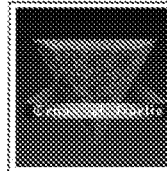


Herons Farm, Dappers Lane, Angmering

Client:	Persimmon Homes (Thames Valley)	Issue Date:	11/05/2020
Project Number:	2624	Revision:	B

Design Criteria Form: NSA 105



Nick Smith Associates
Lighting at the end of the tunnel

Project Data			
Project Name:		Herons Farm, Dappers Lane, Angmering	
Project Number:		2624	Revision: B
Local Authority:		West Sussex County Council	
Client:		Persimmon Homes (Thames Valley)	

Design Standard:		EN13201-2:2015	Class		P6
Luminance		Illuminance		Conflict Area	
Ave Cd/m ²	-	E _{ave}	2	E _{ave}	-
U _o	-	E _{min}	0.4	U ₀	-
U _L	-	E _{Max Ave}	3		

Lantern Data			
Lantern Manufacturer	Philips	IP Rating	IP66
Lantern Name	Micro Luma	Optic Setting	DW50
Lantern Code	BGP615 DW50 1800 12 LED 304ma 5S CLO L90 WW		

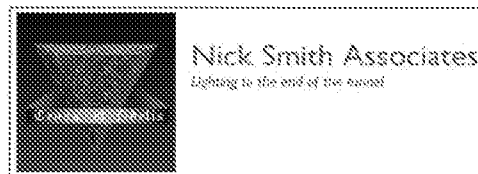
Column Data	
Mounting Height	6 meters
Lantern Mounting	Post
Bracket fitted	No
Projection	0.35 meters
Inclination	0 degrees

Lamp Data	
Wattage	13w
Lamp Type	LED

Maintenance Factor	
Lantern MF:	0.92
Lamp MF:	0.90
Project MF:	0.83

Notes	
1. All columns are to be supplied by DNO supply	
2. The column at the end of the site has been changed to the DN10 lens to reduce spill light outside of the site	

Prepared by:	N Smith	Date:	11/05/2020	Checked by:	N Smith	Date:	11/05/2020
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Document Issue Schedule: NSA 104

Project Name:	Herons Farm, Dappers Lane, Angmering									
Project Number:	2624	Issue Date:	11 May 2020							

	DD	07	07	11						
	MM	05	05	05						
Document Schedule	YY	20	20	20						

Doc Ref:	Title	Revision Details								
NSAI05	Design Criteria document	*	A	B						
NSAI06	Bill of Quantities	*	A	B						
NSAI07	Project cost estimate									
NSAI08	Cable Calculations									
NSAI09	Risk Assessment	*	A	B						
	Local Authority Specification									
	CD rom									
	Lighting Design Calculations	*	A	B						

Drawing Schedule										
DWG Ref	Title									
2624-D-01	Proposed adopted Road Lighting and Illuminance Layout	*	*	B						
2624-D-02	Private and adopted Road Lighting and Illuminance Layout	*	A	B						

Issue Schedule										
Company	Name	Number of Copies								
Persimmon Homes (Thames Valley)	Christine Jordan	e	e	e						

emailed copy (AutoCAD format dwg unless detailed

e = otherwise

PDF = Electronic Adobe PDF format

number = number of copies issued

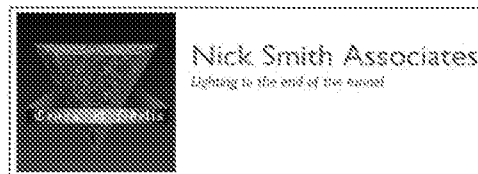
* = Pre revision version

Issued By										
Nick Smith										
Nick Smith										
Nick Smith										

Form Ref: NSA104

Issue Date: Aug 2004

11/05/2020 : 09:15



Project file download links

Project Name:	Herons Farm, Dappers Lane, Angmering									
Project Number:	2624	Issue Date:	11 May 2020							

