasting colour to be agreed with Lincs CC

NOTES:

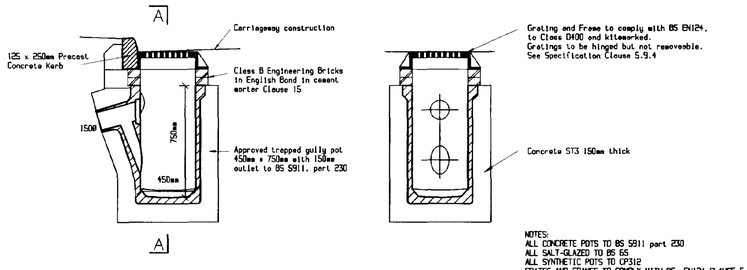
1) Tactile surface shall be in accordance with DETR Guidance on the use of Tactile Paving Surfaces dated Nov.1998
2) Paving shall be cut as necessary to kerb radius if required.



NOTES:

1) The horizontal faces to be sprayed with bitumen emulsion, class K1-40 at + 0.1 l/sq.m.
2) The vertical faces to the base course and road base to be coated with hot bitumen.
3) The vertical face to the wearing course to be coated with asphaltic cement.
4) All joints to be saw cut.

TIE IN DETAIL with existing Curlew Drive



Trapped Channel Gully.

Section A-A.

TYPICAL CHANNEL GULLY DETAILS

Rev. No.	REVISION	Date	Drawn By	Checked By
A	TIE IN DETAIL AND PEDESTRIAN LINK CONSTRUCTION ADDED.	22.3.01	AJMB	AJMB

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Biggleswade, Beds SG18 8AX, U.K. Fax 315434

Project
Proposed Development at :-
Backgate, Cowbit

Drawing Description
Standard Road Details

SOUTH HOLLAND DISTRICT COUNCIL
16 NOV 2001
Ref: 0980/1

Client
Swallow Homes Ltd
West Elloe Avenue
Spalding
Lincolnshire PE11 2BS

Drawing Number
E1333/5/A

Drawn By WD
Date 15.3.01

Scale NTS

Architect

Checked By