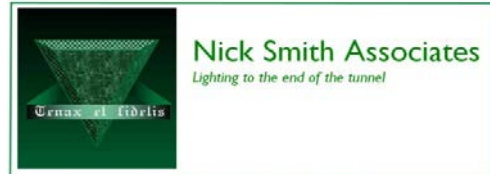


## Charlestown road, Glossop

Client:	Sherwood Homes	Issue Date:	28/02/2017
Project Number:	2241	Revision:	B

# Design Criteria Form: NSA 105



Project Data			
Project Name:	Charlestown road, Glossop		
Project Number:	2241	Revision:	B
Local Authority:	Derbyshire County Council		
Client:	Sherwood Homes		

Design Standard:	BS5489:2013	Class	P5
Luminance		Illuminance	
Ave Cd/m <sup>2</sup>	-	E <sub>ave</sub>	3
U <sub>o</sub>	-	E <sub>min</sub>	0.6
U <sub>L</sub>	-	E <sub>Max Ave</sub>	4.5
		Conflict Area	
		E <sub>ave</sub>	-
		U <sub>0</sub>	-

Lantern Data			
Lantern Manufacturer	Thorn	IP Rating	IP66
Lantern Name	CiviTEQ	Optic Setting	WSC
Lantern Code	CiviTEQ Small - 12 Neutral White 4000K LED 350mA - WSC Optic		

Column Data	
Mounting Height	6 meters
Lantern Mounting	Post
Bracket fitted	No
Projection	0.4 meters
Inclination	0 degrees

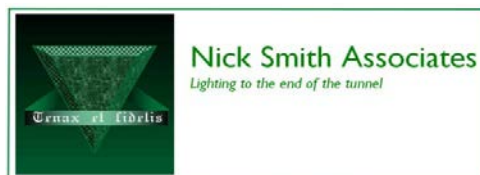
Lamp Data	
Wattage	15w
Lamp Type	LED

Maintenance Factor	
Lantern MF:	0.84
Lamp MF:	0.94
Project MF:	0.7896

Column and Sign Supply Data	
1. All columns are to be supplied by DNO supply	
2. All illuminated sign on the verge are to be supplied by DNO supply	

Prepared by:	N Smith	Date:	28/02/2017	Checked by:	R Smith	Date:	28/02/2017
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# Lighting Class Criteria Form: NSA 116



Project Data			
Project Name:	Charlestown road, Glossop		
Project Number:	2241	Revision:	B
Local Authority:	Derbyshire County Council		
Client:	Sherwood Homes		

## Lighting Class Derived from Table A5

Traffic flow	Lighting class			
	Ambient luminance			
	very low (E1)	low (E2)	moderate (E3)	high (E4)
Busy <sup>A)</sup>		P3 or S3	P2 or S2	P2 or S2
Normal <sup>B)</sup>	P4 or S4	P4 or S4	P3 or S3	P3 or S3
Quiet <sup>C)</sup>	P5 or S5	P5 or S5	P4 or S4	

The Lighting level chosen for this design has been made with white light in mind, therefore S/P ratios have not been used to reduce the lighting levels

### Default Lighting Levels

Class	Eave	Emin	Eave max
P5	3.00	0.60	4.50

A) Busy traffic flow refers to areas where the traffic usage is high and can be associated with local amenities such as clubs, shopping facilities, public houses, etc.

B) Normal traffic flow refers to areas where the traffic usage is of a level equivalent to a housing estate access road.

C) Quiet traffic flow refers to areas where the traffic usage is of a level equivalent to a residential road and mainly associated with the adjacent properties or properties on other equivalent roads accessed from this road.

