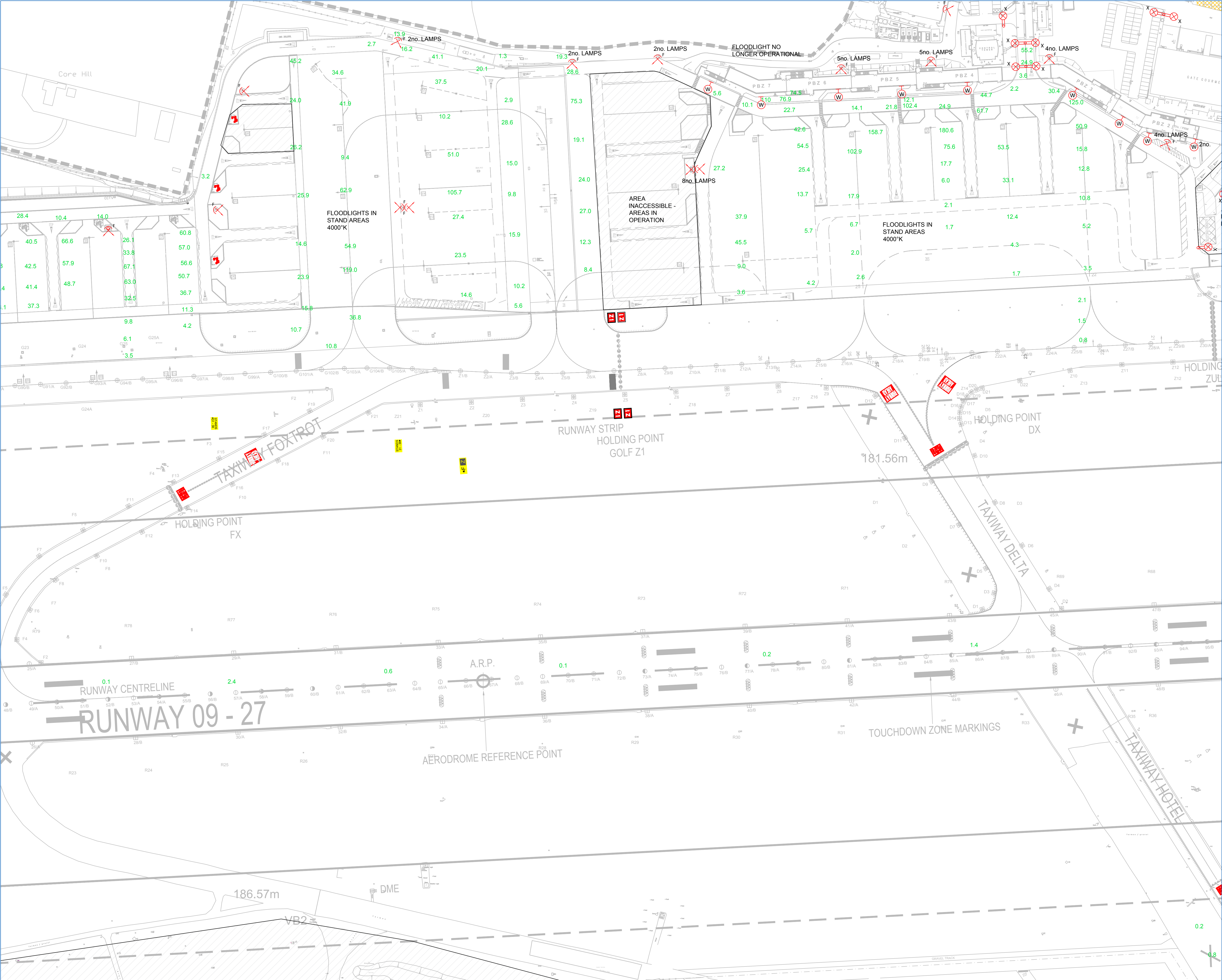




- NOTES:
1. ALL DIMENSIONS ARE TO BE CHECKED ON SITE BEFORE THE COMMENCEMENT OF WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
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P01	24/09/18	Preliminary	HJ	ES
Rev	Date	Description	By	Ckd

