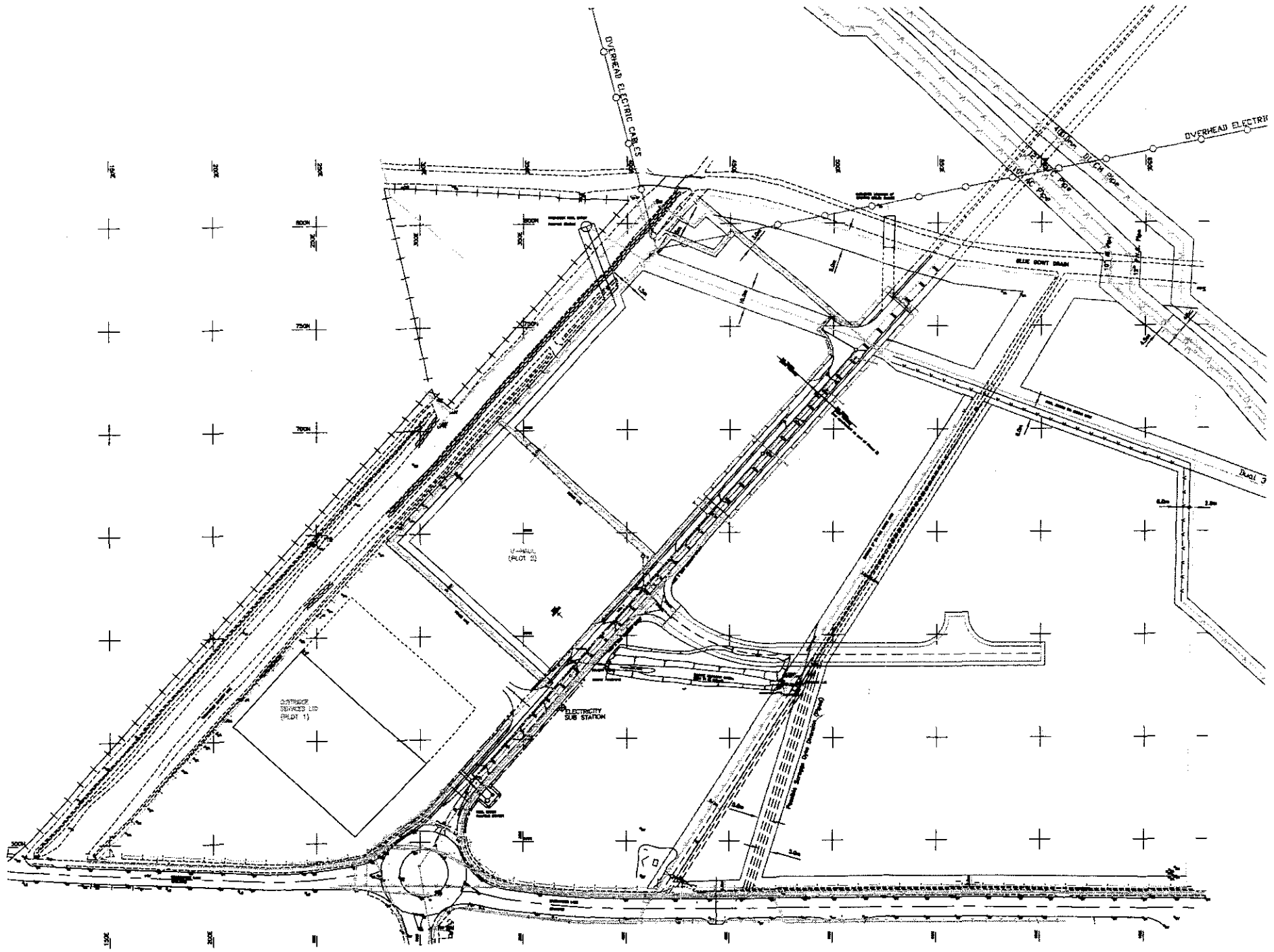


NOTES

1. Anglian Water Services require a 8.0m wide easement for the foul water rising main from the new Foul Pumping Station.

2. Car parking and low level planting is permitted within the rising main easement. Shrubs with deep root systems and trees are not permitted.

3. Welland and Deeping Internal Drainage Board require 9m easement width either side of Scraggs Dyke and Blue Gowt Drain free from surface features to allow access for maintenance purposes. A minimum of 5m adjacent to top of bank should be grassed, the remaining 4m can be paved. Underground services are permitted within the 9.0m easement, but at a minimum off-set of 5m from the top of the bank. Should Scraggs Dyke be culverted an easement of 5m either side of the pipe is required.

4. Anglian Water Services require 3.0m wide minimum easement for water mains, (any increase in easement to be confirmed by AWS Network Manager).

5. Welland and Deeping Internal Drainage Board require a 5m easement to the Wardentree Lane Dyke Culvert. (Culvert location to be confirmed by survey).

KEY

Site boundary
Plot boundary
Proposed road extension

RE. TO SERVICES

Gas
Telecom
Electricity
Foul Sewer
Water
Surface Water
Diverted Water
Diverted Electricity
Water to be Abandoned
Electricity to be Abandoned

SHDC
Planning & Development
12 DEC 2002
1359/02

Rev	Revision	Drn	App	Date
D	TURNING HEAD REPOSITIONED	PJW	NJO	MAY 02
C	ROAD 2 REVISED	PJW	NJO	MAY 02
B	ROAD 2 ADDED	PJW	NJO	NJO
A	PLOTS 3,4 & 5 LAND SALE BOUNDARY ADDED AND ROAD 2 DELETED	MP	NJO	NJO

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SPALDING
LINCOLNSHIRE PE11 1QG