Prepared by:	N Smith	Date:	28/02/2017	Checked by:	R Smith	Date:	28/02/2017
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**Nick Smith Associates**  
Lighting to the end of the tunnel

## Document Issue Schedule: NSA 104

<b>Project Name:</b>	Charlestown road, Glossop									
<b>Project Number:</b>	2241	<b>Issue Date:</b>	28 February 2017							

	DD	24	31							
	MM	08	08							
<b>Document Schedule</b>	YY	16	17							

Doc Ref:	Title	Revision Details								
NSA105	Design Criteria document	*	A							
NSA106	Bill of Quantities	*	A							
NSA107	Project cost estimate									
NSA108	Cable Calculations									
NSA109	Risk Assessment	*	A							
	Local Authority Specification									
	CD rom									
	Lighting Design Calculations	*	A							

<b>Drawing Schedule</b>										
DWG Ref	Title									
2241-D-01	Proposed Road Lighting and Servicing Layout	*	A							
2241-D-02	Proposed Road Lighting and Illuminance Layout	*	A							

<b>Issue Schedule</b>										
Company	Name	Number of Copies								
Sherwood Homes	Adam Wells-Burrow	e	e							

emailed copy (AutoCAD format dwg unless detailed

e = otherwise

PDF = Electronic Adobe PDF format

number = number of copies issued

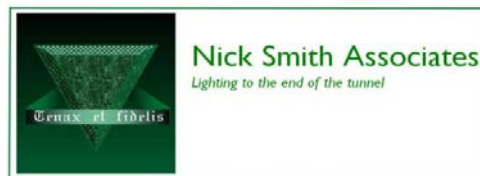
\* = Pre revision version

Issued By	Nick Smith	Nick Smith								
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## Bill of Quantities (NSA106-1300)

Charlestown road, Glossop	Project Number	2241
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Item No	Description	Qty	Unit	Cost	Total
	<u>Series 1300: Road Lighting Columns and Brackets</u>				
13.01	Take up or down and remove to tip road lighting column including lantern and bracket	1	no		
13.02	Proposed tubular steel road lighting column finished in Derbyshire Green (RAL6006) of 8m nominal height with post mounted Thorn Lighting CiviTEQ Lantern (CiviTEQ Small - 36 Neutral White 4000K LED 500mA - PWC Optic ) at 0° tilt with 36 no neutral white LED @500ma integral driver and photocell set to switch on at 35 lux with 2:1 negative switching ratio (see note 9). As DCC LED specification and standard drawings	1	no		
13.03	Proposed tubular steel road lighting column finished in Derbyshire Green (RAL6006) of 6m nominal height with post mounted Thorn CiviTEQ Lantern (CiviTEQ Small - 12 Neutral White 4000K LED 350mA - WSC Optic ) at 0° tilt with 12 no neutral white LED integral driver and photocell set to switch on at 35 lux with 2:1 negative switching ratio (see note 9). As DCC LED specification and standard drawings 1300/1, 1300/2, 1300/3 and 1400/17.	15	no		
13.04	Proposed steel galvanised 5m column with post mounted TRT Lighting Aspect lantern (14W ASPECT ECO 1 FOPR LENS) with neutral white LED to deliver 1590 lumens, integral driver and photocell set to switch on at 35 lux	15			
				<b>Total</b>	



## Bill of Quantities (NSA I 06-2700)

Charlestown road, Glossop	Project Number	2241
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## Risk Assessment (NSA 109)

Charlestown road, Glossop	Project Number 2241
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Prepared by: N Smith	Date: 28/02/2017	Checked by: R Smith	Date: 28/02/2017	Revision B
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Risk Identified	Risk addressed by code of practice or standard	Frequency of Occurrence	Severity Risk	Risk Rating	Notes / Actions Required
Wildlife	Partial	3	4	12	We have not been notified of any wildlife which might be affected by the lighting design
Probable frequency	1 = improbable occurrence	Probable severity	1 = trivial injury/ies		
	2 = possible occurrence		2 = major injury/ies		
	3 = occasional occurrence		3 = major injury to one person		
	4 = frequent occurrence		4 = major injury/ies to several people		
	5 = regular occurrence		5 = death of one person		
	6 = common occurrence		6 = multiple deaths		

Risk ratings above 20 may require project specific risk assessments from the contractor as the risk cannot be designed out of the project