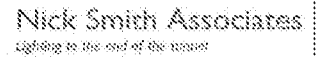
		DD	07	07	11						
		MM	05	05	05						
		YY	20	20	20						
Drawings and Calculations Issue schedule											
Rev	Link										
-		-									
Rev A			A								
Rev B	https://nicksmithassociates.sharefile.com/d-s097b44a073e4035a			B							

All links give access to all project specific file, PDF files, drawings and calculations. Links area available for 30 days from the date shown

Bill of Quantities (NSA106-1300)

Herons Farm, Dappers Lane, Angmering	Project Number	2624
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Item No	Description	Qty	Unit	Cost	Total
	<u>Series 1300: Road Lighting Columns and Brackets</u>				
13.01	Proposed steel galvanised 6m column with post mounted Philips Luma Micro (BGP615 DW50 1800 12 LED 304ma 5S CLO L90 WW) at zero degree tilt, integral driver with Dali control, Mayflower six pin NEMA socket, 35 lux on and 18 lux off photocell and Mayflower internal GPS node.	7	no		
13.02	Proposed steel galvanised 6m column with post mounted Philips Luma Micro (BGP615 DN10 1800 12 LED 304ma 5S CLO L90 WW) at zero degree tilt, integral driver with Dali control, Mayflower six pin NEMA socket, 35 lux on and 18 lux off photocell and Mayflower internal GPS node.	1	no		
13.03	Proposed steel galvanised 6m column with post mounted Philips Luma Micro (BGP615 DN11 1800 12 LED 304ma 5S CLO L90 WW) at zero degree tilt, integral driver with Dali control, NEMA socket, 35 lux on and 18 lux off photocell	9	no		
				Total	

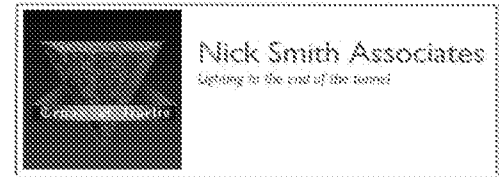


Herons Farm, Dappers Lane, Angmering

2624

Total	
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Elaxon Codes (NSA I 19)

Herons Farm, Dappers Lane, Angmering	Project Number	2624
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Prepared by: N Smith	Date: 11/05/2020	Checked by: N Smith	Date: 11/05/2020	Revision	B
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Item no	Description	Charge Code	Switch Regime	Wattage	Qty	Notes
13.01	Proposed steel galvanised 6m column with post mounted Philips Luma Micro (BGP615 DW50 1800 12 LED 304ma 5S CLO L90 WW) at zero degree tilt, integral driver with Dali control, Mayflower six pin NEMA socket, 35 lux on and 18 lux off photocell and Mayflower internal GPS node.	42 013 0000 100	808	13w	7	
13.02	Proposed steel galvanised 6m column with post mounted Philips Luma Micro (BGP615 DN10 1800 12 LED 304ma 5S CLO L90 WW) at zero degree tilt, integral driver with Dali control, Mayflower six pin NEMA socket, 35 lux on and 18 lux off photocell and Mayflower internal GPS node.	42 013 0000 100	808	13w	1	
13.03	Proposed steel galvanised 6m column with post mounted Philips Luma Micro (BGP615 DN11 1800 12 LED 304ma 5S CLO L90 WW) at zero degree tilt, integral driver with Dali control, NEMA socket, 35 lux on and 18 lux off photocell	42 013 0000 100	808	13w	9	

Risk Assessment (NSA 109)

Herons Farm, Dappers Lane, Angmering	Project Number 2624
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Prepared by: N Smith	Date: 11/05/2020	Checked by: N Smith	Date: 11/05/2020	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	4	4	16	We have been notified of wildlife using the adjacent areas which might be affected by the proposed lighting design. We have recommended to the developer the lighting be in accordance with the ILP guidance note 08/18 Bats and artificial lighting in the UK document. As a result the lighting levels have been lowered, a warm white LED fitting has been used with the lantern mounted horizontal.
Column heights	Partial	6	2	12	The height of column is subjective. Higher columns even as low as 6m are often not considered suitable by ecologist. However lower column raise light levels and reflected light from the road surface and other surrounding materials. As a compromise only 6m column have been used where higher column would normally have been used.
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)