Project
WARDENTREE LANE
SPALDING

Title
SITE DEVELOPMENTS PLAN

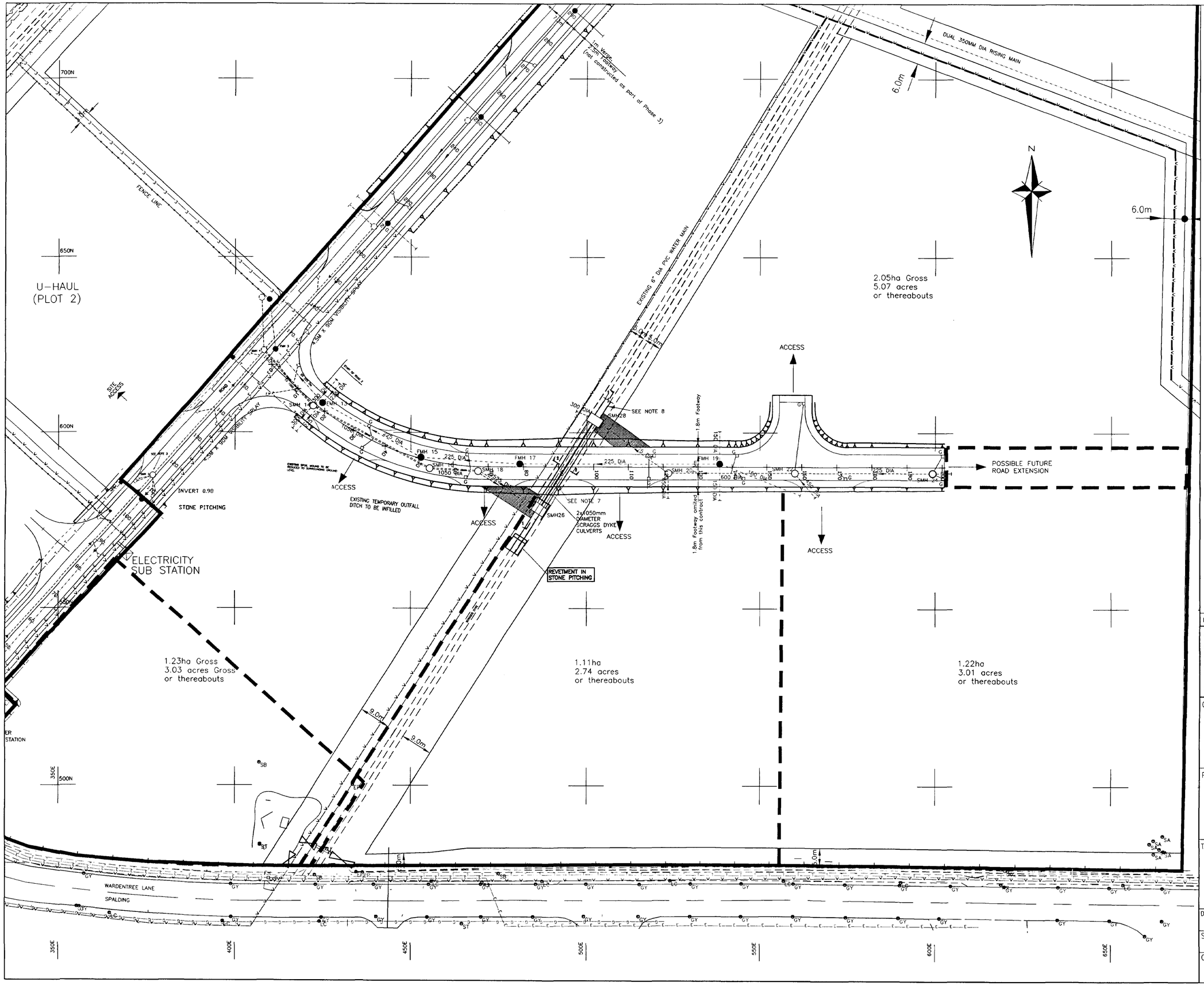
Drn.	Chkd.	App.	Date
L.N.	NJO	NJO	2.4.01

Scales 1:2500

Drg. No. 30177/18

CAD Ref Plot

Rev D



GENERAL NOTES

1. All adoptable sewers shall comply with the 'Civil Engineering Specification for the Water Industry' – 5th Edition and the requirements of Anglian Water Services Ltd.

2. All roadworks and highway drainage works shall comply with the Lincolnshire C.C. "Development Road Specification and Construction"-1999 publication.

3. The temporary 750mm diameter outlet pipe from SMH2 is to be sealed at both ends and grouted with cement/pfa grout in accordance with the specification. Stone pitching and headwalls at each end of the temporary ditch are to be broken out and removed from site. The temporary brickwork set across the channel within SMH 2 is to be removed, and the benching reformed to allow a smooth through flow towards SMH 4.

4. All stub connections shall be sealed in accordance with the specification. Marker posts shall be used to locate the termination of stub connections, outside of the carriageway. Stub connections shall be terminated at locations agreed with the Engineer. See drawing 31683/03 for details of stub connections.

5. Tactile paving is required at all dropped crossing points where a footway is provided. Refer to drawing 30177/39.

6. A Signs and Markings drawing is to be provided by the Developer and approved by Lincolnshire County Council. Refer to drawing 30177/39.

7. Culverting works to Scraggs Dyke shall comply with requirements of Welland and Deeping internal Drainage Board.

8. Culverting works downstream of SMH28 to be undertaken by others.

KEY

Proposed Plot Boundaries

Planning Development
12 DEC 2002
Ref 1359/02

Rev	Revision	Drn	App	Date
A	Footway/ verges shown at junction of Roads 1 & 2. Footway widths amended. Notes 5&6 amended.	NJO	NJO	1/8/02

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Project
WARDENTREE LANE
SPALDING