## Risk Assessment (NSA 109)

Charlestown road, Glossop	Project Number 2241
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Prepared by: N Smith	Date: 28/02/2017	Checked by: R Smith	Date: 28/02/2017	Revision B
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Risk Identified	Risk addressed by code of practice or standard	Frequency of Occurrence	Severity Risk	Risk Rating	Notes / Actions Required
Live Traffic		3	4	12	Provide systems of traffic management in accordance with chapter 8 and contractors procedures within CDM documentation
Lifting operations over live carriageway		2	4	8	Appropriate training for plant operators to ensure this does not happen. Do not permit this operation.
Lifting operations near live carriageway		3	4	12	Contractor to provide method statements and detailed risk assessments to cover this operation.
Accidents occurring to public and/or works vehicles while accessing or engrossing the Site		3	4	12	Undertake works in accordance with Chapter 8. Only designated access/egress points are to be used.
Works carried out during the maintenance period		2	4	8	Carry out work in accordance with Chapter 8 of the Signs Manual. Contractor to provide a method statement for approval by the Engineer.
Probable frequency	1 = improbable occurrence	Probable severity	1 = trivial injury/ies		
	2 = possible occurrence		2 = major injury/ies		
	3 = occasional occurrence		3 = major injury to one person		
	4 = frequent occurrence		4 = major injury/ies to several people		
	5 = regular occurrence		5 = death of one person		
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## Risk Assessment (NSA 109)

Charlestown road, Glossop	Project Number	2241
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Prepared by: N Smith	Date: 28/02/2017	Checked by: R Smith	Date: 28/02/2017	Revision	B
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Risk Identified	Risk addressed by code of practice or standard	Frequency of Occurrence	Severity Risk	Risk Rating	Notes / Actions Required
Damage to Statutory Undertakers Plant	Yes	3	4	12	Drawings giving approximate location using NRSWA notices received from Statutory Undertakers. Contractor to locate apparatus as part of Contractual requirements prior to commencement of any works. Excavation in the vicinity to be in accordance with HSE recommendations.
Interaction of traffic with the works		5	4	20	Undertake works in accordance with Chapter 8 and in accordance with the constraints specified the Contract documents.
Interaction of pedestrians with the works.		6	2	12	Undertake works in accordance with Chapter 8 the Contract Document. Site Specific Traffic Management contained in the each individual tender. The Contractor must provide a method statement for this operation.
Exposure to pollution and pollution of the environment	Yes	3	2	6	Environmental Protection Act 1990
Probable frequency	1 = improbable occurrence	Probable severity	1 = trivial injury/ies		
	2 = possible occurrence		2 = major injury/ies		
	3 = occasional occurrence		3 = major injury to one person		
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## Risk Assessment (NSA 109)

Charlestown road, Glossop	Project Number 2241
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Prepared by: N Smith	Date: 28/02/2017	Checked by: R Smith	Date: 28/02/2017	Revision B
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Risk Identified	Risk addressed by code of practice or standard	Frequency of Occurrence	Severity Risk	Risk Rating	Notes / Actions Required
Works in confined spaces	Yes	1	3	3	To comply with current legislation e.g. Breathing Apparatus etc. (Report on Examinations) Order 1961 Construction (Lifting Operations) Regulations 1961 Construction (Working Places) Regulations 1966 Factories Act Section 30 Control of Substances Hazardous to Health Regulations 1988 Personal Protective Equipment at Work Regulations 1992 Management of Health and Safety at Work Regulations 1992
Removal of DNO fuse carriers	Yes	3	5	15	Only Electricians holding G39/1 certificates allowed to perform this task.
Working on live electrical equipment	Yes	4	5	20	Only qualified electricians to do this. Contractor to submit method statements and risk assessments.
Storage and transportation of materials		4	2	8	Contractor to propose to the engineer for approval the location of stores/offices.
Disposal of materials		6	4	24	Lamp contain chemical elements such as mercury and sodium. Disposal methods must be agreed with the district E.S.O and also comply with COSHH regulations.
Probable frequency	1 = improbable occurrence	Probable severity	1 = trivial injury/ies		
	2 = possible occurrence		2 = major injury/ies		
	3 = occasional occurrence		3 = major injury to one person		
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## Risk Assessment (NSA 109)

