

Rev No.	Revision	Date	Drawn By	Checked By

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 Web: www.wormburp.com
 Email: engineer@wormburp.com

Project:
**Stevenage Project E
 Nobel School**

Drawing Description:
**Fairlands Way, Mobbsbury Way Junction
 Location Plan**

Client:
 Hertfordshire County Council
 Corporate Services

Drawing Number:
E1678/170

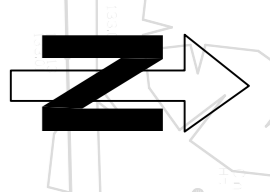
Drawn By:
 AMZ

Date:
 16.11.09

Scale:
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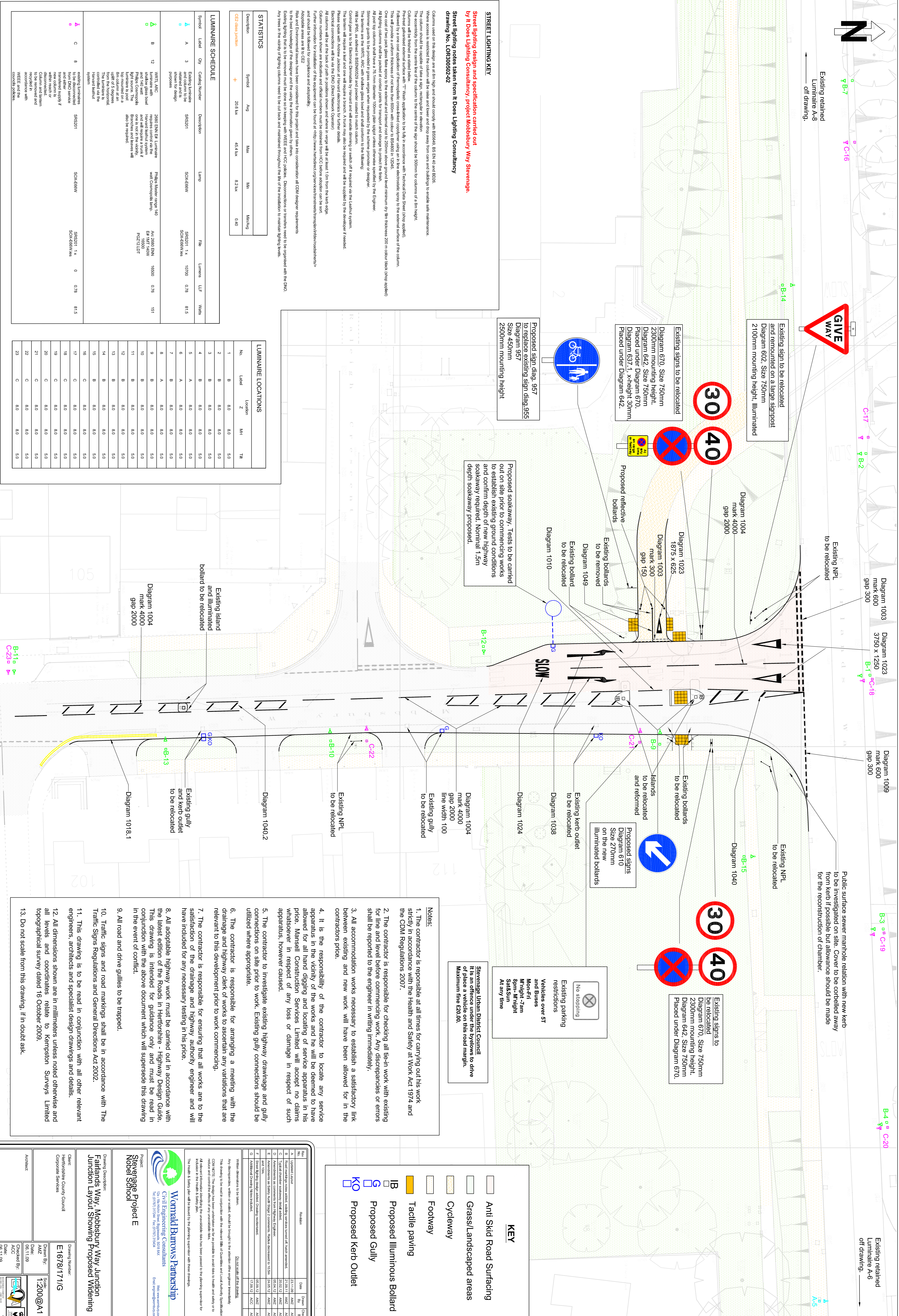
Checked By:
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Date:
 23.11.09



Existing retained Luminaire A-8 off drawing.

Existing retained Luminaire A-6 off drawing.



STREET LIGHTING KEY
Street lighting design and specification carried out by RDC Lighting Consultancy, Project Mobbisbury Way Stevenage.
Drawing No. LOR300502-02

Columns used on this design are at 8m high and should comply with BS5494, BS EN 40 and BS26. Where access is restricted the column will be raised and lower and drop away from cars and buildings to enable safe maintenance. The column should be capable of taking a light, rectangular in elevation. The eccentricity from the centre line of the column to the centre of the sign should be 500mm for columns of a 6m height. Columns will be finished in a dark grey. "T" which application to be filled in accordance with Technical Data Sheet (refer appendix). Followed by a one coat application of thermoplastic cross-linked epoxy resin in a line electronic spray to the external surface of the column. This will provide a uniform thickness of not less than 600µm with colour to BS4800 R11, 12D24. One coat of two part glass flake epoxy to the external and internal face to 250µm above ground level minimum dry film thickness 200µm colour black (shop applied). All lighting columns shall be packed at contact points for transport and storage to protect the finish. The contractor shall ensure that the luminaire is protected from damage during transport and storage. Summer gullies to be provided in grass verges where required by the scheme promoter or designer. The luminaires are the WRTL A9C with shallow glass bowl and shall conform to the following:
Will be IP65, as defined in BS EN 60529 and provide a minimum of 5 year life.
Control gear to be Electronic Dimmable by frequency and will enable dimming or switch off if required via the luminaire system. The luminaire will require a ballast and will require a sensor. A timer may also be required and will be supplied by the contractor if needed. Electrical connections will be via the DMG (Direct Network Operator). All columns will be at the back of path in positions shown and where in verges will be at least 1.0m from the kerb edge. Further information for installation of the equipment can be found at <http://www.hcc.gov.uk/information/transport/signage/standards> and <http://www.hcc.gov.uk/information/transport/signage/standards>. Risk and environmental issues have been considered for the project and have been considered at CDM designer requirements to the best knowledge of the designer and the information given by others. Existing lighting poles to be removed must be done so in keeping with WEEE and HCC policies. Recommendations or transfers need to be organized with the DMCO. Any trees in a vicinity of lighting columns need to be cut back and maintained throughout the life of the installation to maintain lighting levels.

STATISTICS

Description	Symbol	Avg	Min	Max	Mixing
C27 Data Junction	+	20.8 lux	45.4 lux	82 lux	0.40

LUMINAIRE SCHEDULE

Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LFZ	Width
A	3	Existing luminaire and column to be shown for design purposes	SRS201	SOX-559V	SRS201_1.rvt	10700	0.78	81.5
B	12	WRTL A9C shallow glass bowl and column to be shown for design purposes	2088 ENR ET Luminaire	Project Master range 140	Arc-2580 ENR	16500	0.75	151
C	8	existing luminaires to be disconnected from DMCO service new columns to be disconnected in accordance with WEEE and HCC policies	SRS201	SOX-559W	SRS201_1.rvt	0	0.78	81.5

LUMINAIRE LOCATIONS

No.	Label	Location	HL	TH
1	B	8.0	8.0	5.0
2	B	8.0	8.0	5.0
3	B	8.0	8.0	5.0
4	B	8.0	8.0	5.0
5	A	8.0	8.0	5.0
6	A	8.0	8.0	5.0
7	B	8.0	8.0	5.0
8	A	8.0	8.0	5.0
9	B	8.0	8.0	5.0
10	B	8.0	8.0	5.0
11	B	8.0	8.0	5.0
12	B	8.0	8.0	5.0
13	B	8.0	8.0	5.0
14	B	8.0	8.0	5.0
15	B	8.0	8.0	5.0
16	C	8.0	8.0	5.0
17	C	8.0	8.0	5.0
18	C	8.0	8.0	5.0
19	C	8.0	8.0	5.0
20	C	8.0	8.0	5.0
21	C	8.0	8.0	5.0
22	C	8.0	8.0	5.0
23	C	8.0	8.0	5.0

Notes:
1. The contractor is responsible at all times for carrying out his work strictly in accordance with the Health and Safety at Work Act 1974 and the CDM Regulations 2007.
2. The contractor is responsible for checking all in-train work with existing for line and level before commencing work. Any discrepancies or errors shall be reported to the engineer in writing immediately.
3. All accommodation works necessary to establish a satisfactory link between existing and new work will have been allowed for in the contractor's price.
4. It is the responsibility of the contractor to locate any service apparatus in the vicinity of the works and he will be deemed to have allowed for all hand digging and locating of service apparatus in his price. Mansell Construction Services Limited will accept no claims whatsoever in respect of any loss or damage in respect of such apparatus, however caused.
5. The contractor to investigate existing highway drainage and gully connections on site prior to work. Existing gully connections should be utilized where appropriate.
6. The contractor is responsible for arranging a meeting with the drainage and highway clerk of works to ascertain any variations that are relevant to this development prior to work commencing.
7. The contractor is responsible for ensuring that all works are to the satisfaction of the drainage and highway authority engineer and will have included for any necessary testing in his price.
8. All adoptable highway work must be carried out in accordance with the latest edition of the Roads in Hertfordshire - Highway Design Guide. This drawing is intended for guidance only and must be read in conjunction with the above document which will supersede this drawing in the event of conflict.
9. All road and drive gullies to be trapped.
10. Traffic signs and road markings shall be in accordance with The Traffic Signs Regulations and General Directions Act 2002.
11. This drawing is to be read in conjunction with all other relevant engineers' architects and specialist design drawings and details.
12. All dimensions shown are in millimeters unless noted otherwise and all levels and coordinates relate to Kenposum Surveys' Limited topographical survey dated 16 October 2009.
13. Do not scale from this drawing. If in doubt ask.

KEY

- Anti Skid Road Surfacing
- Grass/Landscaped areas
- Cycleway
- Footway
- Tactile paving
- Proposed Illuminous Bollard
- Proposed Gully
- Proposed Kerb Outlet

Revision table:
1. Issued for design
2. Issued for construction
3. Issued for construction
4. Issued for construction
5. Issued for construction
6. Issued for construction
7. Issued for construction
8. Issued for construction
9. Issued for construction
10. Issued for construction

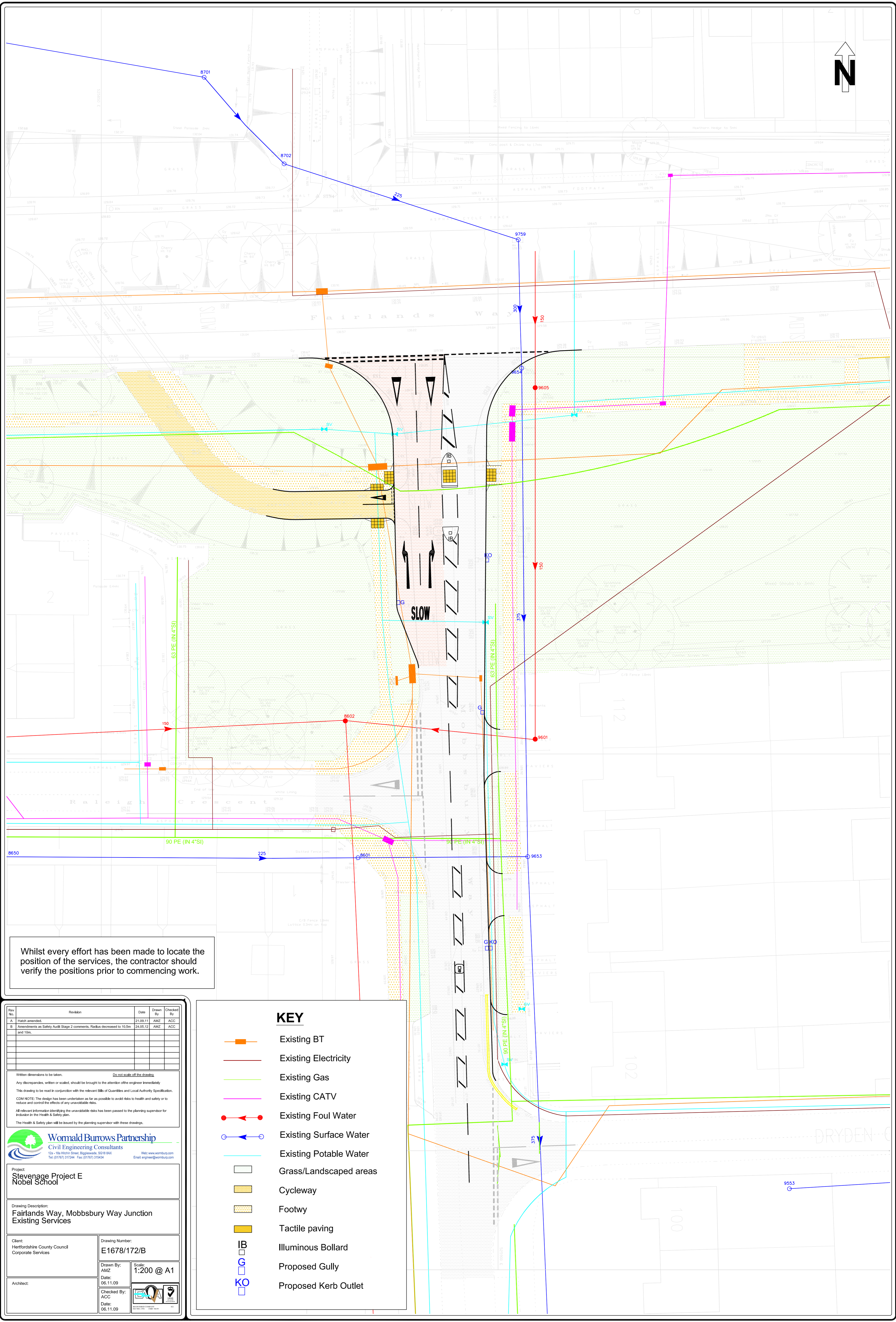
Womnald Burrows Partnership
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Project: Stevenage Project E
Nobel School

Drawing Number: E1678/171/G
Scale: 1:200 @ A1
Drawn By: ANZ
Checked By: ANZ
Date: 06.11.09

Client: Hemel Hempstead Council
Corporate Services

Architect: [Logo]



Whilst every effort has been made to locate the position of the services, the contractor should verify the positions prior to commencing work.