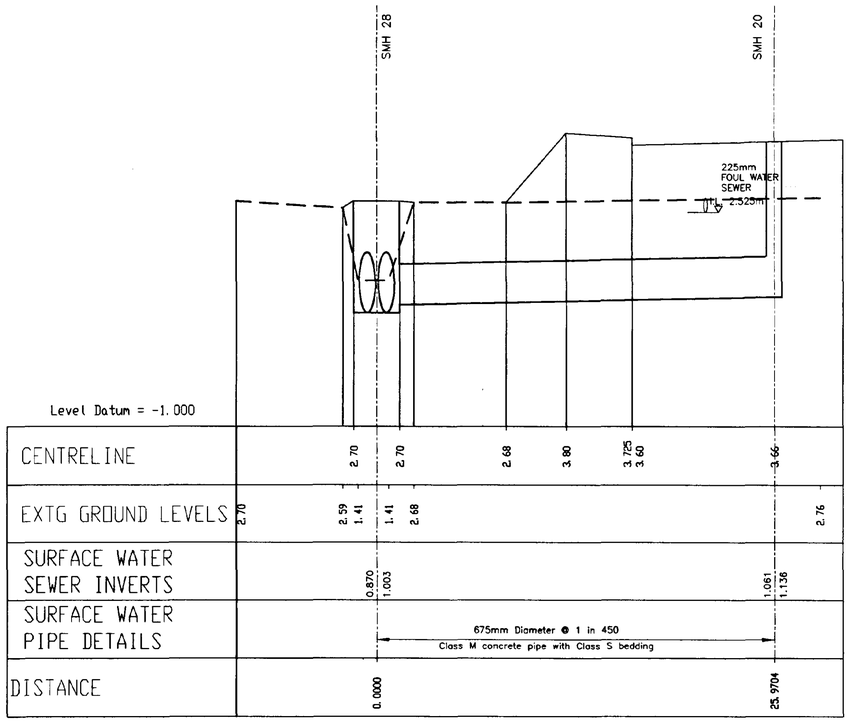
DETERMINED PLAN

Title
ROAD 2
ENGINEERING LAYOUT

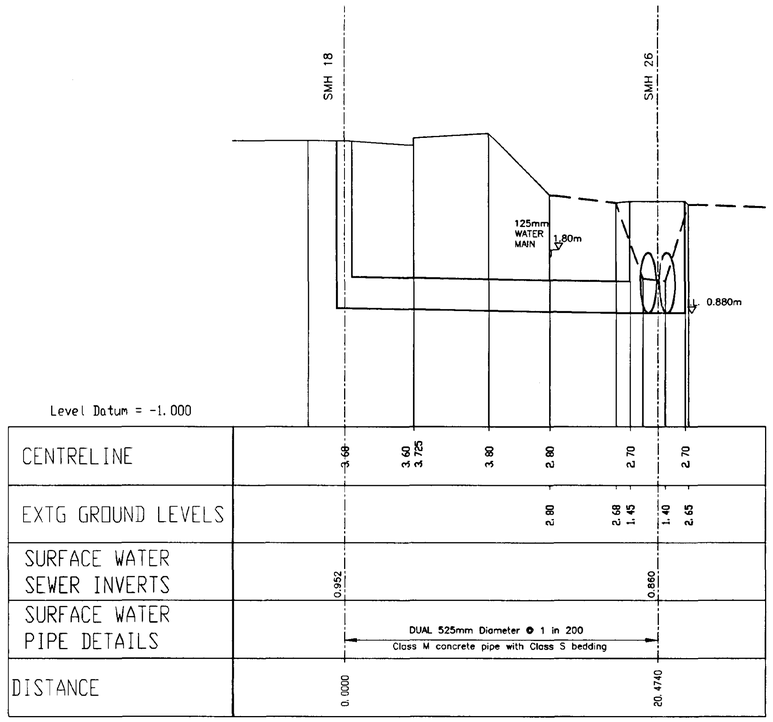
Drawn	Checked	Approved	Date
PJW	NJO	NJO	28/03/2002

Scales
1:500

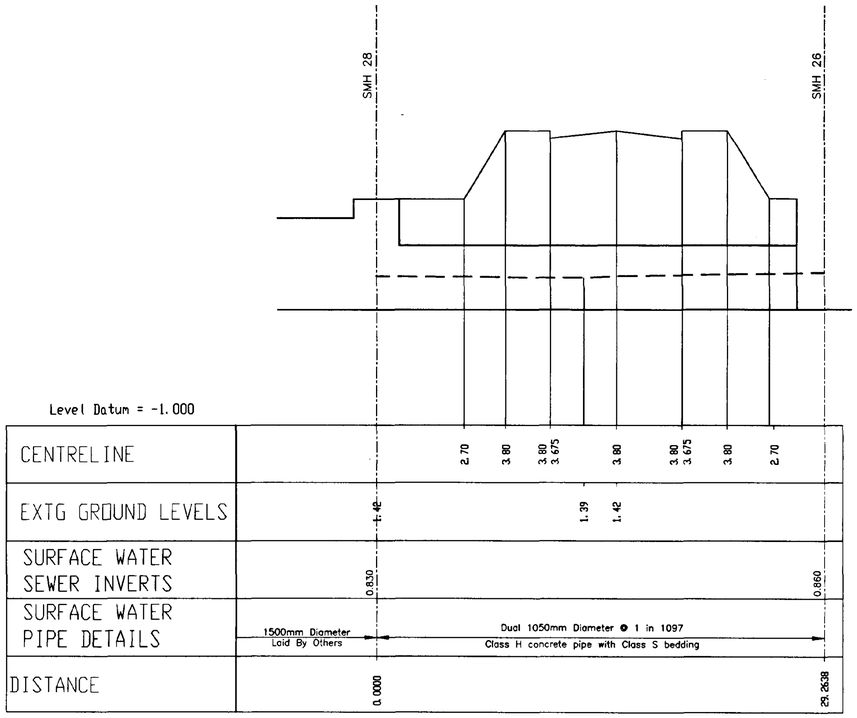
CAD Ref	Plot	Drawing No.	Rev
		30177/30	A