Charlestown road, Glossop	Project Number 2241
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Prepared by: N Smith	Date: 28/02/2017	Checked by: R Smith	Date: 28/02/2017	Revision B
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Risk Identified	Risk addressed by code of practice or standard	Frequency of Occurrence	Severity Risk	Risk Rating	Notes / Actions Required
Staff and operatives on site being injured by the Construction works	Yes	2	4	8	COSHH Regulations. CDM regulations Highways Act 1980 Construction (General Provisions) Regulations 1961 Construction (Working Places) Regulations 1966 Highly Flammable Liquids and Liquefied Petroleum Gases Regulations 1972 Control of substances Hazardous to Health Regulations 1988 Noise requirements contained within Contract document Petroleum-Spirit (Motor Vehicles etc.) Regulations 1929 New Roads and Street Works Act 1991 Street Works (Qualifications of Supervisors and Operatives) Regulations 1992 Personal Protective Equipment at Work Regulations 1992 Health and Safety at Work etc. Act 1974
Probable frequency	1 = improbable occurrence	Probable severity	1 = trivial injury/ies		
	2 = possible occurrence		2 = major injury/ies		
	3 = occasional occurrence		3 = major injury to one person		
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## Risk Assessment (NSA 109)

Charlestown road, Glossop	Project Number 2241
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Prepared by: N Smith	Date: 28/02/2017	Checked by: R Smith	Date: 28/02/2017	Revision B
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Risk Identified	Risk addressed by code of practice or standard	Frequency of Occurrence	Severity Risk	Risk Rating	Notes / Actions Required
Erection and maintenance of Traffic Management systems including diversion routes.		4	3	12	The diversion route signs and traffic management systems are to be erected in accordance with Chapter 8. When maintaining the traffic management system to make any alterations or amendments the contractor is to carry them out in accordance with Chapter 8. The Contractor is to provide a method statement for setting out traffic management systems. Work will not start until traffic management is approved by the Engineer.
Excavation works and traffic management left outside normal working day.	Yes	6	2	12	Undertake works in accordance with Chapter 8 and the contract document.
Vehicles running into excavations. Pedestrians, staff and operatives falling into an excavation.		3	4	12	Consider minimum distance of traffic from excavation and requirements for temporary safety / pedestrian barriers.
Use of Hazardous Materials	Yes	2	3	6	COSHH assessments to be provided for all materials but especially: Bituminous Asphalt's, Grout, Deck Waterproofing, Silane, Concrete
Probable frequency	1 = improbable occurrence	Probable severity	1 = trivial injury/ies		
	2 = possible occurrence		2 = major injury/ies		
	3 = occasional occurrence		3 = major injury to one person		
	4 = frequent occurrence		4 = major injury/ies to several people		
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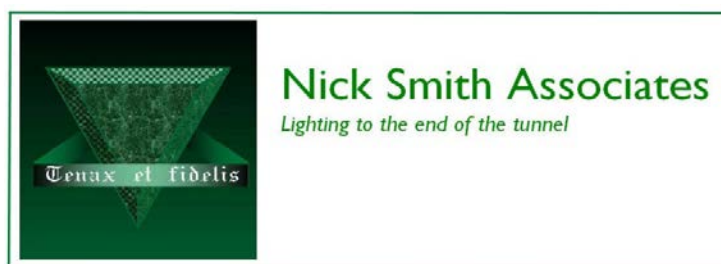
## Risk Assessment (NSA 109)

Charlestown road, Glossop	Project Number	2241
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Prepared by: N Smith	Date: 28/02/2017	Checked by: R Smith	Date: 28/02/2017	Revision	B
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Risk Identified	Risk addressed by code of practice or standard	Frequency of Occurrence	Severity Risk	Risk Rating	Notes / Actions Required
Working at Height		6	3	18	Contractor to comply with work place regulations and also the personal protective equipment at work regulations 1992 (head protection) and chapter 8
Electrical Testing	Yes	6	3	18	Electrical testing should be carried out in accordance with BS7671, the electricity at work regulations, Health and Safety at work Act and CDM
Working in the Vicinity of LV or HV overhead lines	Yes	1	5	5	Operative to be G39 trained to allow identification of overhead line voltage cables. Work in accordance with ILE document GP10 Safety During the Installation and Removal of Lighting columns and similar street furniture in the proximity of overhead lines
Installation of columns and raise and lower columns	Yes	1	3	3	The contractor should consider the use of a carrying cradle for the installation of raise and lower columns. Please refer to The Manual Handling Operations Regulations 1992
Probable frequency	1 = improbable occurrence	Probable severity	1 = trivial injury/ies		
	2 = possible occurrence		2 = major injury/ies		
	3 = occasional occurrence		3 = major injury to one person		
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