Rev No.	Revision	Date	Drawn By	Checked By
A	Initial amended	21.08.11	AMZ	ACC
B	Amendments as Safety Audit Stage 2 comments, Radius decreased to 10.5m and 10m.	24.05.12	AMZ	ACC

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Project:
Stevenage Project E
Nobel School

Drawing Description:
Fairlands Way, Mobbsbury Way Junction
Existing Services

Client:
Hertfordshire County Council
Corporate Services

Drawing Number:
E1678/172/B

Drawn By:
AMZ

Date:
06.11.09

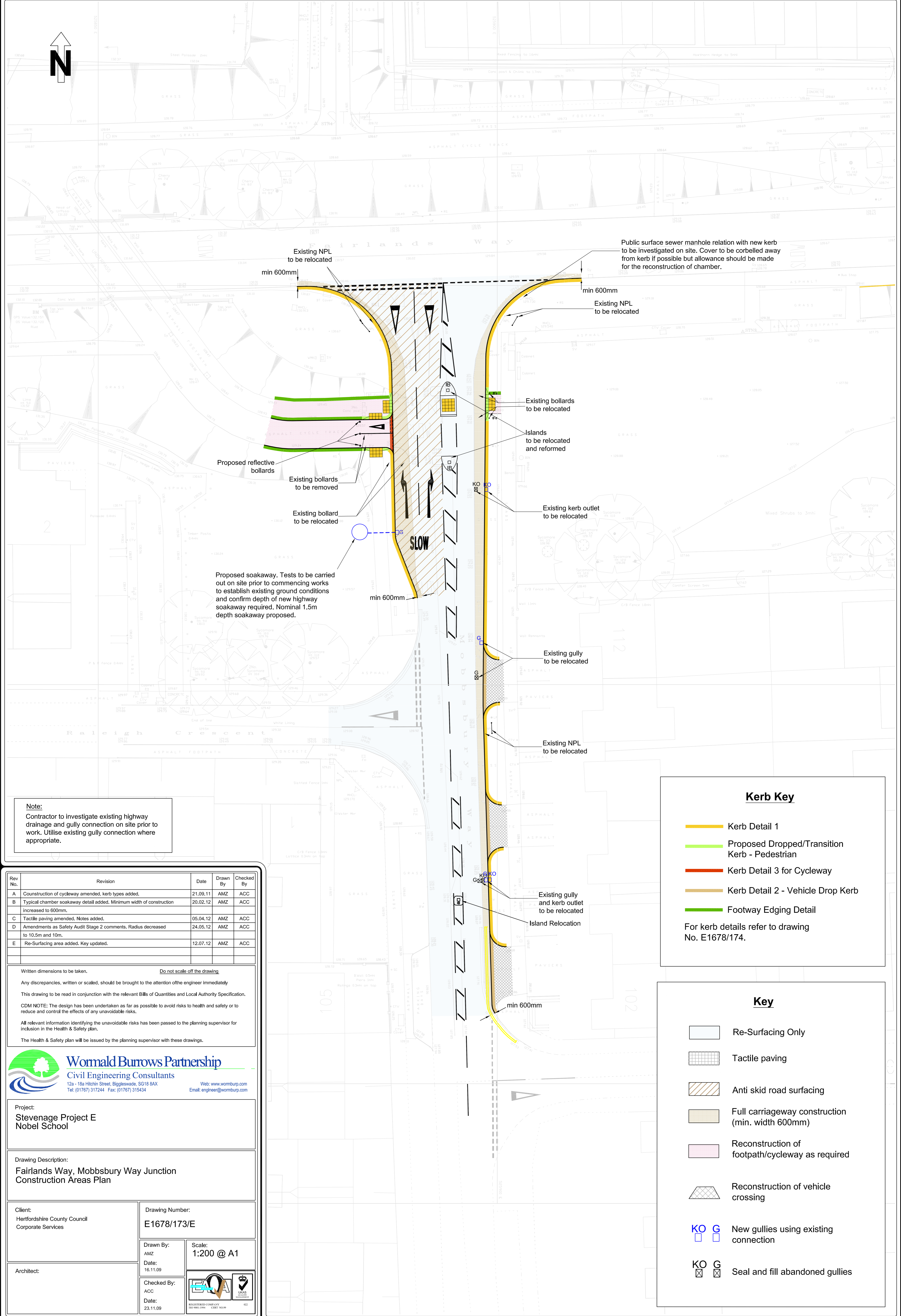
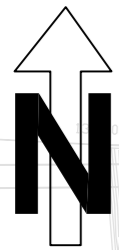
Checked By:
ACC

Date:
06.11.09

Scale:
1:200 @ A1

KEY

- Existing BT
- Existing Electricity
- Existing Gas
- Existing CATV
- Existing Foul Water
- Existing Surface Water
- Existing Potable Water
- Grass/Landscaped areas
- Cycleway
- Footway
- Tactile paving
- Illuminous Bollard
- Proposed Gully
- Proposed Kerb Outlet








Public surface sewer manhole relation with new kerb to be investigated on site. Cover to be corbelled away from kerb if possible but allowance should be made for the reconstruction of chamber.

Proposed soakaway. Tests to be carried out on site prior to commencing works to establish existing ground conditions and confirm depth of new highway soakaway required. Nominal 1.5m depth soakaway proposed.

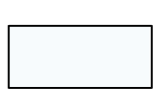
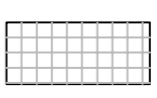






Note:
Contractor to investigate existing highway drainage and gully connection on site prior to work. Utilise existing gully connection where appropriate.

Kerb Key

-  Kerb Detail 1
-  Proposed Dropped/Transition Kerb - Pedestrian
-  Kerb Detail 3 for Cycleway
-  Kerb Detail 2 - Vehicle Drop Kerb
-  Footway Edging Detail

For kerb details refer to drawing No. E1678/174.

Key

-  Re-Surfacing Only
-  Tactile paving
-  Anti skid road surfacing
-  Full carriageway construction (min. width 600mm)
-  Reconstruction of footpath/cycleway as required
-  Reconstruction of vehicle crossing
-  New gullies using existing connection
-  Seal and fill abandoned gullies

Rev No.	Revision	Date	Drawn By	Checked By
A	Construction of cycleway amended, kerb types added.	21.09.11	AMZ	ACC
B	Typical chamber soakaway detail added. Minimum width of construction increased to 600mm.	20.02.12	AMZ	ACC
C	Tactile paving amended. Notes added.	05.04.12	AMZ	ACC
D	Amendments as Safety Audit Stage 2 comments. Radius decreased to 10.5m and 10m.	24.05.12	AMZ	ACC
E	Re-Surfacing area added. Key updated.	12.07.12	AMZ	ACC

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Project:
Stevenage Project E
Nobel School

Drawing Description:
Fairlands Way, Mobbsbury Way Junction
Construction Areas Plan

Client:
Hertfordshire County Council
Corporate Services

Drawing Number:
E1678/173/E


Drawn By:
AMZ

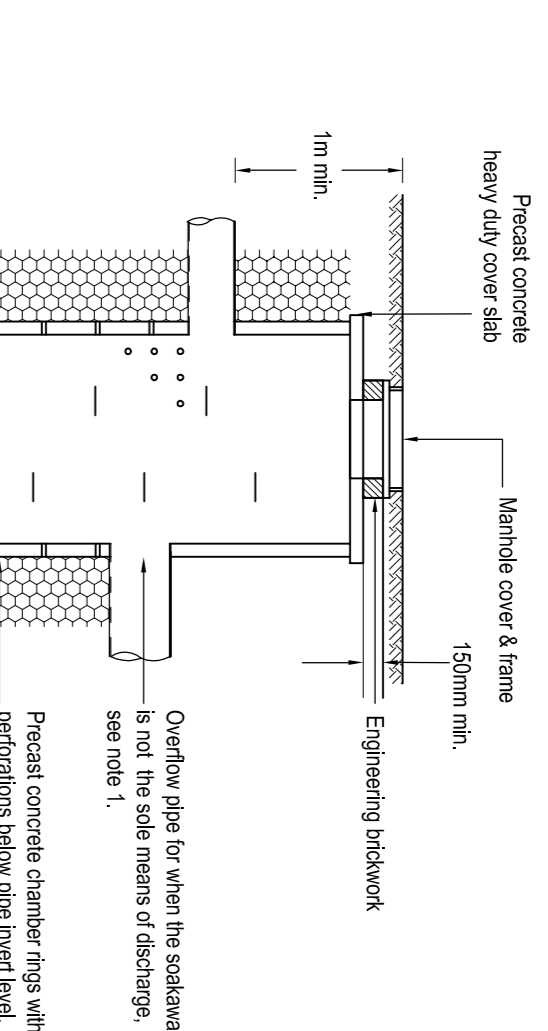
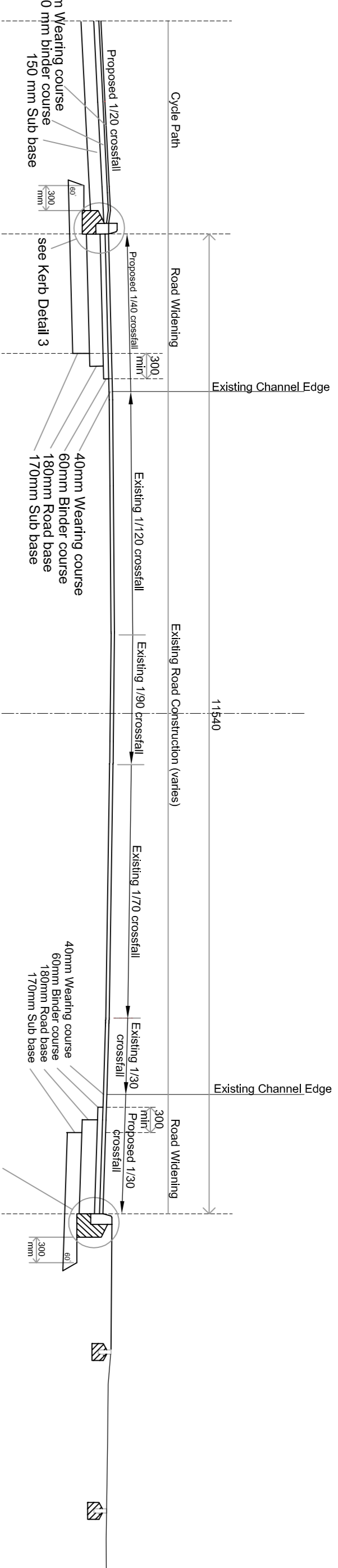
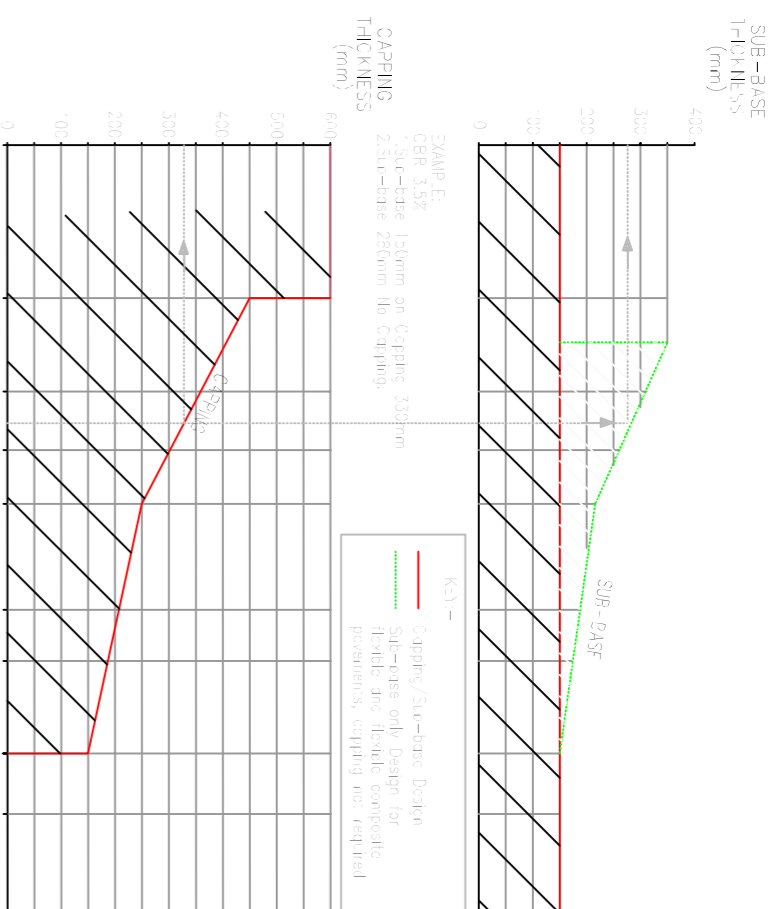
Date:
16.11.09

Scale:
1:200 @ A1

Checked By:
ACC

Date:
23.11.09





CAPPING AND SUB-BASE THICKNESS DESIGN

Cappping and Sub-base thickness is to comply with DOT Circular HD 25/94, from which this graph has been reproduced.

For CBR values between 2.5 and 15%, there are two options available:

- 150mm sub-base can be used on a varying thickness of capping depending upon the CBR value or,
- increasing thickness of sub-base can be used with the decreasing CBR, with no requirement for capping.