Herons Farm, Dappers Lane, Angmering	Project Number 2624
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Prepared by: N Smith	Date: 11/05/2020	Checked by: N Smith	Date: 11/05/2020	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		2	4	8	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		2	4	8	Contractor to provide method statements and detailed risk assessments to cover this operation.
Accidents occurring to public and/or works vehicles while accessing or egressing the Site		2	4	8	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		
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Risk Assessment (NSA 109)

Herons Farm, Dappers Lane, Angmering	Project Number 2624
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Prepared by: N Smith	Date: 11/05/2020	Checked by: N Smith	Date: 11/05/2020	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
Exposure of Statutory Undertakers Plant	Yes refer to statutory undertakers plans	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		
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Risk Assessment (NSA 109)

Herons Farm, Dappers Lane, Angmering	Project Number 2624
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Prepared by: N Smith	Date: 11/05/2020	Checked by: N Smith	Date: 11/05/2020	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 The Lifting Operations and lifting equipment regulations 1992 The Construction (Health, Safety and Welfare) Regulations 1996 Factories Act Section 30 Control of Substances Hazardous to Health Regulations 2002 Personal Protective Equipment at Work Regulations 1999 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)

Herons Farm, Dappers Lane, Angmering	Project Number 2624
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Prepared by: N Smith	Date: 11/05/2020	Checked by: N Smith	Date: 11/05/2020	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	CDM regulations Highways Act 1980 The Lifting Operations and lifting equipment regulations 1992 The Construction (Health, Safety and Welfare) Regulations 1996 Control of substances Hazardous to Health Regulations 1988 Noise at work Regulation 1989 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		
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Risk Assessment (NSA 109)

Herons Farm, Dappers Lane, Angmering	Project Number 2624
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Prepared by: N Smith	Date: 11/05/2020	Checked by: N Smith	Date: 11/05/2020	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		
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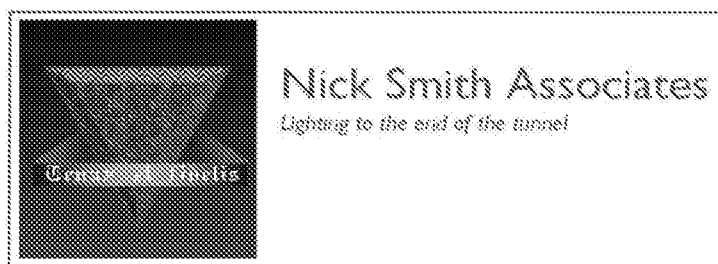
Risk Assessment (NSA 109)

Herons Farm, Dappers Lane, Angmering	Project Number 2624
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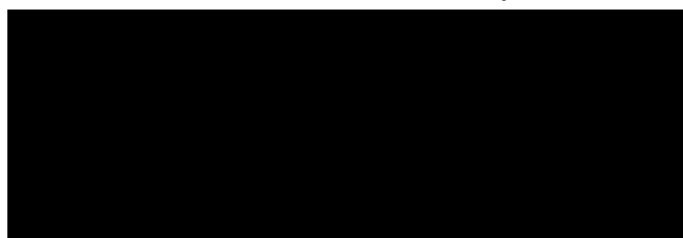
Prepared by: N Smith	Date: 11/05/2020	Checked by: N Smith	Date: 11/05/2020	Revision B
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Risk Identified	Risk addressed by code of practice or standard	Frequency of Occurrence	Severity Risk	Risk Rating	Notes / Actions Required
Working at Height		6	3	18	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 cables	Yes	3	5	15	There are underground HV cable at the western end of the site. The design has been modified to accomodate these service. Instlllers nee to be made aware of the presence of thrse cables
Installation of columns and raise and lower columns	Yes	6	3	18	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		
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