SHDC
Planning & Development
24 FEB 2010
Ref: 0145-10

CONDITION 17

Project:

Barrington Gate, Holbeach, Lincolnshire

Lighting Design Proposal
Daniel Kent
MLM Consulting

Project number: 07682
Date: 06.05.2009

DW Windsor Lighting
Pindar Road
Hoddesdon
Herts EN11 0DX

telephone: 01992 474600
facsimile: 01992 474602
email: info@dwwindsor.co.uk
web: dwwindsor.co.uk

DW Windsor
LIGHTING

Project Team

The following members of our team have been assigned to handle your project. Please call us at anytime for further help.

Design

Sam Dennis
Applications Engineer

tel: 01992 474600
email: samdennis@dwwindsor.co.uk

Project Management

Stefan Stratta
Project Engineer

tel: 01992 474600
mob: 07885 798414
email: stefanstratta@dwwindsor.co.uk

Customer Service

Amy Kelly
Customer Services Advisor

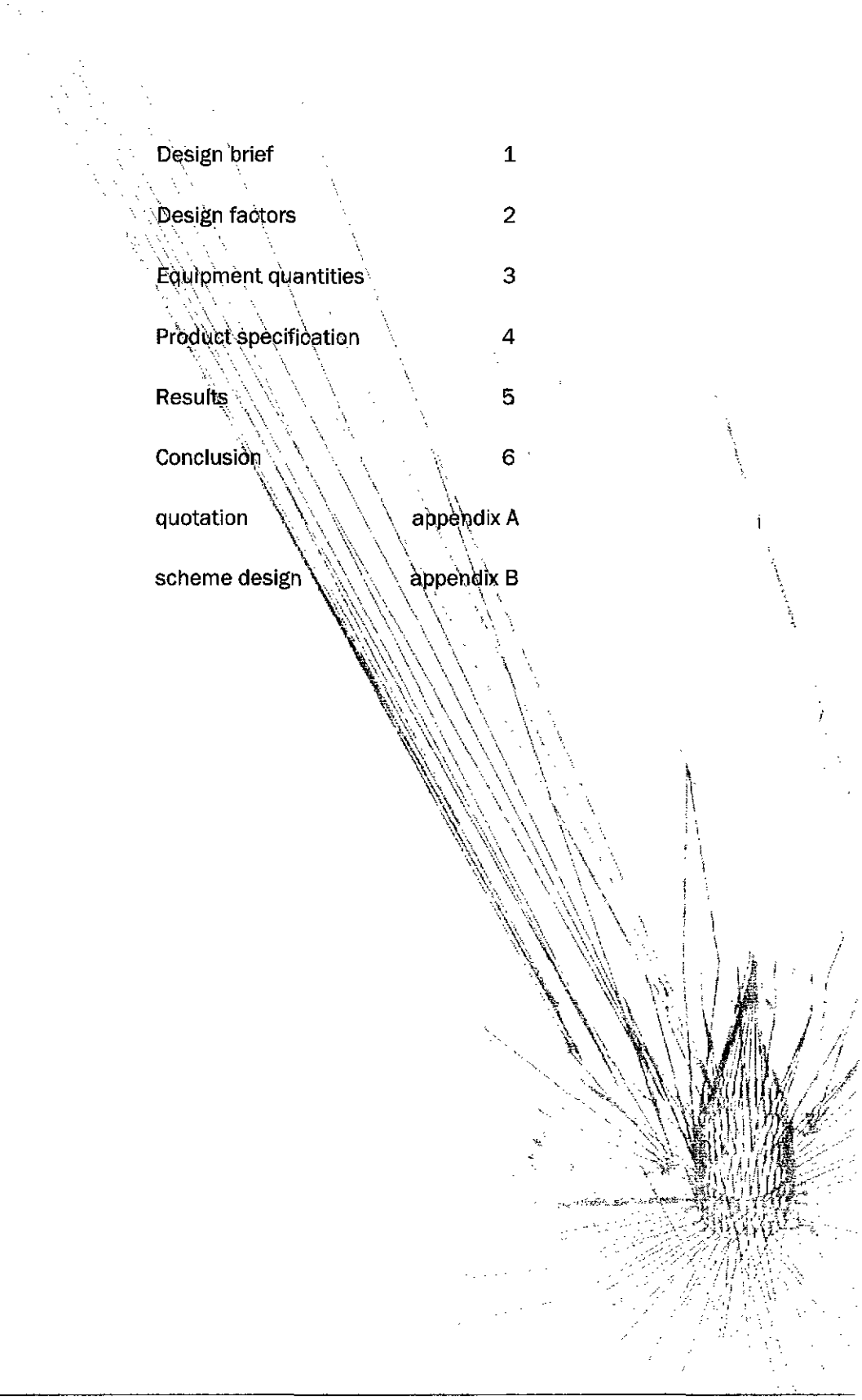
tel: 01992 474600
email: amykelly@dwwindsor.co.uk