SMH20 TO CULVERT LONG SECTION
SCALE V – 1:50, H – 1:200



SMH18 TO CULVERT LONG SECTION
SCALE V – 1:50, H – 1:200



CULVERT LONG SECTION
SCALE V – 1:50, H – 1:200

MANHOLE SCHEDULE

MANHOLE REF.	COVER LEVEL	MANHOLE PLAN	PIPES mm	INVERT LEVELS m	DEPTH TO INVERT m	MANHOLE SIZE mm	MANHOLE TYPE
SMH 14	3.450	1, 2, 3, 0	0 – 1050 1 – 1050 2 – 300 3 – 300	0 – 0.986 1 – 0.986 2 – 1.486 3 – 1.486	2.464	2100	B
SMH 16	3.575	1, 0	0 – 1050 1 – 1050	0 – 0.961 1 – 0.961	2.614	2100	B
SMH 18	3.628	1, 0	0 – 2x525 1 – 1050	0 – 0.952 1 – 0.952	2.676	2100	B
SMH 20	3.612	1, 2, 0	0 – 675 1 – 600 2 – 450	0 – 1.061 1 – 1.136 2 – 1.286	2.551	1500	B
SMH 22	3.473	1, 2, 3, 0	0 – 600 1 – 225 2 – 150 3 – 450	0 – 1.216 1 – 1.591 2 – 1.666 3 – 1.376	2.257	1500	B
SMH 24	3.315	1, 2, 3, 0	0 – 225 1 – 225 2 – 150 3 – 150	0 – 1.825 1 – 1.825 2 – 1.900 3 – 1.900	1.490	1350	E
SMH 26	3.130	1, 2, 0	0– 2x1050 1 – 1500 2 – 2x525	0 – 0.860 1 – 0.860 2 – 0.860	2.270	see detail	–
SMH 28	3.100	1, 2, 3, 0	0 – 1500 1 – 2x1050 2 – 675 3 – 300	0 – 0.830 1 – 0.830 2 – 1.003 3 – 2.000	2.270	see detail	–
FMH 13	3.445	1, 2, 3, 0	0 – 225 1 – 225 2 – 225 3 – 225	0 – 0.495 1 – 0.495 2 – 0.495 3 – 0.495	2.950	1350	B
FMH 15	3.590	1, 0	0 – 225 1 – 225	0 – 1.409 1 – 1.409	2.181	1350	B
FMH 17	3.700	1, 0	0 – 225 1 – 225	0 – 2.200 1 – 2.200	1.500	1350	E
FMH 19	3.581	1, 2, 3, 0	0 – 225 1 – 150 2 – 150 3 – 150	0 – 2.580 1 – 2.655 2 – 2.655 3 – 2.655	1.001	1350	F

Notes for sections:–

1. All adoptable sewers shall comply with the 'Civil Engineering Specification for the Water Industry' – 5th Edition and the requirements of Anglian Water Services Ltd.

2. All roadworks and highway drainage works shall comply with the Lincolnshire C.C. "Development Road Specification and Construction"–1999 publication.

3. Precast concrete channel blocks, ref Type KCS are required where proposed carriageway gradients are flatter than 1:150.

4. Concrete surround Class Z shall be provided to all pipework with less than 1.2m of cover

5. Dual 525mm diameter pipes entering SMH26 and 675mm diameter pipe entering SMH28 are to be fitted with cast iron flap valves manufactured to BS 1452.

Notes for table: –

1. Cover levels relate to finished road levels. Covers are to be set at base course level as part of this contract.

2. Manhole F13 – 225mm diameter stub connection to be Class 160 clay pipe with Class S bedding laid at a gradient of 1 in 150.

3. Manhole S14 – 300mm diameter surface water stub connection is to be laid at a gradient of 1 in 150. Pipes are to be clay, Class 120 with Class S bedding.

4. Manholes S20 and S22 – 450mm diameter surface water stub connections are to be laid at a gradient of 1 in 150. Pipes are to be concrete Class M with Class S bedding.

5. Manhole F19 – 150mm diameter foul water stub connections are to be laid at a gradient of 1 in 150. Pipes are to be clay 22kn/m crushing strength with Class Z bedding.

Rev	Revision	Drn	App	Date
A	MH F15 LEVELS REVISED. MH F19 SIZE REVISED.	PJW	NJO	19/08/02

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Project
WARDENTREE LANE
SPALDING

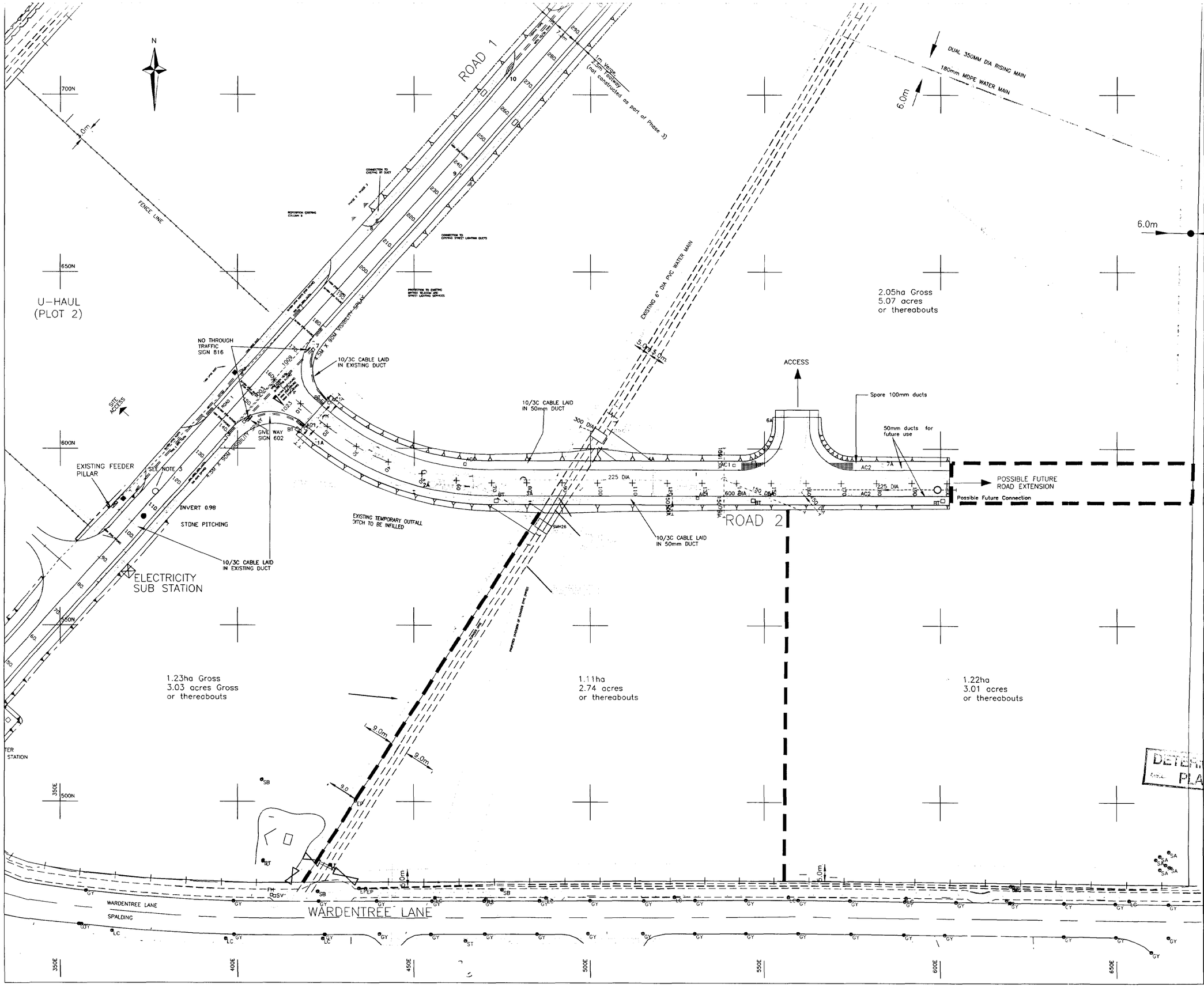
Planning Supervision
12 DEC 2002
Ref 1351/02