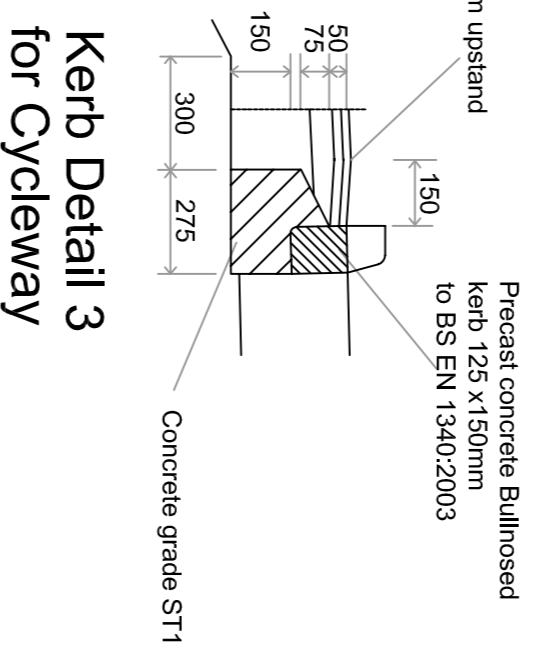
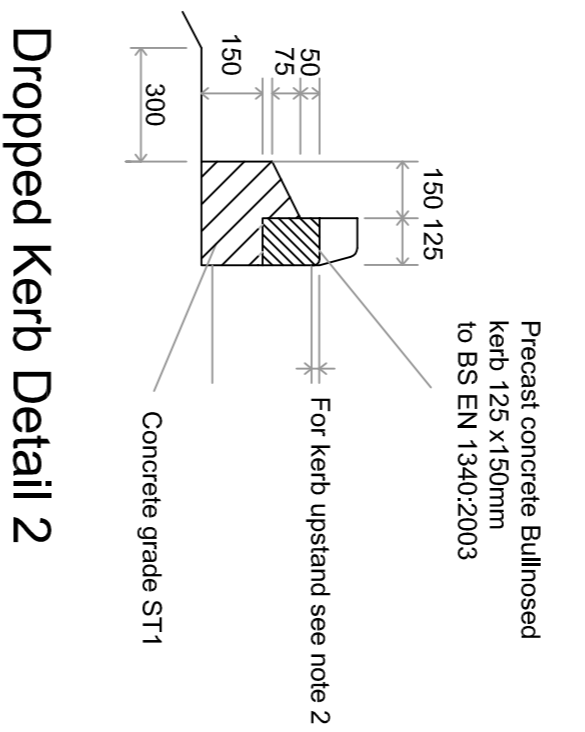
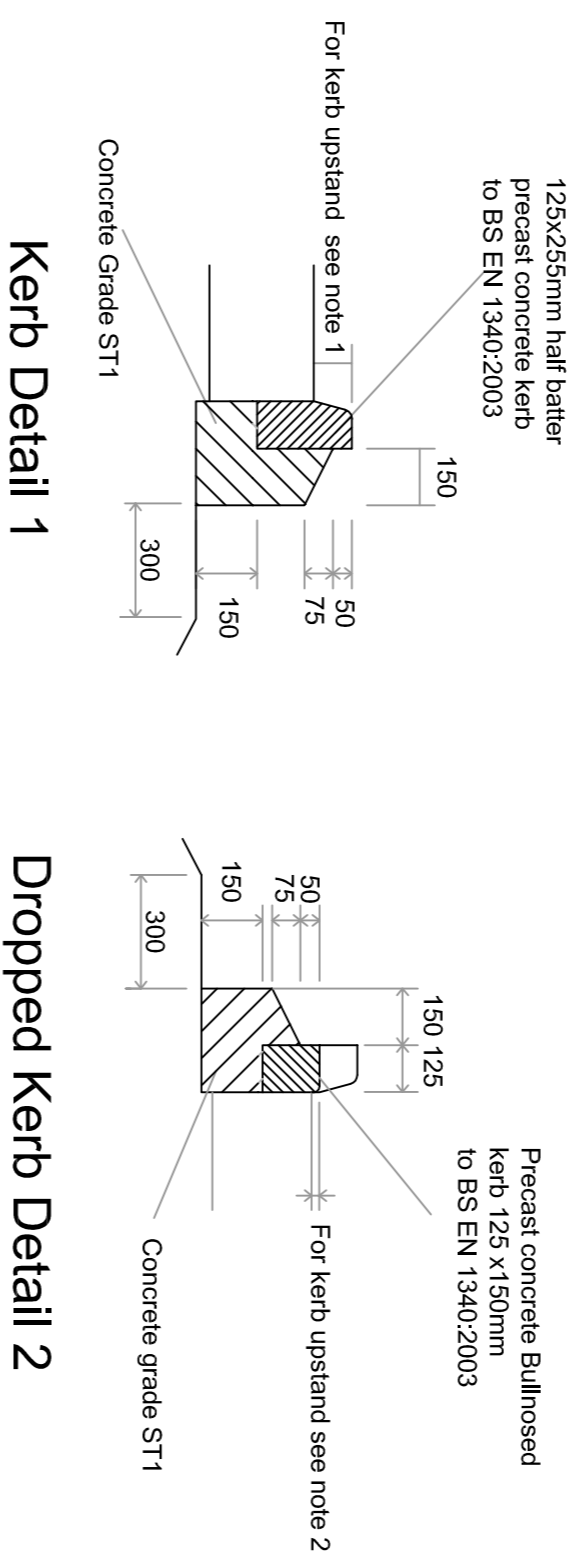
Below 2.5% CBR capping MUST be used. Final sub-base/capping thickness to be agreed at site inspection with LA Engineer, dependent on measured CBR. For CBR < 1.5%, specialised treatment eg rockfill/stabilisation would be required.

At least two CBR test should be taken on the proposed widening area prior to construction starting on site.

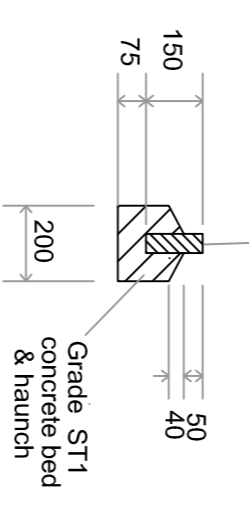
* Minimum overall c/way thickness to be 450mm, where the sub-grade is frost susceptible.

KERBING AND EDGING DETAILS

KERBING AND EDGING DETAILS Scale 1:50



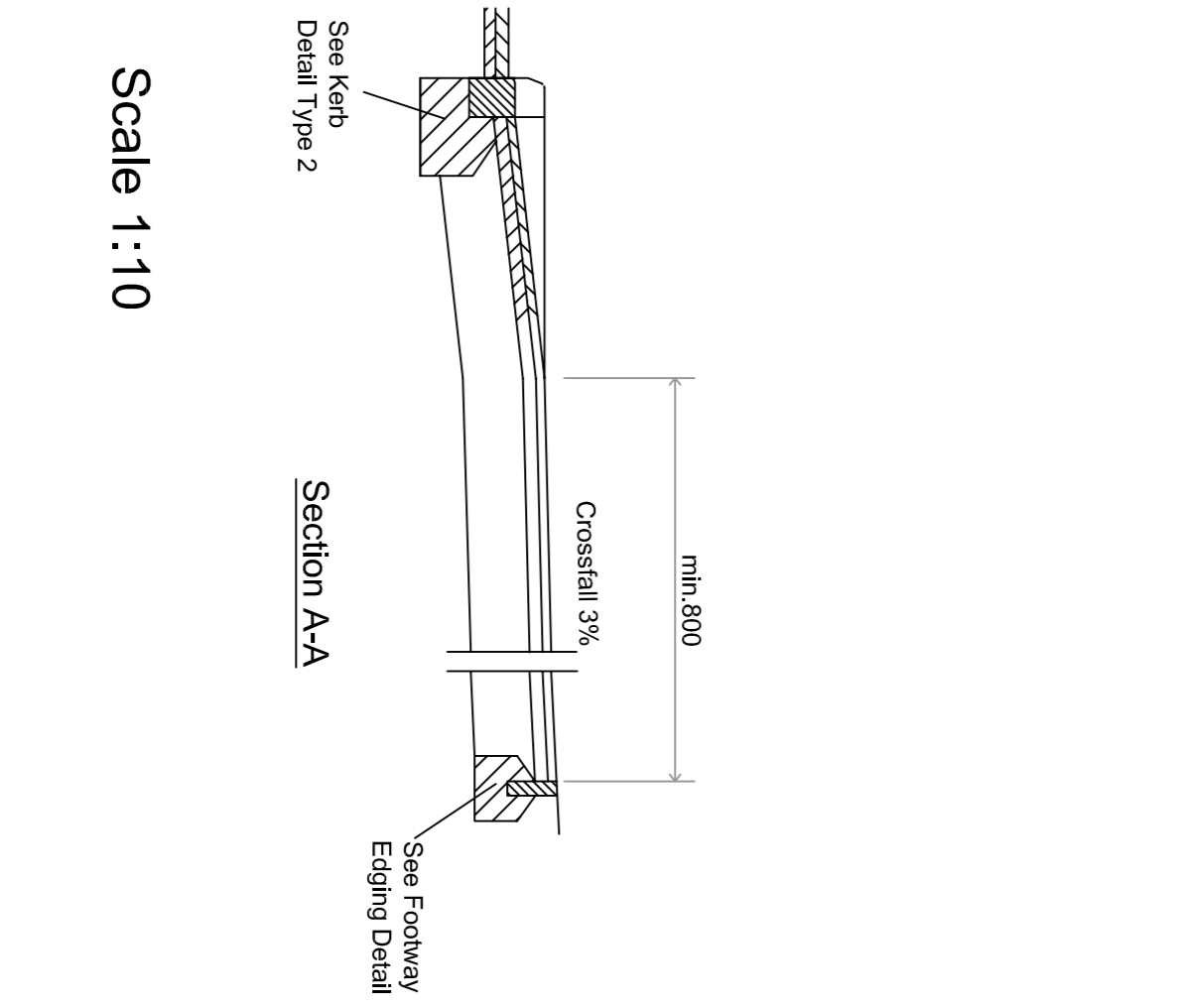
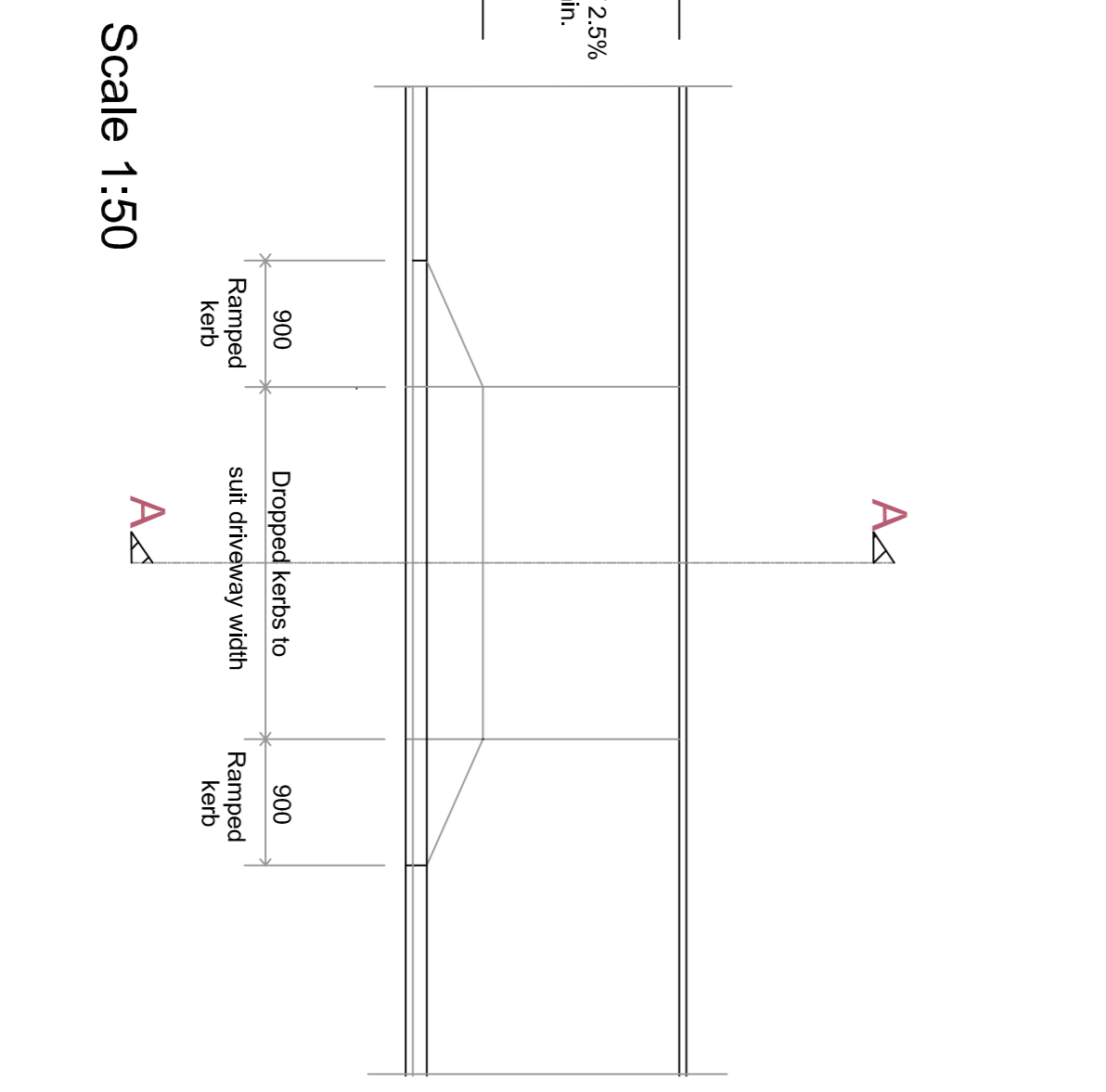
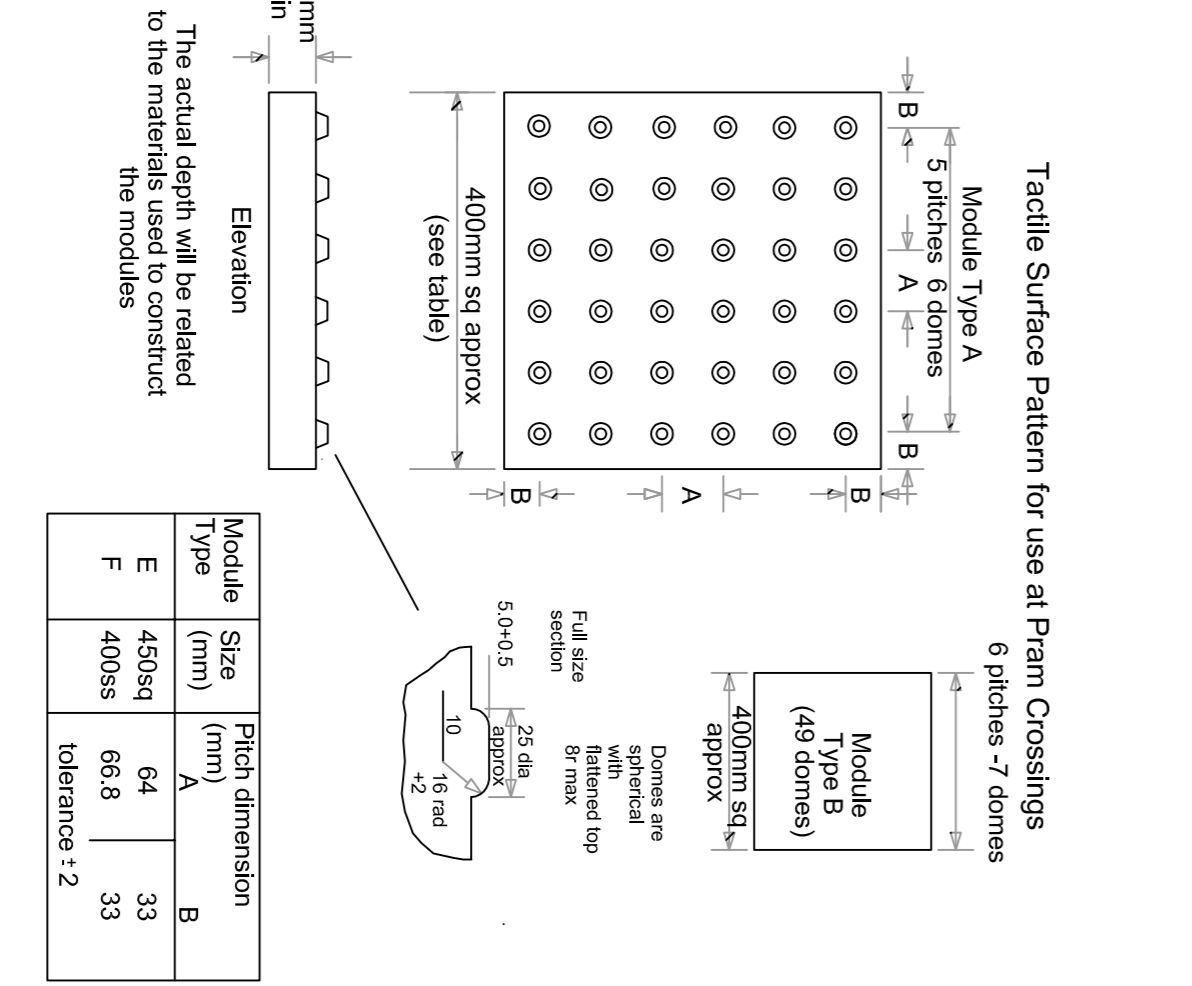
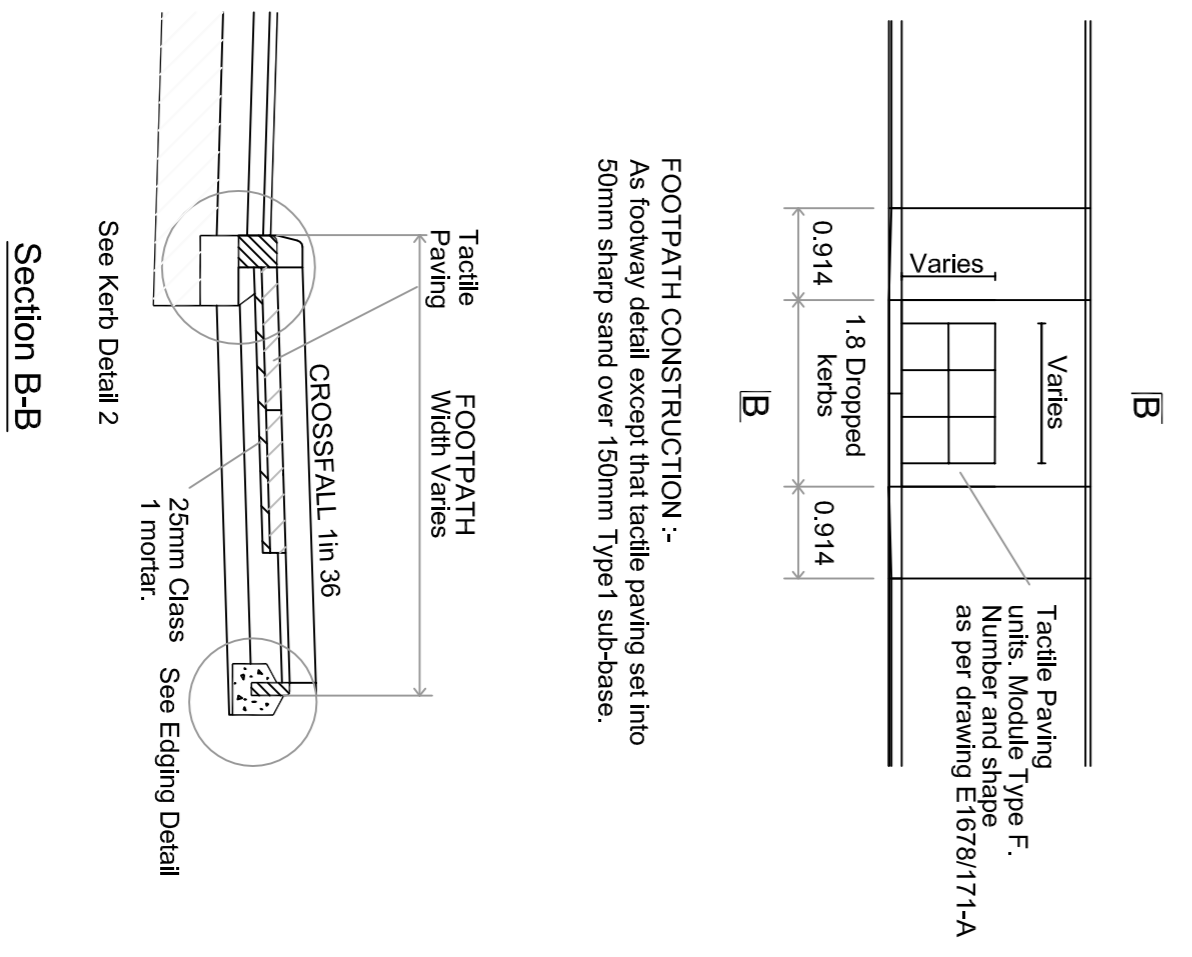
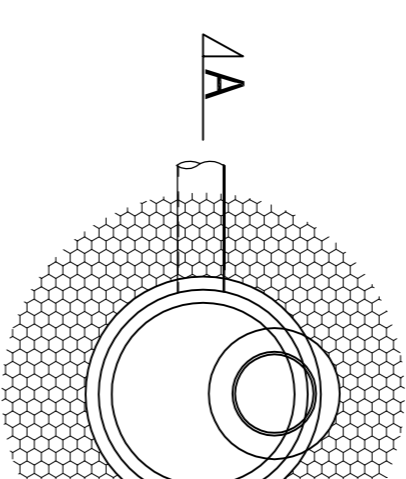
Footway Edging Detail