Jane Prangnell
Customer Services Manager

tel: 01992 474600
email: janeprangnell@dwwindsor.co.uk

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Design brief

BS EN 13201-2:2003
Road lighting – Part 2: Performance requirements
Category S4
Subsidiary roads
Horizontal illuminance
≥ 5 lux Maintained average illuminance (E_{av})
≤ 7.5 lux Maintained average illuminance (E_{av})
≥ 1 lux Maintained minimum point illuminance (E_{min})

This design has been performed in conjunction with the parameters and information provided to us. If any aspect of the design does not meet your expectations, please do not hesitate to contact us in order for alterations to be performed.

Unless already specified, it has been assumed that there are no special factors to be considered for this design. However, if there are any issues* you feel may need addressing, please contact us to allow amendments to be made as required.

* Potential issues could include proximity to railway lines, conservation areas, overhead power cables, listed buildings, and aircraft flightpaths. Incorporation of CCTV into the scheme is also a factor, as certain additional criteria may apply.

Design factors

A horizontal burning Osram 50 watt SON-T+ lamp with a lumen output of 4400 lumens has been utilised.

Cleaning cycle: 24 months
Pollution area category: medium
Ingress Protection Rating: IP65
⇒ Luminaire dirt depreciation factor: 0.89

Lamp change cycle: 24 months
⇒ Lamp depreciation factor: 0.94

Combined maintenance factor: 0.84

(This factor ensures that the required illumination levels are still achieved prior to the scheduled maintenance visit in accordance with BS5489 guidelines.)

Columns must generally be located within 2 metres of their marked positions in order to maintain the results achieved within this design. If there are any potential restrictions on the positioning of the columns, brackets or fittings (due to underground services, access ways or any other obstructions), please ensure that we are aware of these in order for suitable alternatives to be arranged.

All luminaires must be orientated in the directions specified on the design plot / plots and not obstructed in any way, or the results obtained within the design may be impaired.

Landscaping or planting around the installation point should be kept at a reasonably low level to avoid obstructing the luminaires, and should be suitably maintained to avoid future obstruction of the fittings. Access to the column doors must be maintained at all times where applicable.

Light input from other sources, such as highway lighting, adjacent buildings or signage has not been included in our calculations.

Unless otherwise specified, all luminaires used in this design are rated as IP65. Any luminaire with this classification is protected against the ingress of both dust and water, thus requires no internal cleaning.

The minimum number of luminaires has been used to achieve the design target levels, where applicable.

Equipment quantities

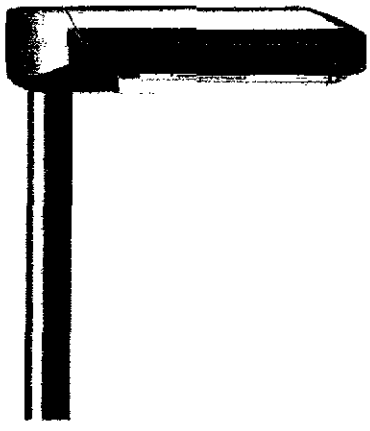
7 Qty Monaro luminaire, integral 50w SON-T+ control gear, Diamond Optic setting 5/25, low-profile glazing.

7 Qty 5m tubular steel column to suit above luminaire.

Detailed general product specifications can be found in the next section of the report.

Product specification

Monaro



Key features

Ingress Protection - IP66

Compact contemporary designed all-aluminium housing with unique self-coloured finish

Choice of pressed toughened glass or polycarbonate glazing

Quick release, hinged cover for tool-less maintenance

Options

Sizes	Monaro For mounting at 4 - 6 metres Maximum lamp wattage: 150w
Glazing	Polycarbonate low profile bowl [up to 70w] (standard) Polycarbonate deep bowl [90w and above only] Pressed low-profile toughened glass [all wattages]
Optical Control	Diamond Optic® (standard)
Lamp	60, 90, 140w CosmoWhite 65, 140w CosmoGold 70, 100, 150w SON 70, 100, 150w HQI 70, 150w CDM-T 70, 100, 150w CDO-TT 42, 57w PL-T
Mounting	Direct entry [60mm ø & 76mm ø] with 0° & +5° tilt
Colours	Bead blasted & clear polysiloxane lacquer RAL 9017 Black RAL 7016 Anthracite Grey RAL 7037 Dusty Grey RAL 5003 Sapphire Blue PAN 7621 Metallic Silver RAL 9007 Textured Metallic Grey
Other	Electronic gear, some models ER12 HN Photocell

Results

The full illuminance results can be found printed on the layout plot(s).