Title
ROAD 2
LONGTUDINAL SECTIONS

Drawn	Checked	Approved	Date
PJW	NJO	NJO	26/06/02

Scales
VERT – 1:50, HORT – 1:200

CAD Ref	Plot	Drawing No.	Rev
		30177/36	A



KEY TO STREET LIGHTING

6 — 6m lighting column with 1m/5° bracket to Appendix 13/1 incorporating a 70W lantern to Appendix 14/2 S.H.W. Column centres are to be located 1.65m back from kerbface, as agreed with the Engineer.

TYPE D — 100mm HDPE duct to Appendix 5/2 terminated in access boxes to SD14/6B. Type 2 – indicates that a Class 2 concrete bed and surround is required.

10/3c — 10/3c cable in 50mm HDPE duct to Appendix 5/2.

10/3c cable laid in existing ducts

450x450mm square chamber

600x600mm square chamber

NOTE:
Electrical testing shall be carried out to BS7671 including, additionally, a sheath test on armouring irrespective of being laid in duct.

KEY TO TELECOM

100mm UPVC duct. (Class 2 concrete bed and surround is required to ducts in carriageways and vehicle crossings)

Joint Box, Ref JBF106

NOTE:
British Telecommmunications will supply to site, free of charge, the ducting and joint box accessories required to complete the works.

KEY TO WATER

250m — 250mm UPVC duct with Class 2 concrete bed and surround

100m — 100mm UPVC duct with Class 2 concrete bed and surround

KEY TO ELECTRICITY

100m — 100mm UPVC duct with Class 2 concrete bed and surround. Class 2 bed and surround is not required for the 100mm duct alongside U-Haul's boundary.

150m — 150mm UPVC duct with Class 2 concrete bed and surround

KEY TO GAS

250m — 250mm UPVC duct with Class 2 concrete bed and surround.

Notes:

1. Traffic signs and markings to be in accordance with "The Traffic Signs Regulations and General Directions 1994"

Rev	Revision	Drn	App	Date
C	SIGNS AND MARKINGS ADDED.	PJW	NJO	24/10/02
B	Street Lighting column 7A amended. Note re column setback amended.	NJO	NJO	9/9/02
A	BT & Street Lighting chambers amended.	NJO	NJO	29/7/02

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Project
WARDENTREE LANE
SPALDING

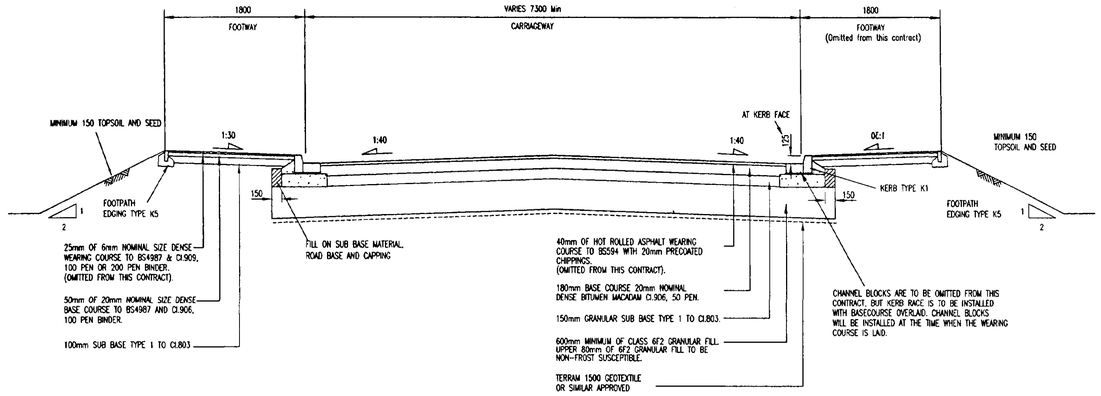
DETERMINATION PLAN
Planning Development Control
12 DEC 2002
Ref 13371/62

Title
ROAD 2 SERVICES PLAN

Drawn	Checked	Approved	Date
PJW	NJO	NJO	22/05/02

Scales
1:500

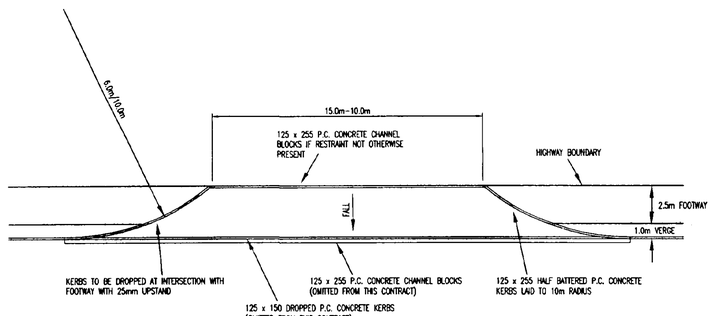
CAD Ref	Plot	Drawing No.	Rev
		30177/35	C



TYPICAL ROAD CROSS SECTION

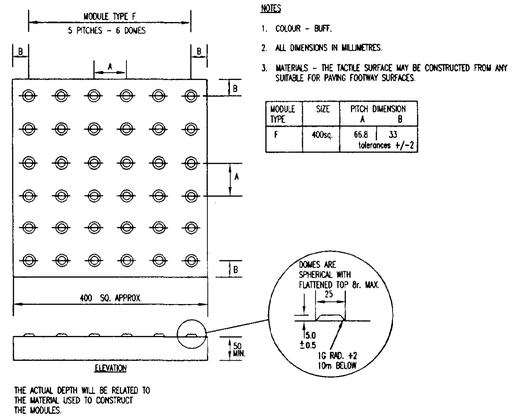
N.T.S.