TYPICAL CHAMBER SOAKAWAY

Notes:

1. Soakaway may be included in a pipe network to discharge light rainfall into the ground. If the rainfall occurs, or the soakaway is overflowing, the water will flow down the overflow pipe to an outlet.
2. The permeable surround should be recycled material, preferably obtained locally, with the following characteristics:
 - 100% passing a 75mm sieve
 - 0 to 55 passing a 5mm sieve
 - A ten percent fines value of 30% or more, when wet.



MOBBSBURY WAY WIDENING DETAILS

GENERAL

1. All acceptable highway work must be carried out in accordance with the latest edition of the Roads in Hertfordshire - Highway Design Guide. This drawing is intended for guidance only and must be read in conjunction with the above document which will supersede this drawing in the event of conflict.
2. The contractor is responsible for checking all in-situ work existing for line and level before commencing work. Any discrepancies or errors shall be reported to the engineer in writing immediately.
3. All accommodation works necessary to establish a satisfactory link between existing and new work will have been allowed for in the contractor's price.
4. The contractor is responsible for arranging a meeting with the drainage and highway department of works to ascertain any variations that are relevant to the development prior to work commencing.
5. The contractor is responsible for ensuring that all works are to the satisfaction of the drainage and highway authority engineer and will have included for any necessary testing in his price.

COURSE AND BASE DETAILS

Wearing Course - 40mm of 14 mm nominal size aggregate HRA complying with BS 5948:97 with 0/20 nominal size precasted chippings applied to the surface with a minimum Polished Stone Value of 65 and AAV value of 10.

Binder Course - 60mm of 0/20 nominal size aggregate DBM BS EN 13102.

Road base - 180mm of 0/32 nominal size aggregate DBM BS EN 13102.

Sub base - 170mm of granular sub-base material Type 1 (SHW) (Clause 603).

Capping layer - 355mm Clause 613-615 and Table 6/1 based on equilibrium CBR value of 3%.

NOTE:

At least two CBR tests should be taken on the proposed widening area prior to construction starting on site.

Final sub-base and capping layer thickness based on equilibrium CBR test results of 3%.

Soft Spots to be treated by unsuitable material being replaced with Class 2a 2b or 2c material laid on geotextile.

KERBING AND EDGING DETAILS

1. Where footway/cycle track is adjacent to the carriageway the upstand should be 125mm.
2. An upstand of 40 mm will be sufficient where adjacent properties, footways & cycle tracks are separated from an area of shared surface block paved carriageway.
3. At dropped kerb vehicular crossings, the upstand should be 25mm.

At crossings used by pedestrians, the upstand should be zero.

TACTILE PAVING DETAILS

1. Colour in BtF.
2. Guidance should be in accordance with 'Guidance Notes for use of Tactile Paving Surfaces'.
3. Paving shall be cut as necessary to kerb radius if required.

Rev	No.	Revision	Date	Drawn By	Checked By
A		As shown	21/02/11	AMZ	KCC
B		Typical drainage soakaway detail added. Where amendments show	20/02/12	AMZ	KCC
C		Revised soakaway detail added	12/01/12	AMZ	KCC
D		Additional drainage notes included	17/09/12	KCC	KCC

Written permission to be given.

Any amendments, when or before, should be brought to the attention of the engineer responsible.

This drawing is the property of the contractor and shall remain the property of the contractor. It is to be used only for the project for which it is issued. It is not to be used for any other project without the written permission of the contractor.

CDM 2007: The design team considers it as far as possible to avoid risks to health and safety or to the environment. It is the contractor's responsibility to ensure that the contractor takes the necessary steps to ensure that the contractor complies with the Health & Safety Act and will be held liable by the planning supervisor for these drawings.

Wornald Burrows Partnership
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Project: **Severage Project E**
Nobel School

Drawing Description: **Fairlands Way, Mobbsbury Way Junction Construction Details**

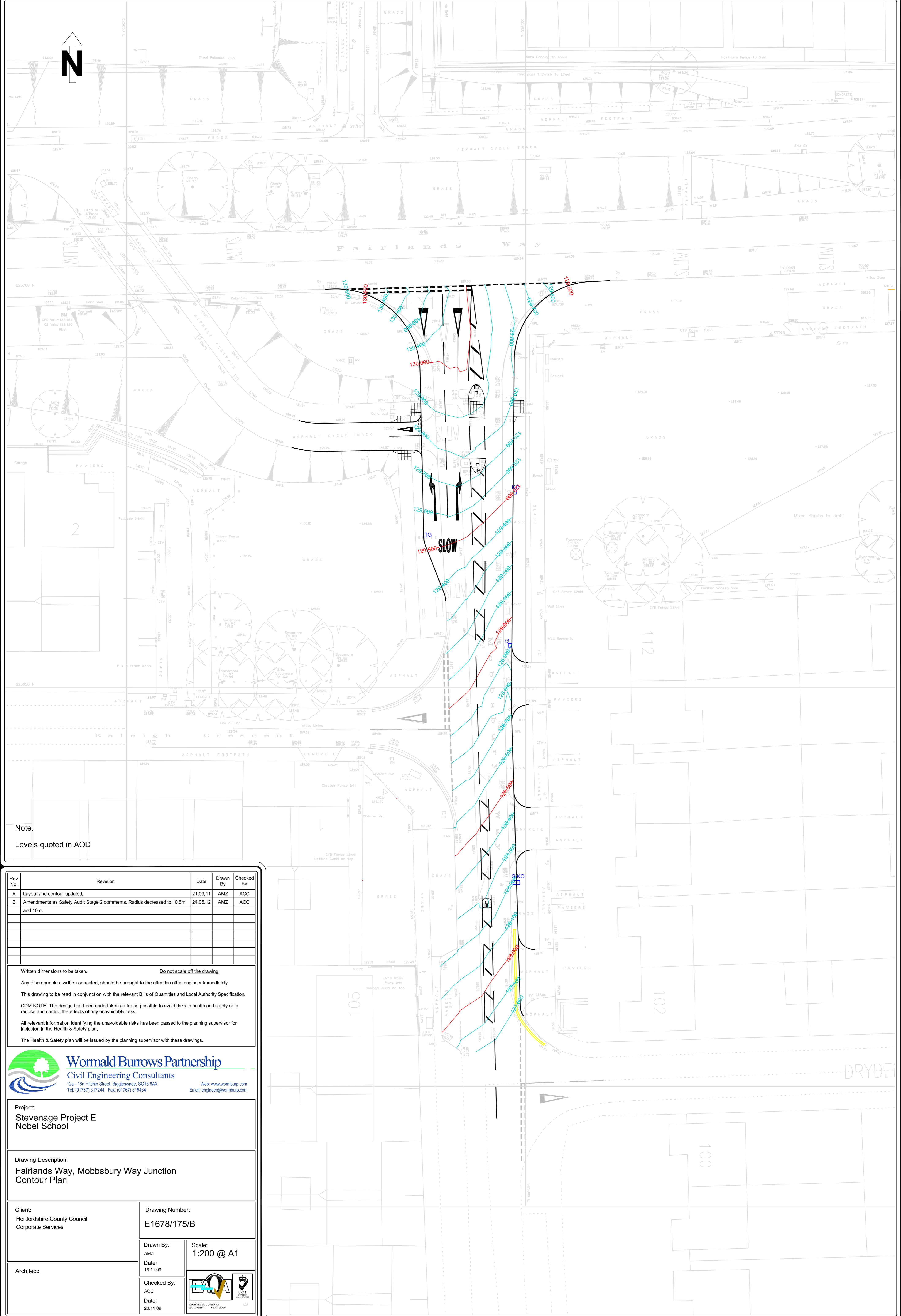
Client: **Hertfordshire County Council**
Corporate Services

Drawing Number: **E1678/174/D**

Scale: **As Shown**

Drawn By: **AMZ**
Checked By: **AMZ**
Date: **11/11/09**

Author: **AMZ**



Note:
Levels quoted in AOD

Rev No.	Revision	Date	Drawn By	Checked By
A	Layout and contour updated.	21.09.11	AMZ	ACC
B	Amendments as Safety Audit Stage 2 comments. Radius decreased to 10.5m and 10m.	24.05.12	AMZ	ACC

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Project:
**Stevenage Project E
 Nobel School**