To aid identification of the luminaires, the plots have been marked with X-Y co-ordinates, and individual references have been given to each luminaire, so relative locations can be derived.

The results are obtained using standard fixed parameters with regard to the equipment used, the electrical supply and the installation. Any variations in these parameters may affect the results.

Area	Eav (lux)	Emin (lux)	Uniformity (%)
Requirement	5.0 – 7.5	1.0	-
Adoptable Roadway	6.72	1.3	19

Conclusion

The Monaro luminaire has been utilised at a mounting height of 5m to illuminate the roadway.

Please note that this proposed lighting scheme is a lighting solution that has been designed with the information provided by the client. The solution does not include site, installation engineering and risk assessment considerations.

We trust that this design is acceptable and that we have satisfied all of your requirements. Should you require any additional information or clarification please do not hesitate to contact us.

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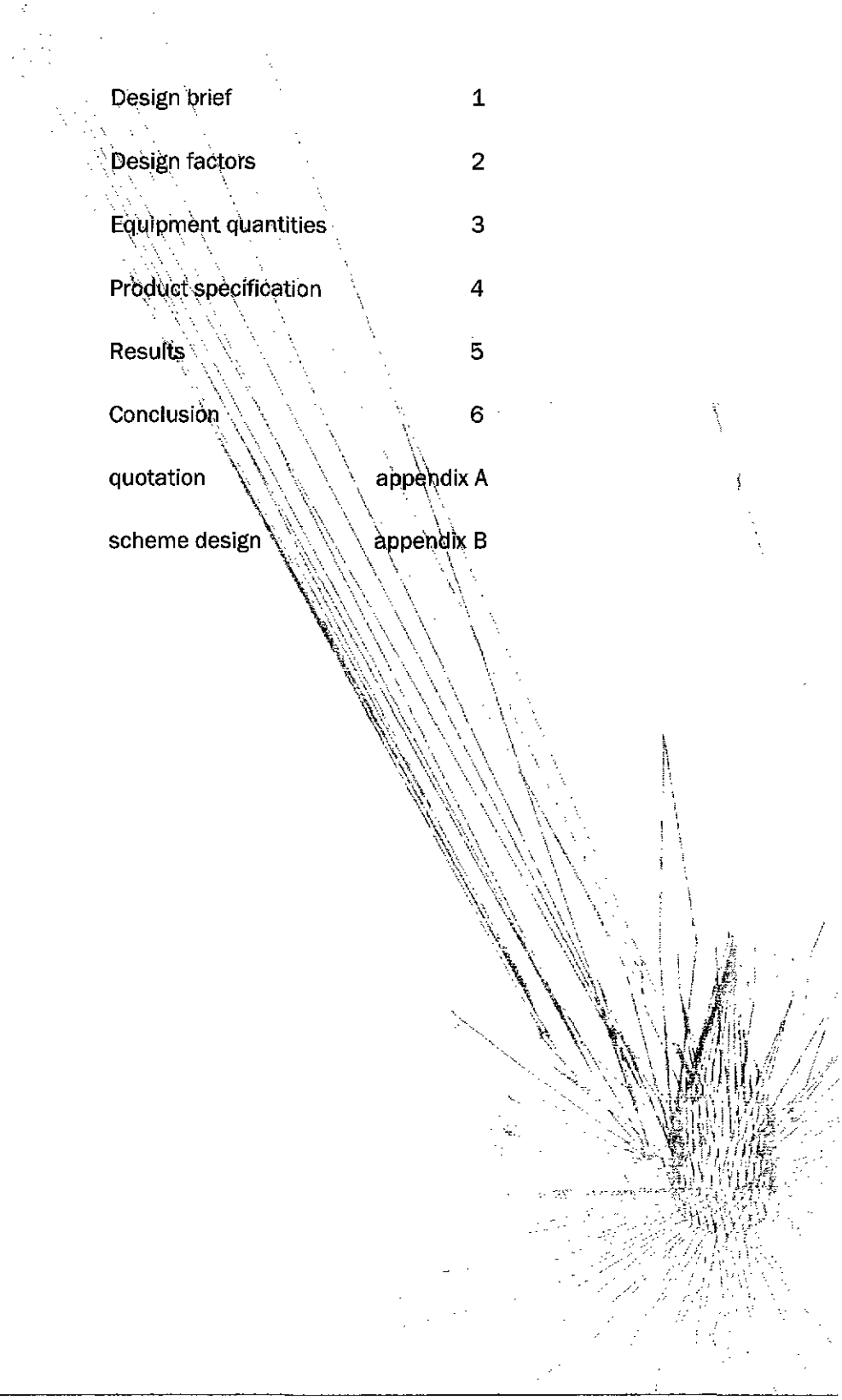
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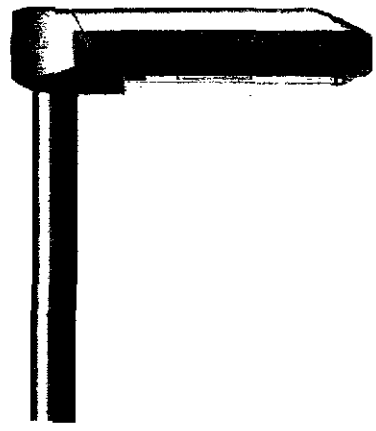
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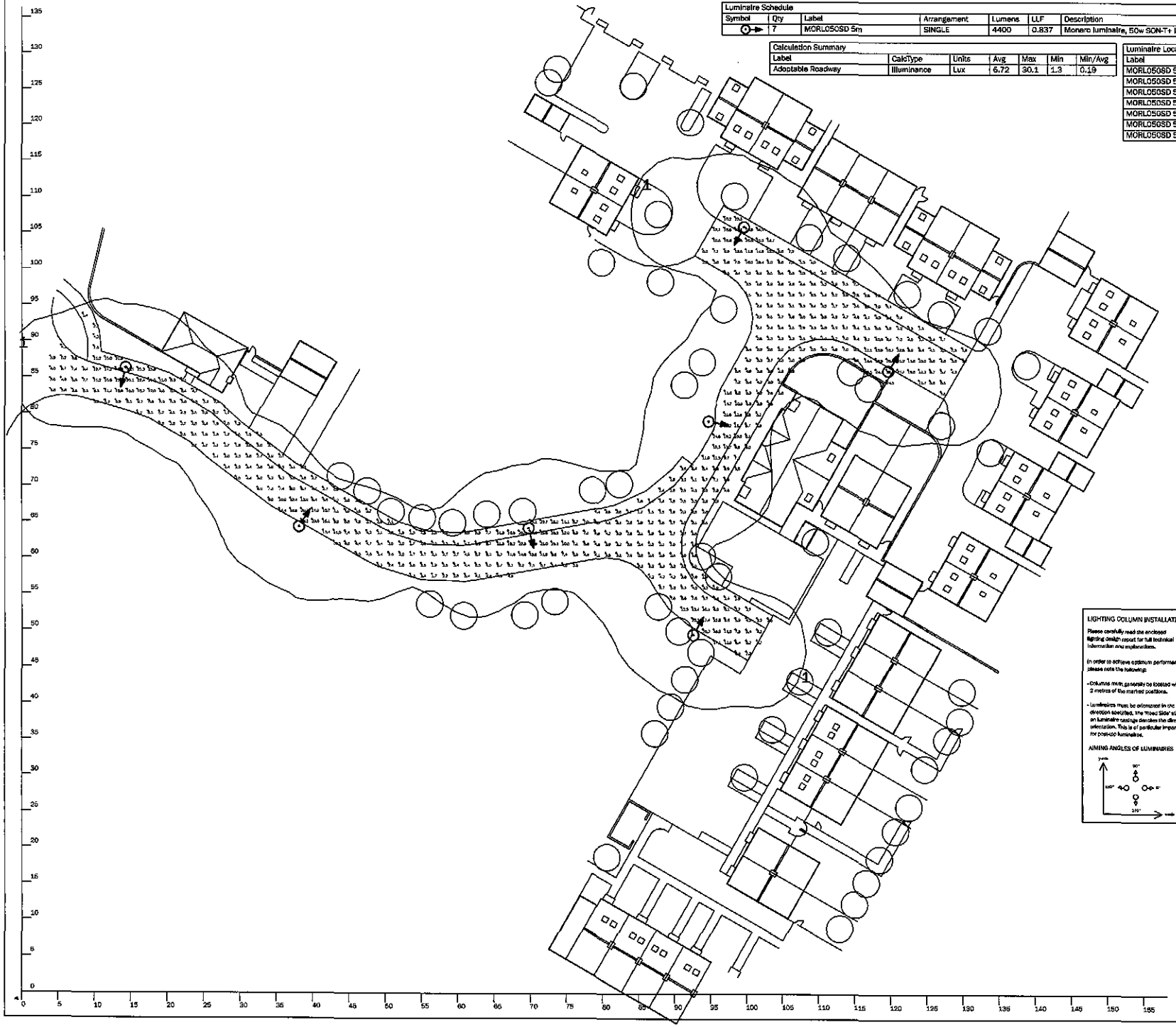
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Luminaire Schedule