NOTE:- PAVEMENT CONSTRUCTION IS TO COMPRISE A MINIMUM OF 450mm OF NON-FROST SUSCEPTIBLE CONSTRUCTION.



HEAVY DUTY VEHICLE ACCESS CROSSING

NOTE:- VEHICLE ACCESS SHALL BE CONSTRUCTED AS THE ADJOINING CARRIAGEWAY



NOTES

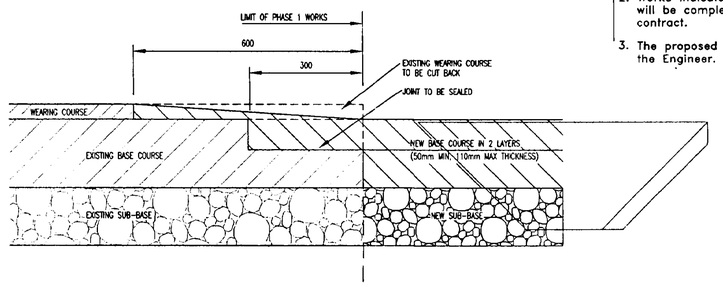
1. COLOUR - BUFF.
2. ALL DIMENSIONS IN MILLIMETRES.
3. MATERIALS - THE TACTILE SURFACE MAY BE CONSTRUCTED FROM ANY SUITABLE FOR PAVING FOOTWAY SURFACES.

MODULE TYPE	SIZE	PITCH DIMENSION A	PITCH DIMENSION B
F	400sq.	66.8	33 tolerances +/-2

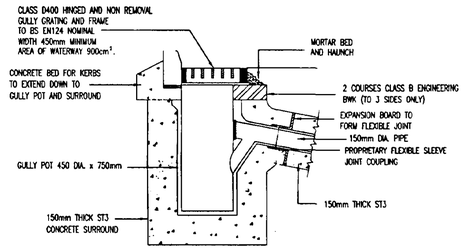
THE ACTUAL DEPTH WILL BE RELATED TO THE MATERIAL USED TO CONSTRUCT THE MODULES.

TYPICAL DETAIL OF TACTILE PAVING

(OMITTED FROM THIS CONTRACT)



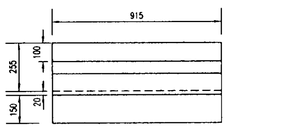
TYPICAL DETAIL OF CONSTRUCTION JOINT WITH EXISTING PAVEMENT



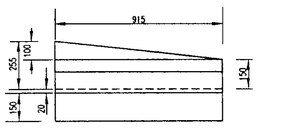
TYPICAL GULLY DETAIL

NOTE:- 1. THE FOLLOWING MARKINGS MUST APPEAR ON ALL GULLY COVERS AND FRAMES:-
(I) THE MARK OF THE CERTIFICATION BODY
(II) THE MANUFACTURERS NAME IN FULL
(III) THE EN CLASS

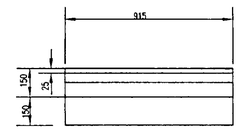
2. CONCRETE BED AND SURROUND TO CONNECTION IS TO EXTEND FOR FULL DEPTH.
3. GULLY CONNECTIONS SHALL BE 150mm DIAMETER WITH CLASS Z CONCRETE BED AND SURROUND AS DETAILED DRAWING No. 30177/06. GULLY CONNECTIONS SHALL BE 22kN/m STRENGTH CLAY PIPES, OR AN ALTERNATIVE PIPE FROM TABLE 5.1 OF THE LINCOLNSHIRE C.C. "DEVELOPMENT ROAD SPECIFICATION AND CONSTRUCTION - 1999".
4. TRENCHES UNDER CARRIAGEWAYS SHALL BE BACKFILLED WITH TYPE 1 SUB-BASE MATERIAL.
5. GRATINGS ARE TO BE SET AT BASECOURSE LEVEL AS PART OF THIS CONTRACT.



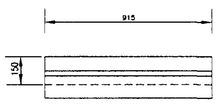
TYPE K1
(HALF BATTERED)



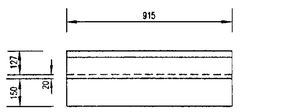
TYPE K2
(TRANSITION TYPE K1 TO TYPE K3)



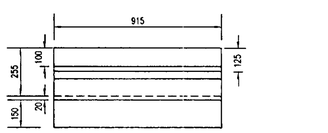
TYPE K3
(DROPPED)



TYPE K5
(FOOTWAY EDGING)



TYPE CS1
(CHANNEL KERB DETAIL)



TYPE KCS
(CHANNEL KERB DETAIL)

NOTE:- RADIUS KERBS AND CHANNELS SHALL BE USED IN CURVES OF RADIUS 12m OR LESS. FOR RADII BETWEEN 12m AND 80m INCLUSIVE, STRAIGHT KERBS OF LENGTH 600mm MUST BE USED, UNLESS CHANNELS ARE REQUIRED, IN WHICH CASE RADIUS KERBS AND CHANNELS WILL BE REQUIRED. FOR RADII GREATER THAN 80m AND ALL STRAIGHTS, KERBS OF 900mm LENGTH MUST BE USED.

GENERAL NOTES

1. All roadworks and highway drainage works shall comply with the Lincolnshire C.C. 'Development Road Specification and Construction - 1999 publication'.
2. Works indicated as being 'Omitted from this contract' will be completed as part of a finishing works contract.
3. The proposed kerbing layout is to be agreed with the Engineer.