Drawing Description:
**Fairlands Way, Mobbsbury Way Junction
 Contour Plan**

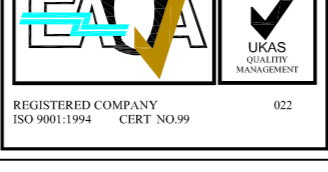
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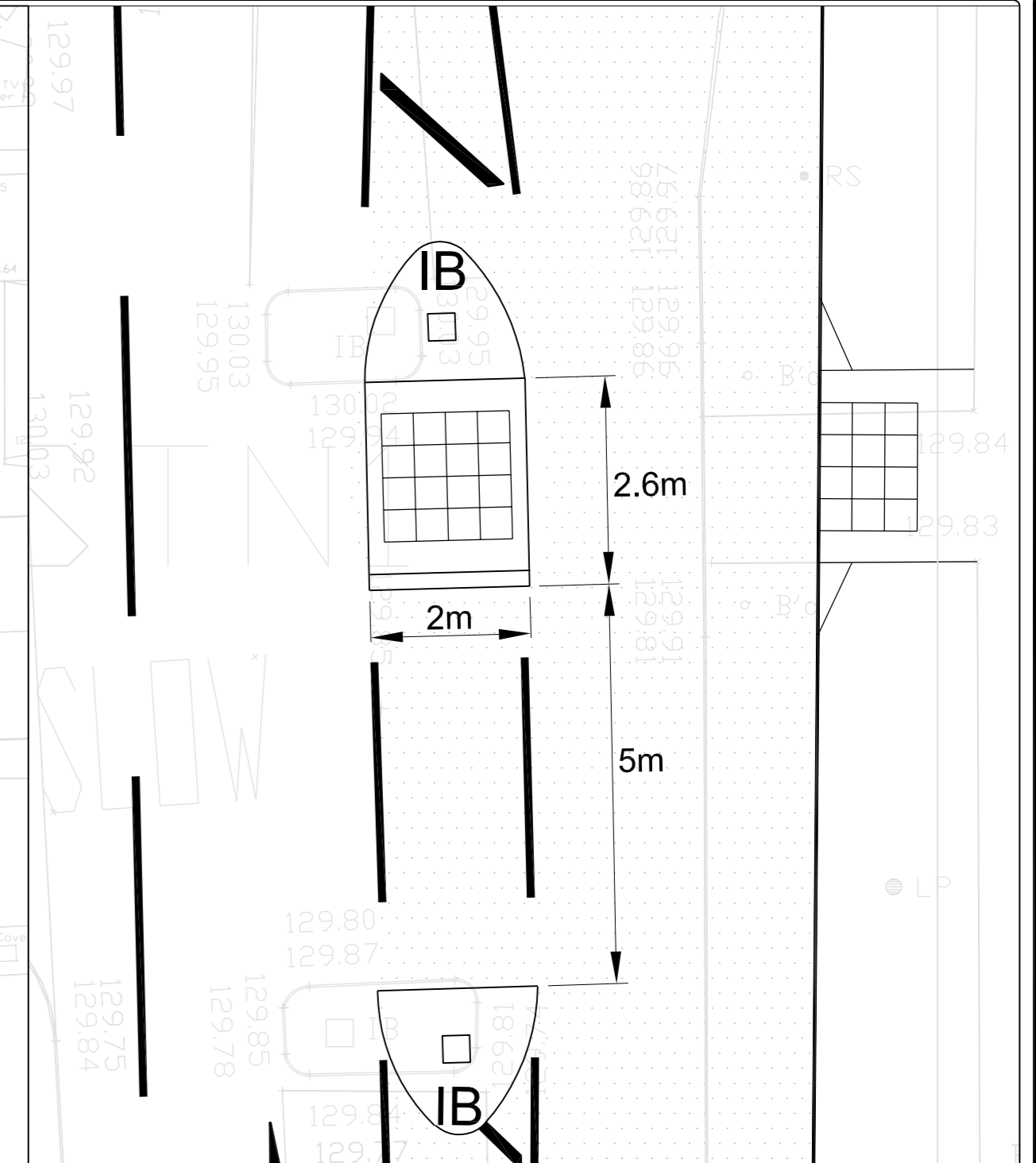
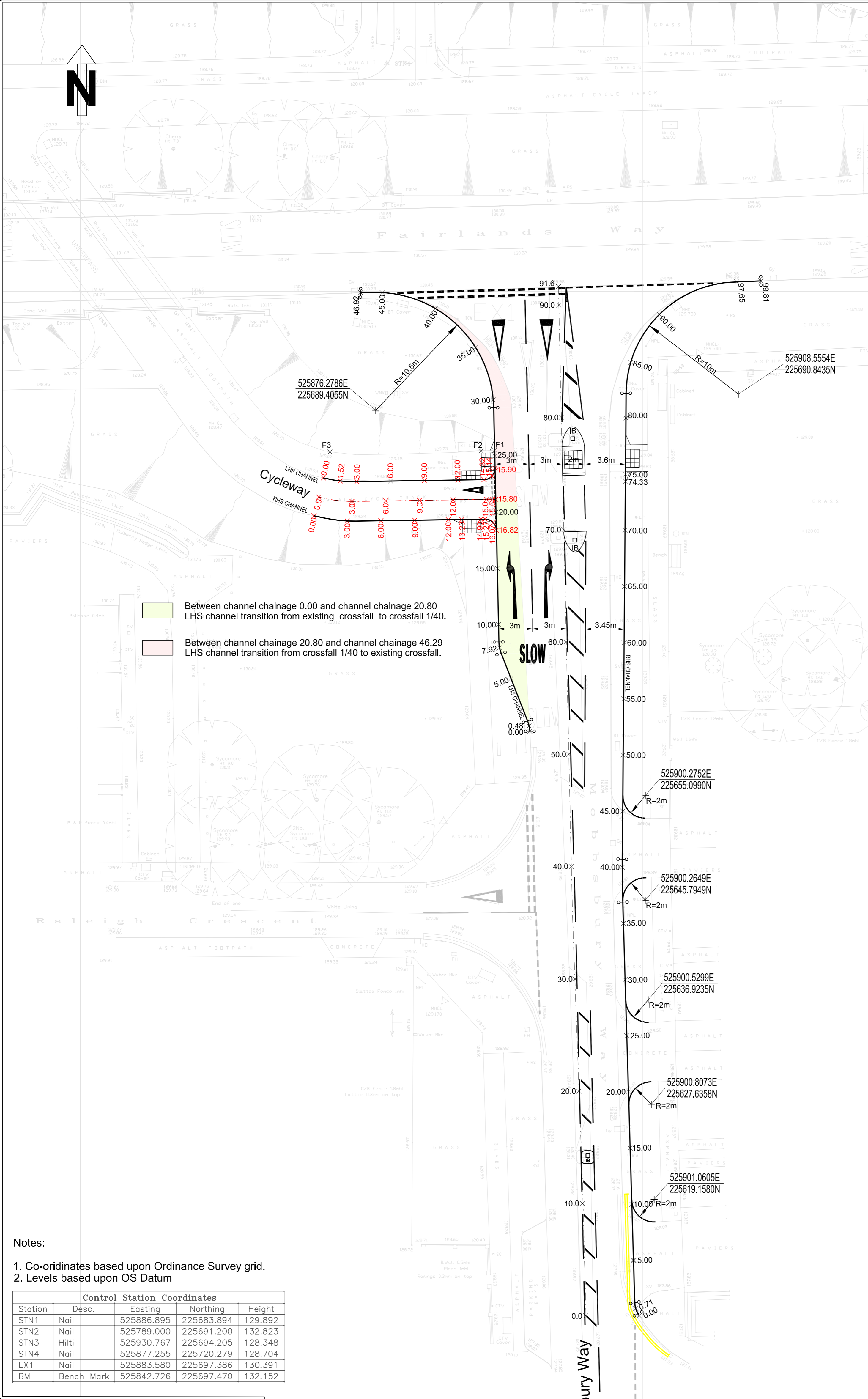
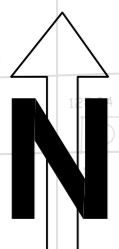
Drawing Number:
E1678/175/B

Drawn By:
 AMZ
 Date:
 16.11.09

Scale:
1:200 @ A1

Architect:
 Checked By:
 ACC
 Date:
 20.11.09





Central Island
Scale 1:75

- Between channel chainage 0.00 and channel chainage 20.80 LHS channel transition from existing crossfall to crossfall 1/40.
- Between channel chainage 20.80 and channel chainage 46.29 LHS channel transition from crossfall 1/40 to existing crossfall.

- Notes:**
- Co-ordinates based upon Ordnance Survey grid.
 - Levels based upon OS Datum

Control Station Coordinates				
Station	Desc.	Easting	Northing	Height
STN1	Nail	525886.895	225683.894	129.892
STN2	Nail	525789.000	225691.200	132.823
STN3	Hilti	525930.767	225694.205	128.348
STN4	Nail	525877.255	225720.279	128.704
EX1	Nail	525883.580	225697.386	130.391
BM	Bench Mark	525842.726	225697.470	132.152

Mobbsbury Way
Co-ordinated setting out for right hand side channel

Chainage	Easting	Northing	Level	Type
0.00	525899.7269	225608.8227	127.7272	Start
0.19	525899.6290	225608.9821	127.7354	Tangent Point
0.71	525899.4170	225609.4562	127.7565	Curve Radius 2,000
1.23	525899.3343	225609.9688	127.7729	Tangent Point
5.00	525899.2217	225613.7385	127.8990	Straight
10.00	525899.0725	225618.7363	128.0253	Straight
15.00	525898.9233	225623.7341	128.1395	Straight
20.00	525898.7741	225628.7318	128.2570	Straight
25.00	525898.6249	225633.7296	128.3823	Straight
30.00	525898.4757	225638.7274	128.5068	Straight
35.00	525898.3265	225643.7252	128.6273	Straight
36.92	525898.2693	225645.6415	128.6743	Tangent Point
40.00	525898.2248	225648.7239	128.7503	Curve Radius 100,000
40.73	525898.2282	225649.4530	128.7678	Tangent Point
45.00	525898.2635	225653.7237	128.8671	Straight
50.00	525898.3049	225658.7235	128.9666	Straight
55.00	525898.3462	225663.7234	129.1476	Straight
60.00	525898.3876	225668.7232	129.3104	Straight
65.00	525898.4290	225673.7230	129.4776	Straight
70.00	525898.4703	225678.7228	129.6293	Straight
74.33	525898.5061	225683.0464	129.7586	IP
75.00	525898.5112	225683.7227	129.7669	Straight
80.00	525898.5487	225688.7225	129.8032	Straight
82.20	525898.5652	225690.9184	129.8370	Tangent Point
85.00	525898.9768	225693.8828	129.7801	Curve Radius 10,000
90.00	525901.5140	225697.9308	129.6794	Curve
97.65	525908.4030	225700.8364	129.3768	Tangent Point
99.81	525910.5559	225700.9248	129.3120	End

Mobbsbury Way
Co-ordinated setting out for left hand side channel

Chainage	Easting	Northing	Level	Type
0.00	525889.9949	225660.8348	129.3554	Start
0.00	525889.9948	225660.8375	129.3555	Tangent Point
0.48	525889.9305	225661.3050	129.3659	Curve Radius 3,000
0.95	525889.7937	225661.7566	129.3772	Tangent Point
5.00	525888.3178	225665.5309	129.4662	Straight
7.40	525887.4446	225667.7638	129.5121	Tangent Point
7.92	525887.2969	225668.2678	129.5226	Curve Radius 3,000
8.45	525887.1493	225668.7698	129.5330	Tangent Point
10.00	525887.2049	225670.3401	129.5638	Straight
15.00	525887.0938	225675.3389	129.6665	Straight
20.00	525886.9827	225680.3377	129.7656	Straight
25.00	525886.8716	225685.3364	129.8637	Straight
29.30	525886.7760	225689.6388	129.9481	Tangent Point
30.00	525886.7374	225690.3342	129.9797	Curve Radius 10,500
35.00	525885.1482	225695.0251	130.2020	Curve
40.00	525885.6379	225698.4657	130.4306	Curve
45.00	525876.8418	225699.8904	130.6305	Curve
45.82	525876.0206	225699.9023	130.6649	Tangent Point
46.92	525874.9270	225699.8754	130.7072	End

Cycleway
Co-ordinated setting out for left hand side channel

Chainage	Easting	Northing	Level	Type
0.00	525871.6225	225683.3922	128.9833	Start
0.28	525871.8986	225683.3268	129.0007	Tangent Point
1.52	525873.1179	225683.1167	129.0820	Curve Radius 10,000
2.76	525874.3537	225683.0587	129.1633	Tangent Point
3.00	525874.5939	225683.0623	129.1768	Straight
6.00	525877.5936	225683.1075	129.3449	Straight
9.00	525880.5933	225683.1526	129.5129	Straight
12.00	525883.5929	225683.1977	129.6809	Straight
14.32	525885.9107	225683.2326	129.8111	Tangent Point
15.14	525886.6360	225683.5602	129.8601	Curve Radius 1,00
15.90	525886.8954	225683.2547	129.8581	Tangent Point
15.90	525886.8954	225683.2547	129.8581	End

Cycleway
Co-ordinated setting out for right hand side channel

Chainage	Easting	Northing	Level	Type
0.00	525870.7799	225680.0178	129.0826	Start
0.91	525871.6686	225679.8248	129.1187	Tangent Point
3.00	525873.7390	225679.5535	129.2011	Curve Radius 12,500
3.77	525874.5093	225679.5413	129.2316	Tangent Point
6.00	525876.7365	225679.5747	129.3309	Straight
9.00	525879.7382	225679.6197	129.4645	Straight
12.00	525882.7379	225679.6647	129.5980	Straight
13.20	525883.9223	225679.6825	129.6510	Straight
14.90	525885.6379	225679.7081	129.7270	Straight
15.27	525886.0034	225679.7196	129.7450	Tangent Point
16.07	525886.7279	225679.4184	129.7690	Curve Radius 1,00
16.82	525887.0182	225678.7360	129.7360	Tangent Point
16.82	525887.0182	225678.7360	129.7360	End

Footway Adjacent Cycleway

Chainage	Easting	Northing	Level
F1	525886.8598	225685.8532	129.892
F2	525886.4603	225685.8365	129.865
F3	525872.2067	225685.7021	129.079

Cycleway
Co-ordinated setting out for centreline

Metrage	Easting	Northing	Level	Curve/Straight
0.0000	525871.1956	225681.6827	129.0336	Start
0.1198	525871.3119	225681.6537	129.0396	Tangent Point
3.0000	525874.1628	225681.2963	129.1835	Curve Radius 12,000
3.2387	525874.4015	225681.2975	129.1954	Tangent Point
6.0000	525877.1625	225681.3395	129.3334	Straight
9.0000	525880.1622	225681.3850	129.4832	Straight
12.0000	525883.1618	225681.4306	129.6331	Straight
15.0000	525886.1615	225681.4762	129.7830	Straight
15.5206	525886.6821	225681.4840	129.8091	Straight
15.8000	525886.9567	225681.4881	129.7890	Straight
15.8000	525886.9567	225681.4881	129.7890	End

Rev No.	Revision	Date	Drawn By	Checked By
A	LHS Channel transition shown	18.01.12	AMZ	ACC
B	Tacility zoning and island oriented	05.04.12	AMZ	ACC
C	Amendments as Safety Audit Stage 2 comments, Radius decreased to 10.5m and 10m.	24.05.12	AMZ	ACC

Written dimensions to be taken. Do not scale off the drawing.
Any discrepancies, written or scaled, should be brought to the attention of the engineer immediately.
This drawing to be read in conjunction with the relevant Bills of Materials and Local Authority Specification.
CDM NOTE: The design has been undertaken as far as possible to avoid risks to health and safety or to reduce and control the effects of any unavoidable risks.
All relevant information identifying the unavoidable risks has been passed to the planning supervisor for inclusion in the Health & Safety plan.
The Health & Safety plan will be issued by the planning supervisor with these drawings.