Symbol	Qty	Label	Arrangement	Lumens	LLF	Description
⊙→	7	MORL050SD 5m	SINGLE	4400	0.837	Monaro luminaire, 50w SON-T+ lamp, Diamond Optic 5/25, low-profile glazing, 5m mtg ht

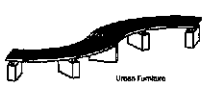
Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Min/Avg
Adoptable Roadway	Illuminance	Lux	6.72	30.1	1.3	0.19

Luminaire Location Summary

Label	X	Y	Z	Orient	Tilt
MORL050SD 5m	94.747	79.084	5	350.452	0
MORL050SD 5m	119.644	86.045	5	58.138	0
MORL050SD 5m	99.667	106.869	5	240.708	0
MORL050SD 5m	14.272	86.309	5	256.105	0
MORL050SD 5m	92.555	49.492	5	59.23	0
MORL050SD 5m	69.763	84.131	5	284.081	0
MORL050SD 5m	38.116	64.306	5	58.002	0

Further enhancements are available for your project



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LIGHTING COLUMN INSTALLATION

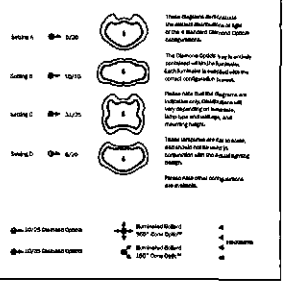
Please carefully read the enclosed lighting design report for full technical information and explanations.

In order to achieve optimum performance, please note the following:

- Columns must generally be located within 2 metres of the marked positions.
- Luminaires must be orientated in the direction specified. The 'Road Side' slicker on luminaire castings denotes the direction of orientation. This is of particular importance for post-top luminaires.