Planning ... ment
12 DEC 2002
Ref 1359/02

Rev	Revision	Drn	App	Date
A	Footway width amended to 1.8m	NJO	NJO	30/09/02

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SPALDING
LINCOLNSHIRE PE11 1QP

DETERMINED PLAN

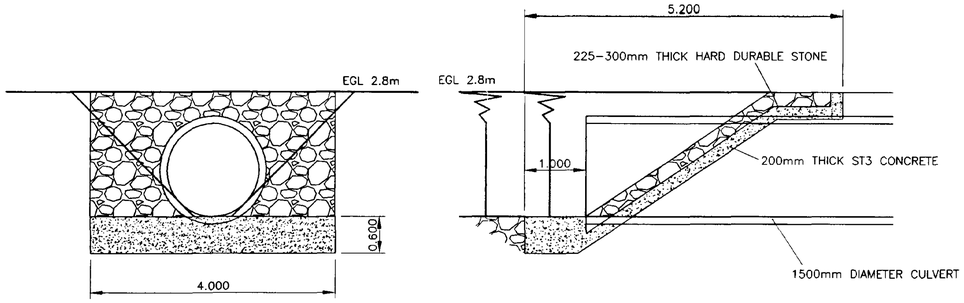
Project
WARDENTREE PARK
SPALDING

Title
HIGHWAY CONSTRUCTION DETAILS

Drawn	Checked	Approved	Date
P.J.W.	N.J.O.	G.A.J.	26.06.02

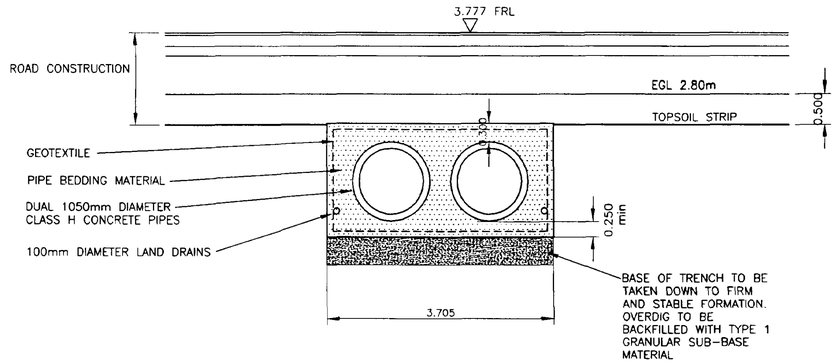
Scales
N.T.S.

CAD Ref	Plot	Drawing No.	Rev
		30177/34	A

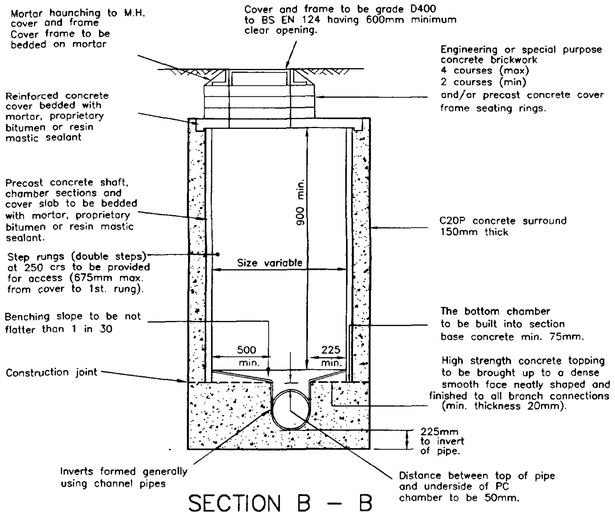


ELEVATION SECTION

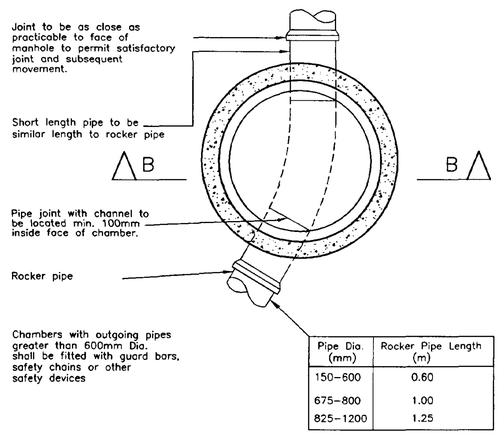
REVETMENT DETAIL TO 1500mm DIAMETER CULVERT
NTS



TRENCH DETAIL TO DUAL 1050mm DIAMETER CULVERT
NTS

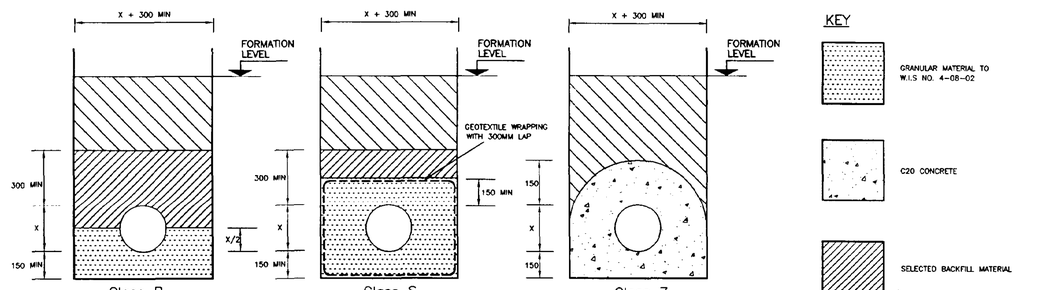


SECTION B – B



Pipe Dia. (mm)	Rocker Pipe Length (m)
150–600	0.60
675–800	1.00
825–1200	1.25

TYPICAL MANHOLE DETAIL – TYPE B
DEPTH TO SOFFIT 1.46 – 3.0m



Notes:–
1. Pipe joint flexibility must be maintained with the use of class Z concrete bed and surround. Bituminous impregnated boarding 18mm thick should be used for pipes less than 450mm dia. at each pipe joint.

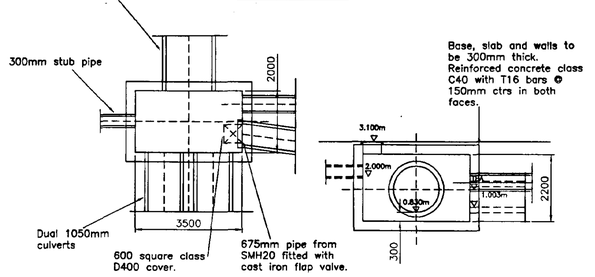
2. pipe trenches in rock shall be cut to a depth of 150mm below pipe barrel or X/4 which ever is the greater