Project:
**Stevenage Project E
Nobel School**

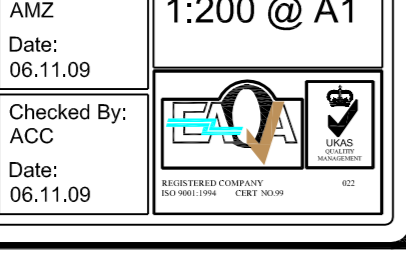
Drawing Description:
**Fairlands Way, Mobbsbury Way Junction
Setting Out**

Client:
Hertfordshire County Council
Corporate Services

Drawing Number:
E1678/178/C

Drawn By:
AMZ

Checked By:
ACC





No.	Revisions	Date	Drawn By	Checked By
A	Approved as comments from Highway Engineer.	26.04.12	AMZ	KCC
B	Approved as Shelly and Steve's Comments. Rebars removed to 150mm.	26.05.12	AMZ	KCC
C	Final design issued. See schedule for details. Key updated.	11.07.12	AMZ	KCC
D	Street lighting design added.	04.08.12	AMZ	KCC
E	Additional drainage notes included.	17.08.12	KCC	KCC

Any discrepancies, whether or not they should be brought to the attention of the engineer are noted.

This drawing is to be read in conjunction with the relevant Bill of Materials and local authority specifications.

CDM NOTE: The designer has been consulted as far as possible to avoid risks to health and safety or to the environment. However, the contractor shall be responsible for the safety of the works and for the exclusion of the Health and Safety file.

This Health & Safety file will be issued by the planning supervisor with these drawings.



Project:
Sleeperage Project E
Nobel School

Drawing Description:
Fairlands Way, Mobbbsbury Way Junction
Section 278 Works

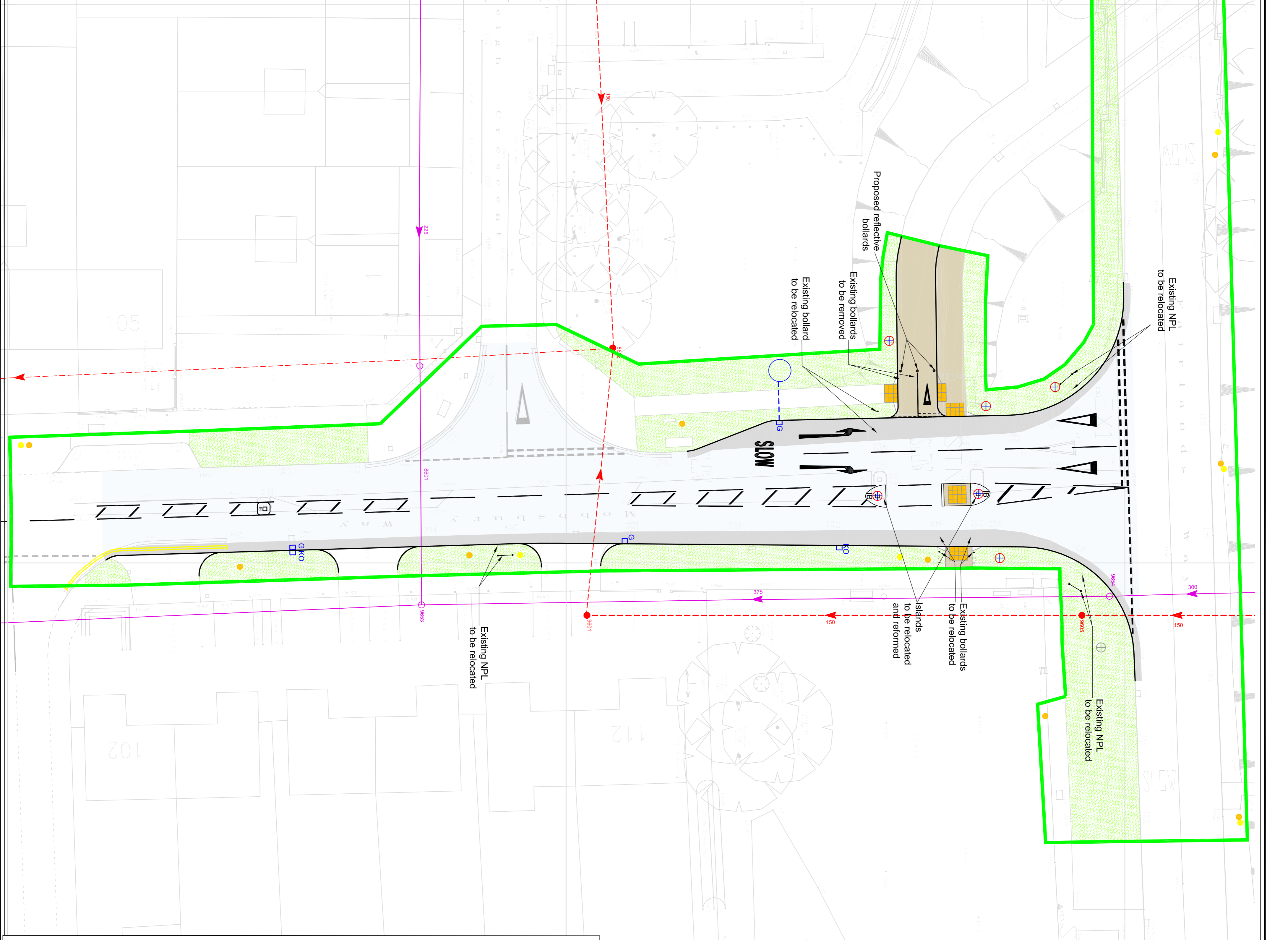
Client:
Fairlands Community Council
Carpenter Services

Drawing Number:
E1678/179/E

Drawn By: AMZ
Checked By: KCC
Date: 23.12.11
Scale: 1:200 @ A1
Checked By: KCC
Date: 10.01.12

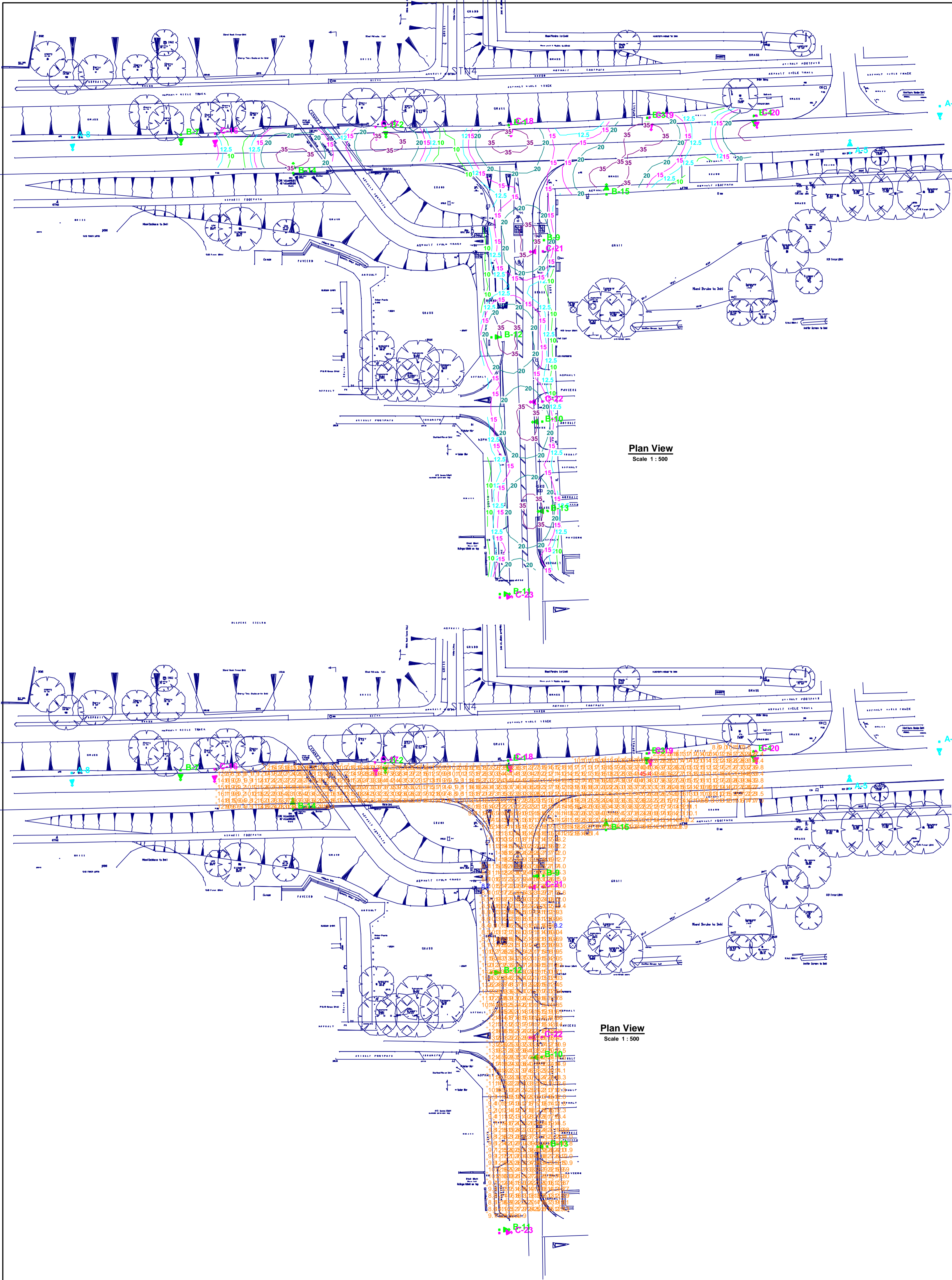
KEY

- Section 278 Works on Public Highways
- Carriageway Construction
- Re-Surfacing Only
- Cycleway/Footway Re-construction
- Highway Grassed Area (verges)
- Proposed Tactile paving
- Proposed Illuminous Bollard
- Proposed Gully
- Proposed Kerb Outlet
- Existing Luminaire to be disconnected from DNO service and either transferred supply if new column is within reach or disconnected. Column and lantern to be removed and recycled with WEEE and the councils policies.
- Proposed WRTL ARC Luminaire with shallow glass bowl and 150 watt Philips Cosmopolis light source. The luminaire is post top mounted on a 8m column at an uplift of 5 degrees from the horizontal. The luminaire is controlled via Harvard feature system.
- Road Signage Existing
- Road Signage Proposed
- Public Foul Sewer
- Public Surface Sewer



Notes:

1. The contractor is responsible at all times for carrying out his work strictly in accordance with the Health and Safety at Work Act 1974 and the CDM Regulations 2007.
2. The contractor is responsible for checking all tie-in work with existing for line and level before commencing work. Any discrepancies or errors shall be reported to the engineer in writing immediately.
3. All accommodation works necessary to establish a satisfactory link between existing and new work will have been allowed for in the contractors price.
4. It is the responsibility of the contractor to locate any service apparatus in the vicinity of the works and he will be deemed to have allowed for all hand digging and locating of service apparatus in his price. Mansell Construction Services Limited will accept no claims whatsoever in respect of any loss or damage in respect of such apparatus, however caused.
5. The contractor to investigate existing highway drainage and gully connections on site prior to work. Existing gully connections should be utilized where appropriate.
6. The contractor is responsible for arranging a meeting with the drainage and highway clerk or works to ascertain any variations that are relevant to this development prior to work commencing.
7. The contractor is responsible for ensuring that all works are to the satisfaction of the drainage and highway authority engineer and will have included for any necessary testing in his price.
8. All adaptable highway work must be carried out in accordance with the latest edition of the Roads in Hertsmere - Highway Design Guide. This drawing is intended for guidance only and must be read in conjunction with the above document which will supersede this drawing in the event of conflict.
9. All road and drive gullies to be trapped.
10. Traffic signs and road markings shall be in accordance with The Traffic Signs Regulations and General Directions Act 2002.
11. This drawing is to be read in conjunction with all other relevant engineers, architects and specialist design drawings and details.
12. All dimensions shown are in millimeters unless noted otherwise and all levels and coordinates relate to Kempton Surveys Limited topographical survey dated 16 October 2009.
13. Do not scale from this drawing. If in doubt ask.



NOTES

Columns used on this design are at 8m high and should comply with BS5649, BS EN 40 and BD26. Where access is restricted the column will be raised and lower and drop away from cars and buildings to enable safe maintenance. The column should be capable of taking a sign, rectangular in elevation. The eccentricity from the centre line of the column to the centre of the sign should be 500mm for columns of a 8m height. Columns will be finished as stated below.

Pre-treat galvanised external surface with "T" Wash application to be fully in accordance with Technical Data Sheet (shop applied). Followed by a one coat application of thermoplastic cross-linked copolymer using an in line electrostatic spray to the external surface of the column. This will provide a uniform thickness of not less than 600m with colour to BS4800 in 12D45.

One coat of two pack glass flake epoxy to the external and internal root to 250mm above ground level minimum dry film thickness 200 m colour black (shop applied)

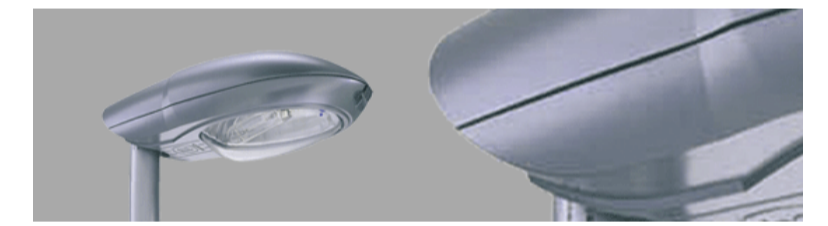
All lighting columns shall be packed at contact points for transport and storage to protect the finish. All post top columns shall have a 76.1mm diameter 100mm plain spigot unless otherwise specified by the Engineer. Strimmer guards to be provided in grass verges when requested by the scheme promoter or designer. The lanterns are the WRTL ARC with shallow glass bowl and shall conform to the following:
Will be IP65, as defined in BSEN60529 and powder coated to match column.
Control gear is to be Electronic Dimmable by Harvard and will enable dimming or switch off it required via the Leafnut system. The lantern will require a leaf and one will require a branch. A trunk may also be required and will be supplied by the developer if needed. Please speak with Andrew Jackson at Harvard electronics for further details.
Electrical connections will be via the DNO (Direct Network Operator)

All columns will be at the back of path in positions shown and where in verge will be at least 1.0m from the kerb edge. Column numbers shown are indicative and official numbers must be obtained from HCC before adoption can be sort. Further information for installation of this equipment can be found at <http://www.hertsdirect.org/services/transplan/infdev/roadsinherts/> and should be followed for compliance and adoptability.

