

<b>Title of Scheme: West Hampstead Railway Station</b>	
Location: Buckingham Group Site Compound Blackburn Road West Hampstead London, NW6 2LJ	NR Ref: NA
	Orton Reference: OES/JE1427/E/LUX/002 Rev 0.0



**Orton Group**  
Electrical & Mechanical Services Ltd

**WEST HAMPSTEAD  
LUX LEVEL TESTING PLAN**

**Document No. – OES/JE1427/E/LUX/002**

**Prepared by  
Richard Whitehouse**

**Checked by  
Richard Whitehouse**



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<b>DISTRUBUTION CONTROL SHEET</b>				
<b>Rev</b>	<b>Date</b>	<b>Authored by</b>	<b>Checked by</b>	<b>Approved by</b>
0.0	03/05/18	R. Whitehouse	R. Whitehouse	
<b>Signature</b>				
<b>Date</b>		03/05/18	03/05/18	
<b>File Reference : OES/JE1427/E/LUX/002</b>				
<b>DISTRIBUTION LIST</b>				
<b>Name</b>	<b>Organisation</b>		<b>From (Issue)</b>	<b>To (Issue)</b>
Master Copy on File	Orton Electrical Services Ltd		0.0	Current
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## DOCUMENT HISTORY AND ISSUE RECORD

Rev	DATE	CHANGE SUMMARY
0.0	03/05/18	First Issue

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## 1 Acronyms and Abbreviations

<b>Abbreviation</b>	<b>Description</b>
A	Ampere
AC	Alternating Current
AIP	Approval In Principle
BIS	Bring Into Service
CPC	Circuit Protective Conductor
CW Gland	Weather Proof SWA Cable Termination Gland
DC	Direct Current
DP	Distribution Point
D&I	Drop and Insertion
E&P	Electrification & Plant
GRP	Glass Reinforced Plastic
IEE	Institute of Electrical Engineers
IP	Ingress Protection
I.P.	Internet Protocol
ISO	International Standards Organisation
LSF	Low Smoke Fume
LV	Low Voltage
M	Metre
MCB	Miniature Circuit Breaker
MCCB	Moulded Case Circuit Breaker
MDF	Main Distribution Frame
MDU	Maintenance Delivery Unit
MICC	Mineral Insulated Copper Cased
mm	Millimetre
NICEIC	National Inspection Council of Electrical Installation Contractors
NR	Network Rail
NRT	Network Rail Telecommunications
O&M	Operation & Maintenance
PICOT	Person In Charge of Testing
PIR	Passive Infer Red
PME	Protective Multiple Earthing
PVC	Polyvinyl Chloride
P-Way	Permanent Way
RAR	Network Rail Asset Register
RCBO	Residual Current Device with Overload Protection
RCD	Residual Current Device

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REB	Re-locatable Equipment Building
S&T	Signal & Telecommunications
SWA	Steel Wired Armoured
TFL	Transport for London
TN-S	Separated Earth and Neutral Supply System
V	Volt
VIR	Vulcanised Indian Rubber
XLPE	Cross Linked Polyethylene
Z	Impedance

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## 2. Drawing Register

Client Reference Number	Orton Reference Number	Revision Number	Description
NA	OES-D-JE1427-E002	0.0	Temporary Walkway Electrical Layout
NA	LSWH-EN31-ELL-DPL-BCK-00051	C02	Footbridge Lighting Layout

## 3. Scope and Document Purpose

As part of the West Hampstead Railway Station new station build lighting has been provided to the following areas:

- Temporary Walkway
- New Station Footbridge – Main Span
- New Station Footbridge - Staircase

As part of the commissioning process the designed lighting levels are required to be validated by the manual checking of the lighting lux levels.

### 3.1 Address

**Site Address:**

Buckingham Site Compound  
Blackburn Road  
Westend Lane  
West Hampstead  
NW6 2LJ

## 4. Proposed Testing Method

The equipment to be used is a calibrated hand held lux level meter.

- Model - Hagner EC-1
- Serial No. - 55 166

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Before any testing commences a suitable SSOW must be in place including Work Package Plans and Task Briefs specific to the task. No works are to start until these documents have been briefed, acknowledged, signed and the SSOW put in place.