ADOPTABLE SEWERS TRENCH AND BEDDING DETAILS

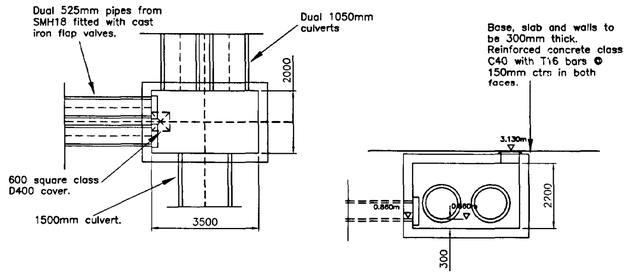
PIPE DIAMETER	GRANULAR BEDDING MATERIAL TO BS 882
150	10 OR 14mm NOMINAL SINGLE SIZE 14mm TO 5mm GRADED
225 300	10,14 OR 20mm NOMINAL SINGLE SIZE OR 14mm–5mm/20mm–5mm GRADED
OVER 300 TO 550	14 OR 20mm NOMINAL SINGLE SIZE OR 14mm–5mm/20mm–5mm GRADED
OVER 550	14, 20 OR 40mm NOMINAL SINGLE SIZE OR 14mm–5mm/20mm–5mm/40mm–5mm GRADED

Note:–
The trench widths given in this table are relevant to the pipe sizes and depths shown on the drainage layout and long section drawings. Any changes to the pipe sizes or depths, as detailed, may result in a revision to the maximum trench widths.

DETAILS OF MANHOLE SMH28.
SCALE 1:100



DETAILS OF MANHOLE SMH26.
SCALE 1:100



GENERAL NOTES

1. All works to adoptable sewers shall comply with the 'Civil Engineering Specification for the Water Industry' – 5th Edition and the requirements of the Anglian Water Services Ltd.
2. Materials for adoptable sewers to be clay and concrete as approved for use by Anglian Water Services Ltd.
3. Manhole covers shall bear the Anglian Water logo and be marked FW or SW. Minimum manhole frame depth shall be 150mm.
4. All step rungs and ladders are to be manufactured from stainless steel.
5. All concrete below ground, including precast concrete products should be suitable for Class 1 soil conditions in accordance with B.R.E. Digest 363.

PIPE INTERNAL DIAMETER	MAXIMUM TRENCH WIDTH 300mm above crown of pipe
150	0.60m
225	0.70m
300	0.80m
375	1.05m
450	1.15m
525	1.20m
600	1.35m
750	1.40m
825	1.40m
900	1.75m
1125	1.95m

TABLE 1

Rev	Revision	Drn	App	Date
A	OPENING ON MANHOLES ON SMH 26 AND 28 MOVED. DIMENSION ON MH TYPE B AMENDED.	PJW	N.J.O.	19/0 /02

Aspen Burrow Crocker Ltd
Lockington Hall Business Centre,
Lockington, Derby DE74 2RH
Tel: (01509) 674567
Fax: (01509) 674623
Consulting Engineers and Project Managers

ASPEN

SHDC Planning Development 12 DEC 2002 13/50102

DETERMINED PLAN

Client
ELSOMS (SPALDING) LIMITED
SPALDING
LINCOLNSHIRE

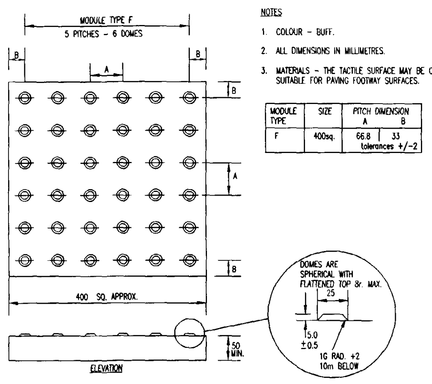
Project
WARDENTREE PARK
SPALDING

Title
DRAINAGE DETAILS

Drawn	Checked	Approved	Date
P.J.W.	N.J.O.	G.A.J.	26.06.02

Scales
AS SHOWN

CAD Ref	Plot	Drawing No.	Rev
		30177/33	A



NOTES

1. COLOUR - BUFF.
2. ALL DIMENSIONS IN MILLIMETRES
3. MATERIALS - THE TACTILE SURFACE MAY BE CONSTRUCTED FROM ANY SUITABLE FOR PAVING FOOTWAY SURFACES.

MODULE TYPE	SIZE	PITCH DIMENSION A	PITCH DIMENSION B
F	400sq	66.8	33 tolerances +/-2

THE ACTUAL DEPTH WILL BE RELATED TO THE MATERIAL USED TO CONSTRUCT THE MODULES.

TYPICAL DETAIL OF TACTILE PAVING

BLUE GOWT DRAIN

NO THROUGH TRAFFIC SIGN 816

GIVE WAY SIGN 602

EXTENT OF PUBLIC HIGHWAY

POSSIBLE FUTURE ROAD EXTENSION

DETERMINED PLAN

Planning Environment 12 DEC 2002 Dept 13S102

Notes:

1. Traffic signs and markings to be in accordance with "The Traffic Signs Regulations and General Directions 1994"

KEY:

Dropped Crossing points with tactile paving

Rev	Revision	Drn	App	Date

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ELSOMS (SPALDING) LIMITED
SPALDING
LINCOLNSHIRE PE11 1QG

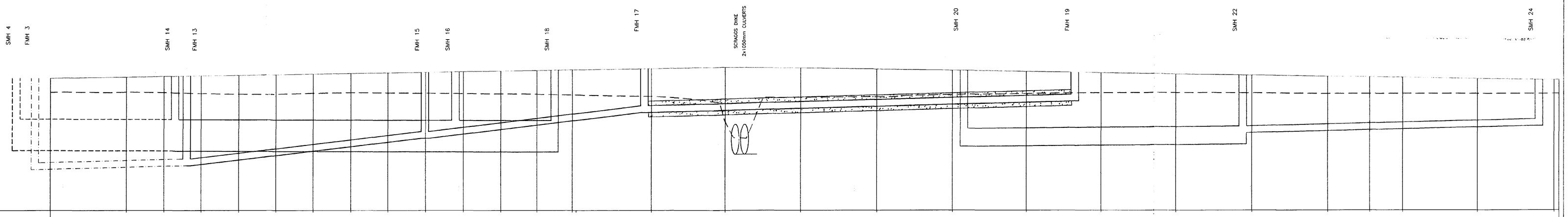
Project
WARDENTREE LANE
SPALDING

Title
SECTION 38
PROPOSED SIGNS AND MARKINGS LAYOUT

Drawn	Checked	Approved	Date
PJW	NJO	NJO.	26/09/02

Scales 1:500

CAD Ref	Plot	Drawing No.	Rev
		30177/39	



Level Datum = -1.000

| | | |