Adoptable areas are lit to CE2
Risk and Environmental issues have been considered for this project and take into consideration all CDM designer requirements to the best knowledge of the designer and the using the information given by others.
Existing lighting that is to be removed must be done so in keeping with WEEE and HCC policies. Disconnections or transfers need to be organised with the DNO. Any trees in the vicinity of lighting columns need to be cut back and maintained throughout the life of the installation to maintain lighting levels.

LUMINAIRE LOCATIONS

No.	Label	Location Z	MH	Tilt
1	B	8.0	8.0	5.0
2	B	8.0	8.0	5.0
3	B	8.0	8.0	5.0
4	B	8.0	8.0	5.0
5	A	8.0	8.0	5.0
6	A	8.0	8.0	5.0
7	B	8.0	8.0	5.0
8	A	8.0	8.0	5.0
9	B	8.0	8.0	5.0
10	B	8.0	8.0	5.0
11	B	8.0	8.0	5.0
12	B	8.0	8.0	5.0
13	B	8.0	8.0	5.0
14	B	8.0	8.0	5.0
15	B	8.0	8.0	5.0
16	C	8.0	8.0	5.0
17	C	8.0	8.0	5.0
18	C	8.0	8.0	5.0
19	C	8.0	8.0	5.0
20	C	8.0	8.0	5.0
21	C	8.0	8.0	5.0
22	C	8.0	8.0	5.0
23	C	8.0	8.0	5.0



STATISTICS

Description	Symbol	Avg	Max	Min	Min/Avg
CE2 class junction	+	20.6 lux	45.4 lux	8.2 lux	0.40

LUMINAIRE SCHEDULE

Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
▲	A	3	Existing luminaire and column to be retained and is shown for design purposes	SRS201	SOX-E66W	SRS201 1 x SOX-E66W.ies	10700	0.78	81.5
▲	B	12	WRTL ARC luminaire with shallow glass bowl and 140 watt Philips Cosmopolis light source. The luminaire is post top mounted on a 8m column at an uplift of 5 degrees from the horizontal. The luminaire is controlled via the Harvard leafnut system	2680 ENN E# Luminaire requires control via the Harvard leafnut system and will require a trunk if one is not in the vicinity. Branches and leaves will also be required.	Philips Master range 140 watt Cosmopolis lamp.	Arc 2680 ENN E# 1MT 140W 16500 PGZ12.LDT	16500	0.76	151
▲	C	8	existing luminaires to be disconnected from DNO service and either transferred supply if new column is within reach or disconnected. Column and lantern to be removed and recycled in accordance with WEEE and the councils policies.	SRS201	SOX-E66W	SRS201 1 x SOX-E66W.ies	0	0.78	81.5



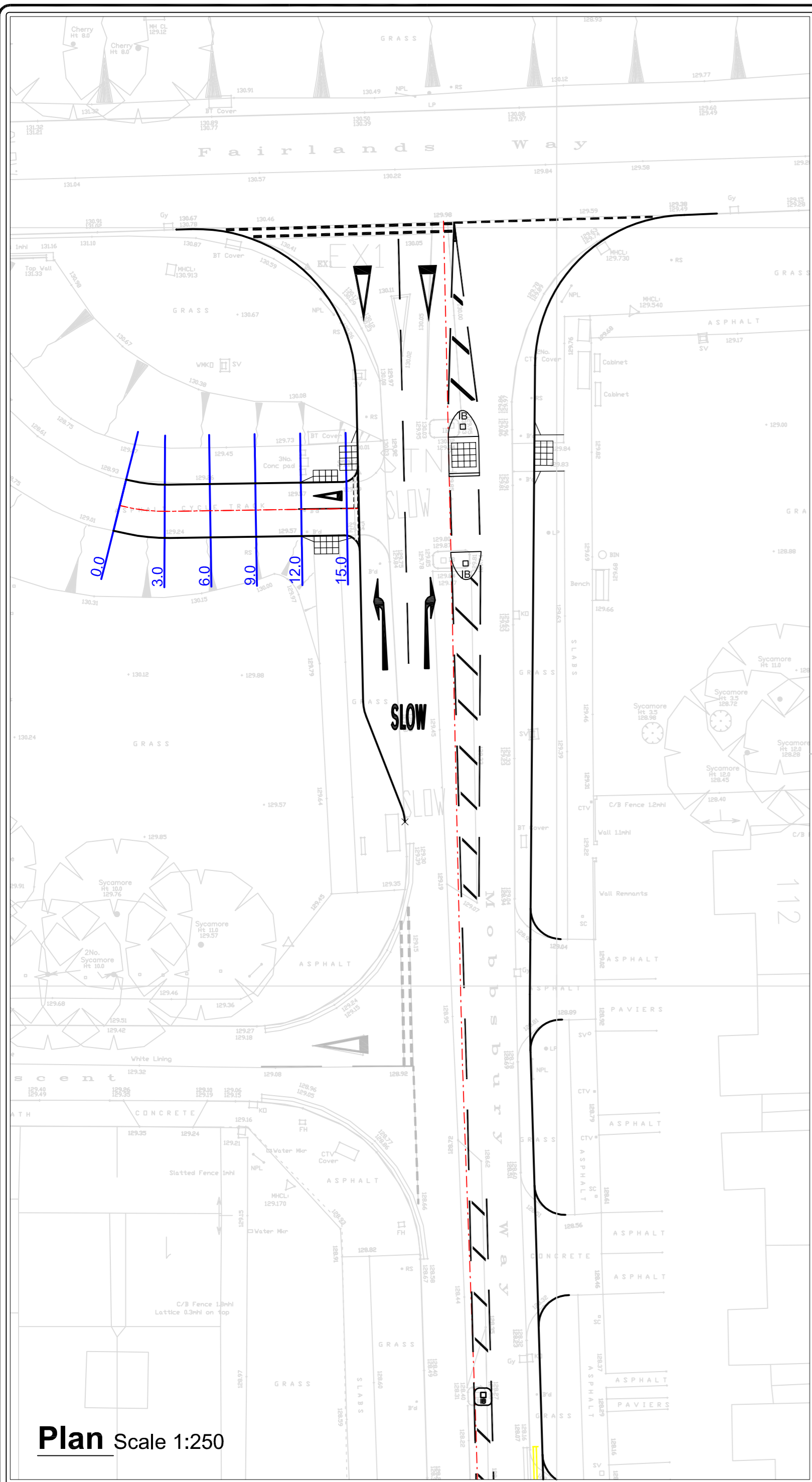
Mobbsbury Way Stevenage
new junction and road layout
designed to CE2 with white light

Designer
Lorraine Calcott

Date
Aug 30 2012

Scale
As shown at A1

Drawing No.
LOR300502-02



Plan Scale 1:250

Cross Section for cycleway
Datum: 128.00 AOD

Existing Levels	128.413	128.201	128.116	128.177	128.210	128.440	130.084
OffSet	-5.000	-4.196	-1.916	0.729	1.718	2.610	5.000
Proposed Levels			128.151	128.183	128.217		
OffSet			-1.762	-0.000	1.755		

Chainage : 3.0000

Cross Section for cycleway
Datum: 127.00 AOD

Existing Levels	128.302	128.078	128.050	128.011	128.076	128.401	128.695	130.084
OffSet	-5.000	-4.144	-3.406	-2.469	1.716	2.803	3.860	5.000
Proposed Levels				128.983	129.004	128.083		
OffSet				-1.762	0.000	1.716		

Chainage : 0.0000

Cross Section for cycleway
Datum: 128.00 AOD

Existing Levels	128.724	128.557	128.551	128.419	128.424	128.414	128.447	128.640	128.740	129.986	130.025
OffSet	-5.000	-4.179	-3.933	-1.756	-0.844	0.024	1.786	2.490	3.189	4.453	5.000
Proposed Levels				128.487	128.483	128.484					
OffSet				-1.761	-0.000	1.759					

Chainage : 9.0000

Cross Section for cycleway
Datum: 128.00 AOD

Existing Levels	128.608	128.380	128.264	128.264	128.329	128.719	130.057
OffSet	-5.000	-4.154	-1.722	-1.722	1.780	3.528	5.000
Proposed Levels			128.319	128.323	128.333	128.339	
OffSet			-1.761	-1.370	-0.000	0.457	

Chainage : 6.0000

Cross Section for cycleway
Datum: 128.00 AOD

Existing Levels	128.970	128.887	128.859	128.757	128.729	128.640	128.718	128.870	128.904	128.886
OffSet	-5.000	-4.336	-2.787	-1.761	0.381	1.378	1.884	2.413	4.378	5.000
Proposed Levels				128.823	128.783	128.751				
OffSet				-1.760	-0.000	1.760				

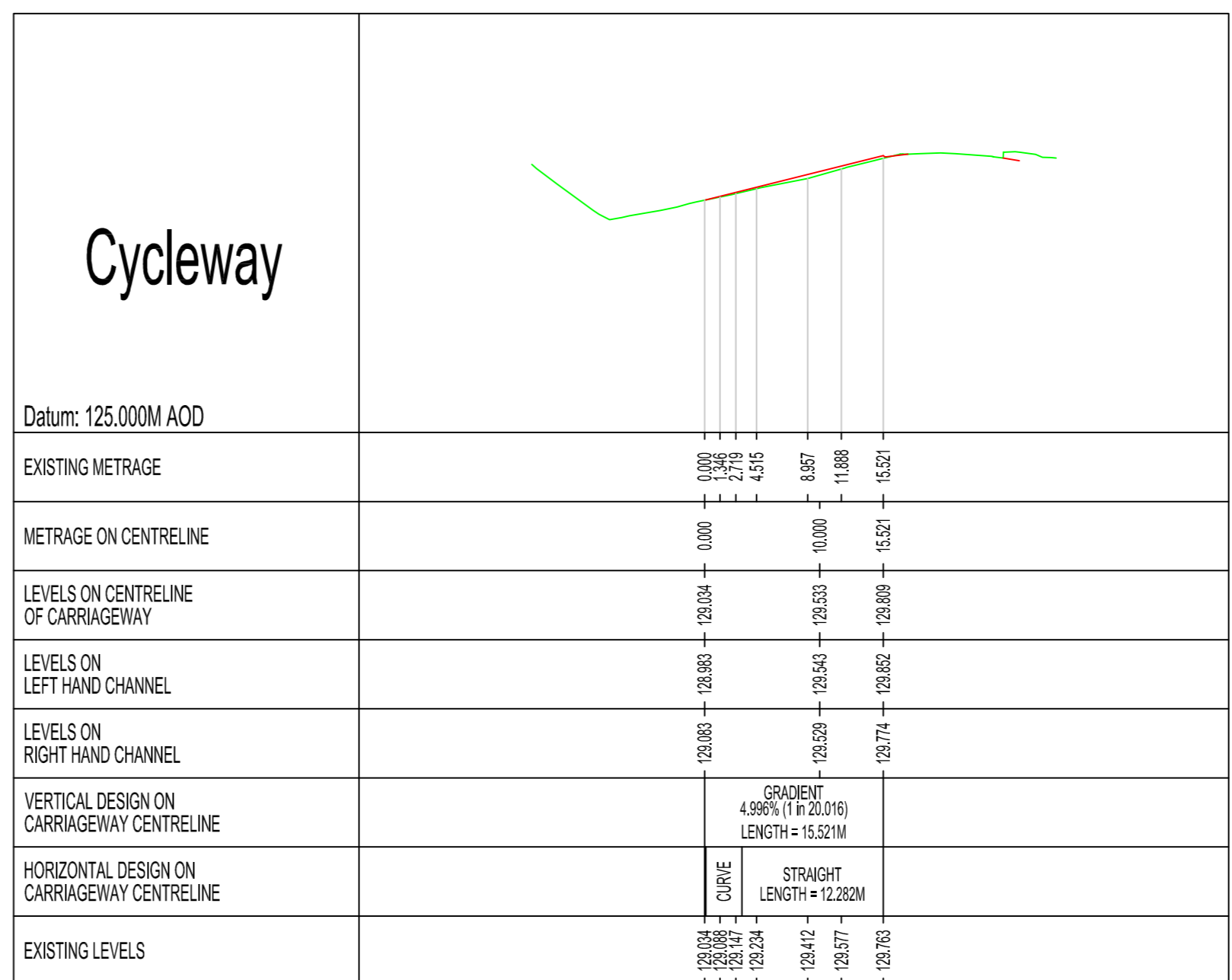
Chainage : 15.0000

Cross Section for cycleway
Datum: 128.00 AOD

Existing Levels	128.930	128.771	128.771	128.669	128.669	128.594	128.586	128.988
OffSet	-5.000	-3.617	-2.827	-2.470	-2.470	1.726	1.792	4.849
Proposed Levels				128.655	128.661	128.630	128.618	
OffSet				-1.760	-1.389	-0.000	0.457	