The required design levels are to be identified within the design document and logged in section 3 of this document on site for reference during testing.

The lux meter is to be checked for a zero reading before any testing is carried out. The cap is to be fitted to the sensor and a reading of zero lux confirmed. If the meter does not read zero the fine adjustment dial is to be rotated until the meter reads zero.

Readings are generally to be taken with the sensor resting on the floor pointing up vertically. Operatives are to stand back as far as the meter lead will allow aiming to avoid casting any shadows over the sensor.

Where it is not possible to avoid shadows, readings should be taken with the operative standing in a number of different positions until the best reading possible is achieved.



As the sample locations progress along the sample area, the operatives should check that the readings are fluctuating in conjunction with the proximity to the light sources.

In order to identify the location of the readings within the report, landmarks should be identified alongside readings to show where readings are.



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## 5. Logging of Results

 <span style="margin-left: 300px;">Lux Level Validation Summary</span> 									
Westhampstead									
Tested Area	Required Average Lux	Actual Average Lux	Required Uniformity	Uniformity Emin / Eav	Relevant Standard	Relevant Section	Reference Plane	Lux Reading Grid Size	"d" value (as per BS 12464-1 & 2)
Footbridge									
Footbridge Main Span	200	334.2	0.5	0.7	Form B Design - LSWH-EN31-EME-FOB-BCK-00051	3.2.21 Proposed Lighting Levels	0.0 m	0.70	6
Footbridge Platform 2 Staircase	200	201.9	0.5	0.6	Form B Design - LSWH-EN31-EME-FOB-BCK-00051	3.2.21 Proposed Lighting Levels	0.0 m	0.53	4
Temporary Walkway									
Temporary Walkway	150	173.4	0.6	0.6	Form B Design - OES/T/JE1427/E002	3.3 – Temporary Walkway Lighting	0.0 m	0.86	8

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Footbridge Main Span										
Position	Position 1	Position 2	Position 3	Position 4	Position 5	Position 6	Position 7	Position 8	Position 9	Comments
1	340.0	334.0	378.0	385.0	367.0	371.0	374.0	349.0	330.0	
2	320.0	357.0	365.0	362.0	345.0	346.0	355.0	314.0	308.0	
3	225.0	257.0	336.0	330.0	324.0	295.0	318.0	308.0	293.0	
4	237.0	330.0	349.0	327.0	294.0	312.0	337.0	317.0	296.0	
5	271.0	360.0	348.0	359.0	344.0	331.0	369.0	317.0	292.0	
6	311.0	379.0	387.0	369.0	360.0	380.0	384.0	361.0	341.0	

Footbridge Platform 2 Staircase							
Position	Position 1	Position 2	Position 3	Position 4	Position 5	Position 6	Comments
1	160.0	306.0	212.0	185.0	282.0	162.0	
2	175.0	273.0	205.0	182.0	232.0	121.0	
3	179.0	258.0	200.0	182.0	212.0	117.0	
4	157.0	280.0	190.0	184.0	230.0	112.0	
5	132.0	250.0	199.0	180.0	230.0	112.0	
6	160.0	283.0	221.0	191.0	233.0	125.0	
7	140.0	278.0	244.0	202.0	245.0	118.0	
8	160.0	332.0	246.0	196.0	288.0	128.0	

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Temp Walkway					
Position	Position 1	Position 2	Position 3	Position 4	Comments
1	275.0	298.0	264.0	137.0	
2	203.0	262.0	201.0	114.0	
3	120.0	137.0	150.0	111.0	
4	101.0	108.0	160.0	109.0	
5	108.0	119.0	235.0	184.0	
6	100.0	102.0	213.0	273.0	
7	97.0	104.0	132.0	145.0	
8	138.0	175.0	150.0	130.0	
9	233.0	278.0	204.0	185.0	
10	266.0	275.0	210.0	128.0	

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## 6. Accreditations

- Orton Electrical Services Ltd
- ISO 9001 :2008
- Certificate Number - 3738
- Expiry Date - 14<sup>th</sup> Sept 2018

## 7. Operative Qualifications

### Mark Hammond

- JIB Approved Electrician
- C&G 2394 and 2395 Testing qualified
- NICEIC Approved Qualifying Supervisor
- SSSTS (Site Supervisor Safety Training Scheme)