AIMING ANGLES OF LUMINAIRES

KEY TO DIAMOND OPTIC® SYMBOLS



DW Windsor Lighting

www.dwwindsor.co.uk

Project
Bentington Gate,
Holbeach,
Lincolnshire

07682.1.A

Drawing Title: Maintenance Plot

Date: 08/05/08 Scale: 1:250 at A1

Client: MEAD CONSULTING

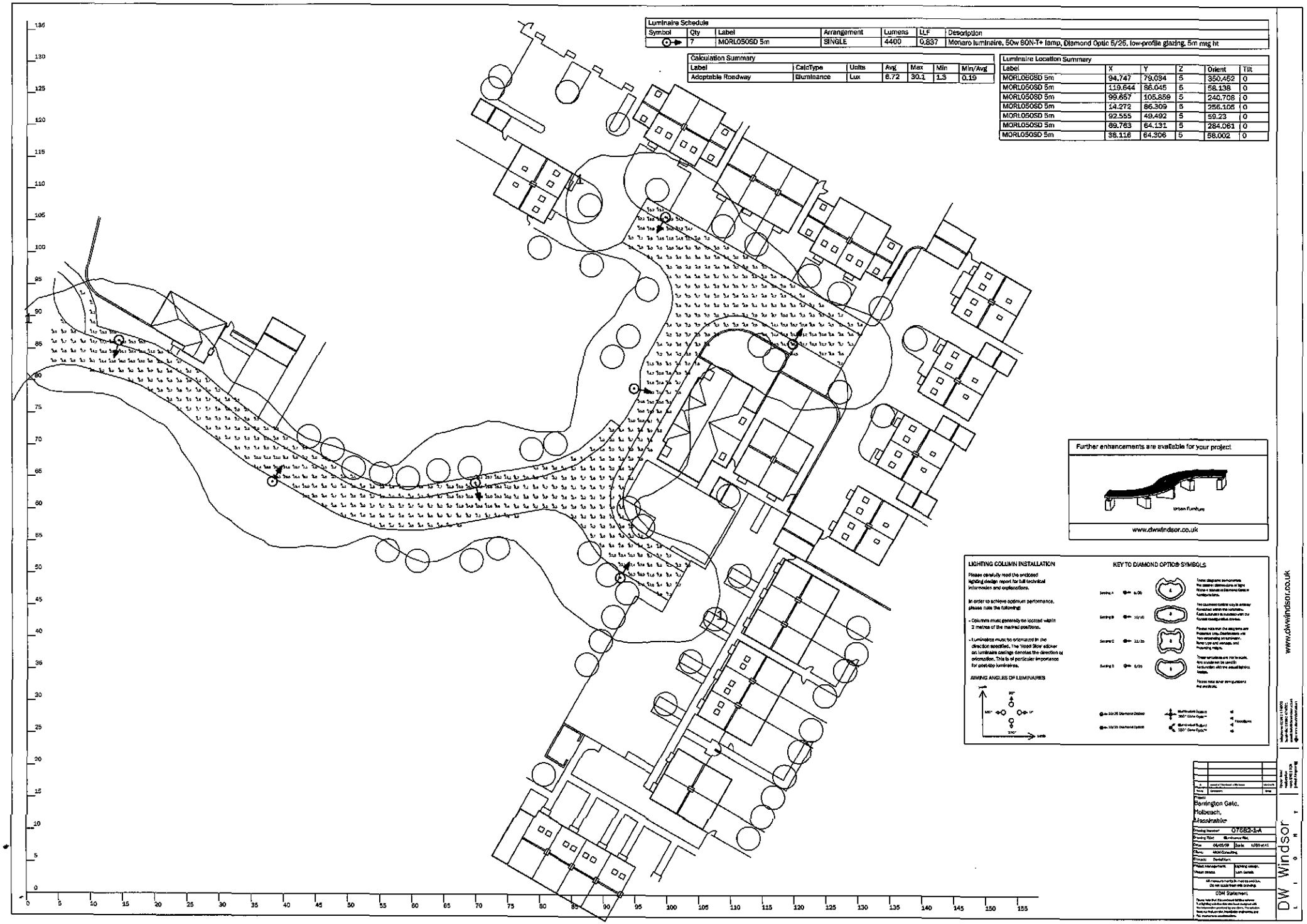
Consultant: Barton Willmore

Project Management: Landmark Design, Sam Dennis

All Photometrics by DW Windsor Lighting Ltd. Do not scale from this drawing.

CDM Statement

Please note that this scheme has been designed with the Construction (Design and Management) Regulations 2007 in mind. Any residual risks have been assessed and will be communicated to the contractor and client as appropriate.



Luminaire Schedule

Symbol	Qty	Label	Arrangement	Lumens	LLF	Description
⊙→	7	MORL050SD 5m	SINGLE	4400	0.837	Monaro luminaire, 50w SON-T+ lamp, Diamond Optic 5/25, low-profile glazing, 5m mtg ht

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Min/Avg
Adoptable Roadway	Illuminance	Lux	6.72	30.1	1.3	0.19

Luminaire Location Summary

Label	X	Y	Z	Orient	Tilt
MORL050SD 5m	94.747	79.034	5	350.462	0
MORL050SD 5m	119.644	86.045	5	58.136	0
MORL050SD 5m	99.857	105.859	5	240.708	0
MORL050SD 5m	14.272	86.309	5	256.105	0
MORL050SD 5m	92.555	49.492	5	59.23	0
MORL050SD 5m	69.763	64.131	5	284.061	0
MORL050SD 5m	38.116	64.306	5	58.002	0

Further enhancements are available for your project

Urban Furniture

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LIGHTING COLUMN INSTALLATION

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- Columns must generally be located within 2 metres of the marked positions.
- Luminaires must be orientated in the direction specified. The 'Road Side' sticker on luminaire castings denotes the direction of orientation. This is of particular importance for asymmetric luminaires.

AIMING ANGLES OF LUMINAIRES

KEY TO DIAMOND OPTIC® SYMBOLS

Project: Barrington Gate, Holbeach, Lincolnshire

Drawing Number: 07682-1-A

Drawing Title: Illuminance Plot

Date: 06/05/09 Scale: 1:250 at A1

Client: Mott MacDonald

Prepared: Paul Mann

Project Management: Signing usage: Liam Jarrett

Design Status:

All measurements in mm unless otherwise stated. Do not scale from this drawing.

CDM Statement

DW Windsor Lighting

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