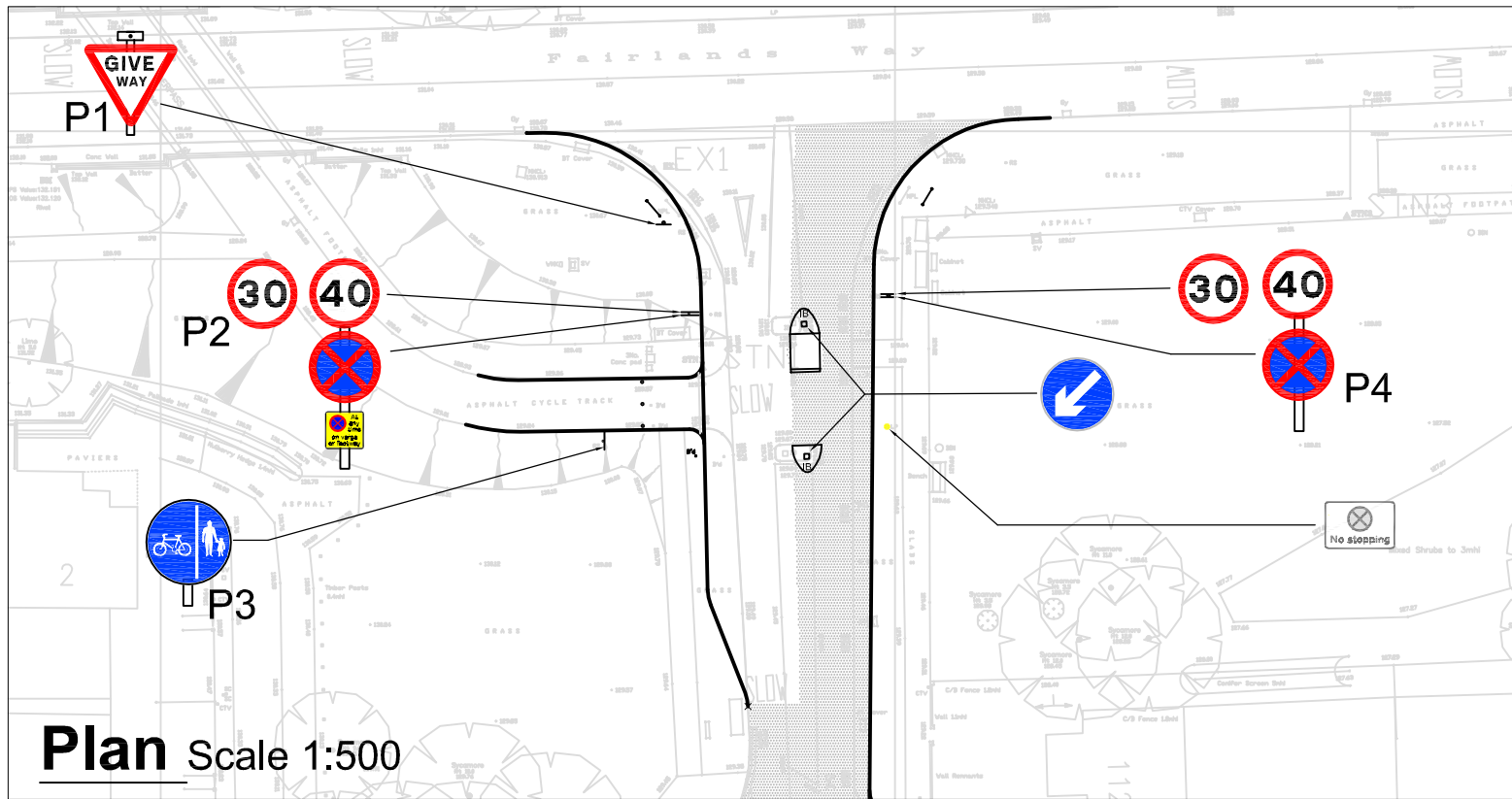
Chainage : 12.0000

Cycleway Cross Sections Scale V 1:200, H 1:200

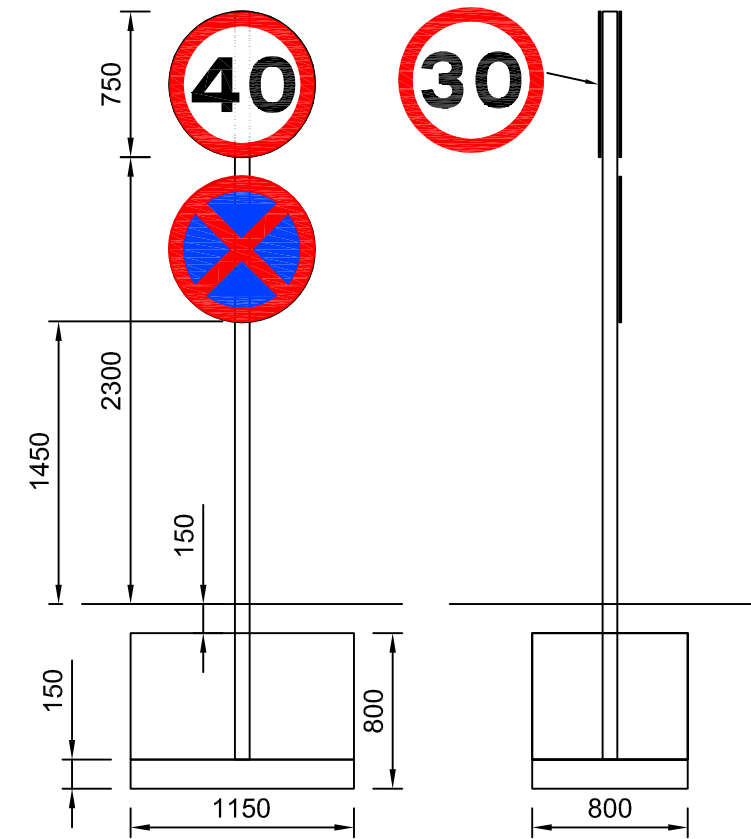


Cycleway Longitudinal Section Scale V 1:100, H 1:500

Rev No.	Revision	Date	Drawn By	Checked By
<p>Written dimensions to be taken. Do not scale off the drawing.</p> <p>Any discrepancies, written or scaled, should be brought to the attention of the engineer immediately.</p> <p>This drawing to be read in conjunction with the relevant Bills of Materials and Local Authority Specification.</p> <p>CDM NOTE: The design has been undertaken as far as possible to avoid risks to health and safety or to reduce and control the effects of any unavoidable risks.</p> <p>All relevant information identifying the unavoidable risks has been passed to the planning supervisor for inclusion in the Health & Safety plan.</p> <p>The Health & Safety plan will be issued by the planning supervisor with these drawings.</p>				
<p>Wormald Burrows Partnership Civil Engineering Consultants 12a - 18a Hitchin Street, Biggleswade, SG18 8AX Tel: (01767) 317244 Fax: (01767) 315434 Web: www.wormburp.com Email: engineer@wormburp.com</p>				
<p>Project: Stevenage Project E Nobel School</p>				
<p>Drawing Description: Fairlands Way, Mobbsbury Way Junction Cycleway Sections</p>				
<p>Client: Hertfordshire County Council Corporate Services</p>		<p>Drawing Number: E1678/177</p>		
<p>Architect:</p>		<p>Drawn By: AMZ</p>	<p>Scale: As Shown @ A2</p>	
<p>Date: 06.10.11</p>		<p>Checked By: ACC</p>		
<p>Date: 21.09.11</p>		<p>Date: 21.09.11</p>		



Plan Scale 1:500



Post Specification P4

Signs:
 Reference: Diagram 670
 Width: 750mm, Height: 750mm
 Shape: Roundel
 Orientation: Facing front
 Mounted on posts: 1
 Mounting height: 2300mm

Posts:
 Quantity: 1
 Type: 76.1 x 3.2 CHS
 Spacing: N/A
 Post 1 Length: 3850mm

Base:
 Type: Combined
 Width: 1150mm
 Length: 800mm
 Depth: 800mm
 Volume: 0.74cu.m
 Earth cover: 150mm
 Blinding layer: 150mm

Reference: Diagram 642
 Width: 750mm, Height: 750mm
 Shape: Roundel
 Orientation: Facing front
 Mounted on posts: 1
 Mounting height: 1450mm

Reference: Diagram 670
 Width: 750mm, Height: 750mm
 Shape: Roundel
 Orientation: Facing back
 Mounted on posts: 1
 Mounting height: 2300mm

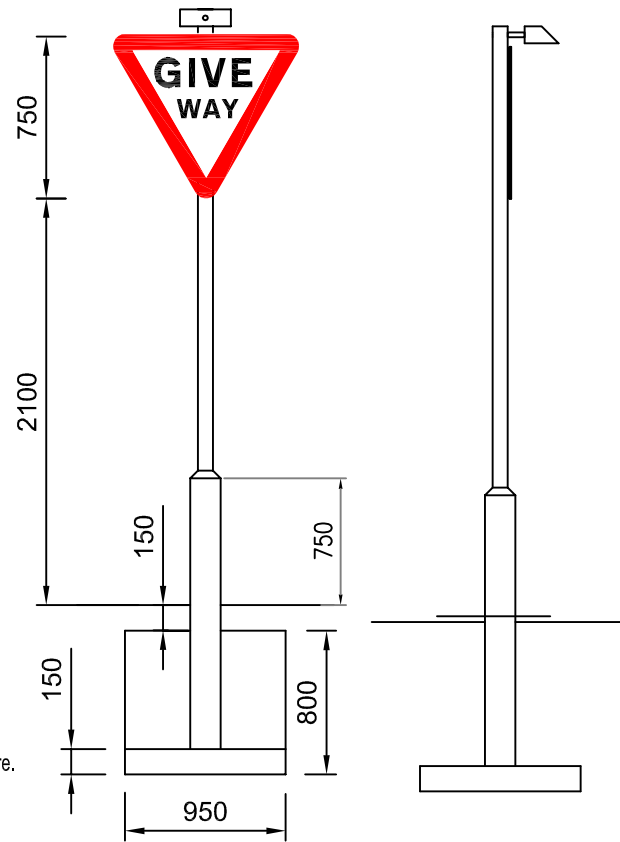
Post Specification P1

Signs:
 Reference: Diagram 602
 Orientation: Facing front
 Mounted on posts: 1
 Mounting height: 2100mm

Posts:
 Quantity: 1
 Type: 76.1 x 3.2 CHS
 with base 180 x 3.2 CHS
 Post total length: 3970mm
 Finish: Galvanised and grey plastic coated

Base:
 Material: ST4 concrete
 Width: 950mm
 Length: 950mm
 Depth: 800mm
 Volume: 0.72cu.m
 Earth cover: 150mm
 Blinding layer: 150mm

Illumination:
 Orientation: Facing front
 Light on posts: 1
 Inspection hatch and electrical equipment to meet Hertfordshire Highways and Roads in Hertfordshire. A guide to New Developments. Appendix 14/5" requirements



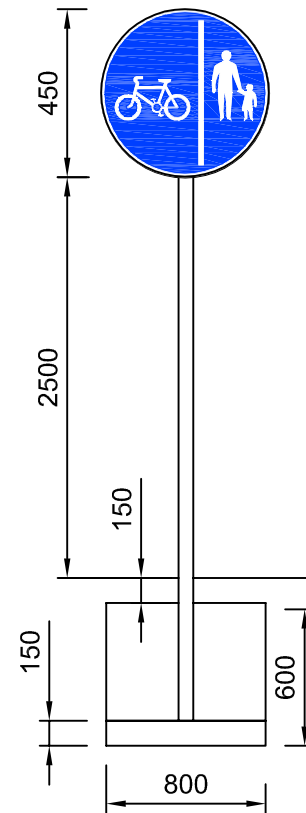
Post Specification P3

Signs:
 Reference: Diagram 957
 Orientation: Dual Facing front and back
 Mounted on posts: 1
 Mounting height: 2500mm

Posts:
 Quantity: 1
 Type: 76.1 x 3.2 CHS
 Post total length: 3550mm
 Finish: Galvanised and grey plastic coated

Base:
 Material: ST4 concrete
 Width: 600mm
 Length: 600mm
 Depth: 600mm
 Volume: 0.22cu.m
 Earth cover: 150mm
 Blinding layer: 150mm

Illumination: None



Post Specification P2

Signs:
 Reference: Diagram 670
 Width: 750mm, Height: 750mm
 Shape: Roundel
 Orientation: Facing front
 Mounted on posts: 1
 Mounting height: 2300mm

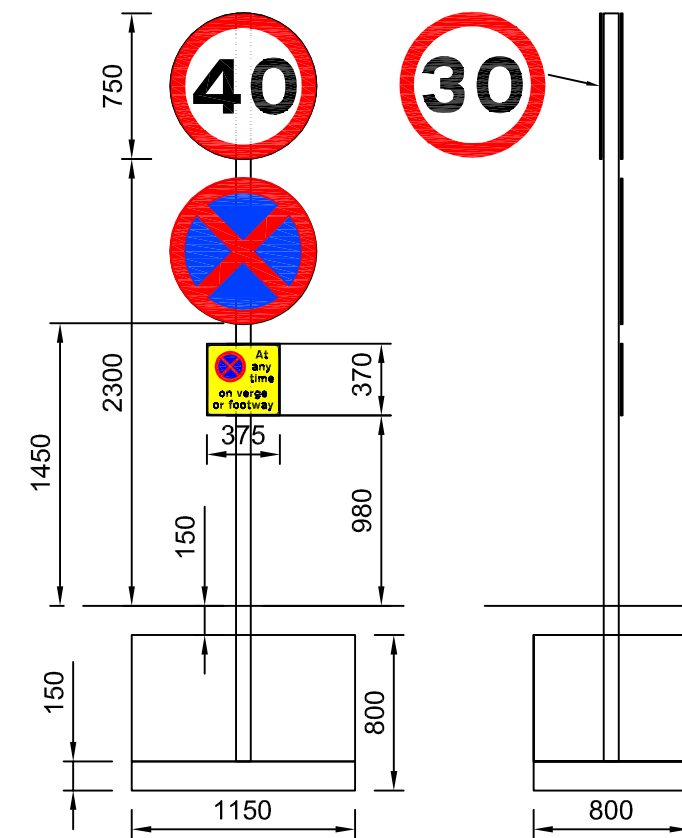
Posts:
 Quantity: 1
 Type: 76.1 x 3.2 CHS
 Spacing: N/A
 Post 1 Length: 3850mm

Base:
 Type: Combined
 Width: 1150mm
 Length: 800mm
 Depth: 800mm
 Volume: 0.74cu.m
 Earth cover: 150mm
 Blinding layer: 150mm

Reference: Diagram 642
 Width: 750mm, Height: 750mm
 Shape: Roundel
 Orientation: Facing front
 Mounted on posts: 1
 Mounting height: 1450mm

Reference: Diagram 637.1
 Width: 375mm, Height: 370mm
 Shape: Rectangle
 Orientation: Facing front
 Mounted on posts: 1
 Mounting height: 980mm

Reference: Diagram 670
 Width: 750mm, Height: 750mm
 Shape: Roundel
 Orientation: Facing back
 Mounted on posts: 1
 Mounting height: 2300mm



Rev No.	Revision	Date	Drawn By	Checked By

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Client:
 Hertfordshire County Council
 Corporate Services

Architect:

Written dimensions to be taken. **Do not scale off the drawing.**

Any discrepancies, written or scaled, should be brought to the attention of the engineer immediately.

This drawing to be read in conjunction with the relevant Bills of Materials and Local Authority Specification.

CDM NOTE: The design has been undertaken as far as possible to avoid risks to health and safety or to reduce and control the effects of any unavoidable risks.

All relevant information identifying the unavoidable risks has been passed to the planning supervisor for inclusion in the Health & Safety plan.

The Health & Safety plan will be issued by the planning supervisor with these drawings.

Drawn By:
 AMZ
 Date:
 23.05.12

Checked By:
 ACC
 Date:
 24.05.12

Scale:
 As Shown @ A3

Drawing Number:
 E1678/185

Drawing Description:
Signs Construction Details

Project:
**Stevenage Project E
 Nobel School**