Architect :
TODD ARCHITECTS



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11-12 Queens Square
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bristolcentral@hydrock.com
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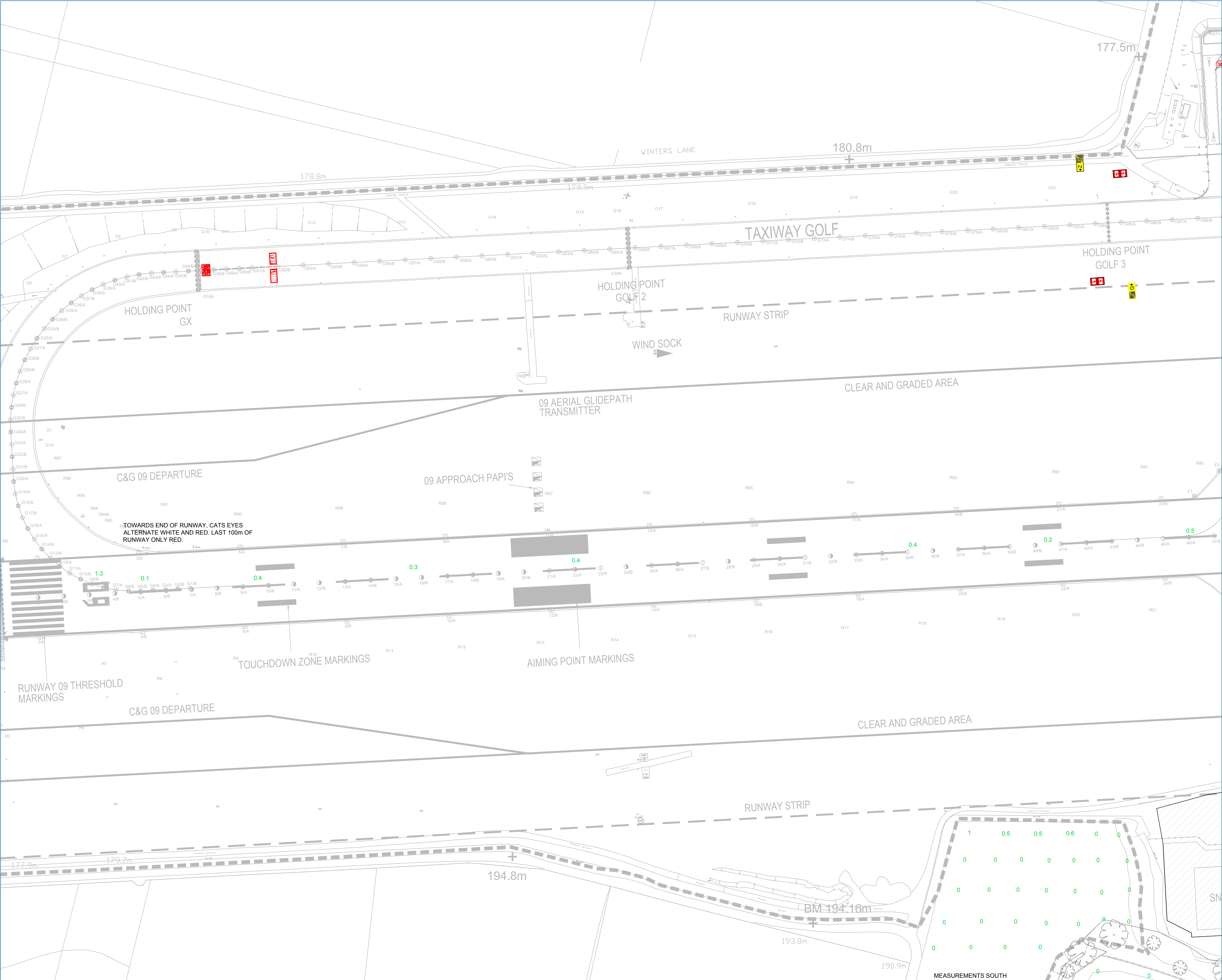
Client :
BRISTOL AIRPORT

Project Title:
**BRISTOL AIRPORT
12MPPA EXTENSION
CENTRAL SITE**

Drawing Title:
**ELECTRICAL SERVICES
BASELINE LIGHT SURVEY
ILLUMINANCE MEASUREMENTS**

Drawing Status:
PRELIMINARY

Hydrock Job No:		C-09194			
Drawn	Checked	Scale @ A1	Date	Issue Date	
HJ	ES	1:400	SEPT 2018	24/09/18	
Drawing Number:				Revision:	
09194-HYD-XX-GF-DR-E-9004				P01	



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P01	24/09/18	Preliminary	HJ	ES
Rev	Date	Description	By	Ckd

Architect :
TODD ARCHITECTS

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Client :
BRISTOL AIRPORT

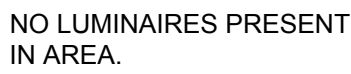
Project Title:
BRISTOL AIRPORT
12MPPA EXTENSION
WEST OF SITE (1)

Drawing Title:
ELECTRICAL SERVICES
BASELINE LIGHT SURVEY
ILLUMINANCE MEASUREMENTS

Drawing Status:
PRELIMINARY

Hydrock Job No:
C-09194

Drawn: HJ	Checked: ES	Scale @ A1: 1:400	Date: SEPT 2018	Issue Date: 24/09/18
Drawing Number: 09194-HYD-XX-GF-DR-E-9005				Revision: P01



NO LUMINAIRES PRESENT
IN AREA.

168.4m

TOWARDS END OF RUNWAY, CATS EYES
ALTERNATE WHITE AND RED. LAST 100m OF
RUNWAY ONLY RED.

1. ALL DIMENSIONS ARE TO BE CHECKED ON SITE BEFORE THE COMMENCEMENT OF WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.

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Architect :
TODD ARCHITECTS

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hydrock.com

Client : **BRISTOL AIRPORT**

Project Title:

**BRISTOL AIRPORT
12MPPA EXTENSION
WEST OF SITE (2)**

Drawing Title:

ELECTRICAL SERVICES
BASELINE LIGHT SURVEY
ILLUMINANCE MEASUREMENTS

Drawing Status:

PRELIMINARY

Hydrock Job No:		C-09194		
Drawn HJ	Checked ES	Scale @ A1 1:400	Date SEPT 2018	Issue Date 24/09/18
Drawing Number: 09194-HYD-XX-GF-DR-E-9006				Revision: P01



- NOTES:
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P01	24/09/18	Preliminary	HJ	ES
Rev	Date	Description	By	Ckd

Architect :



Client :

Project Title:

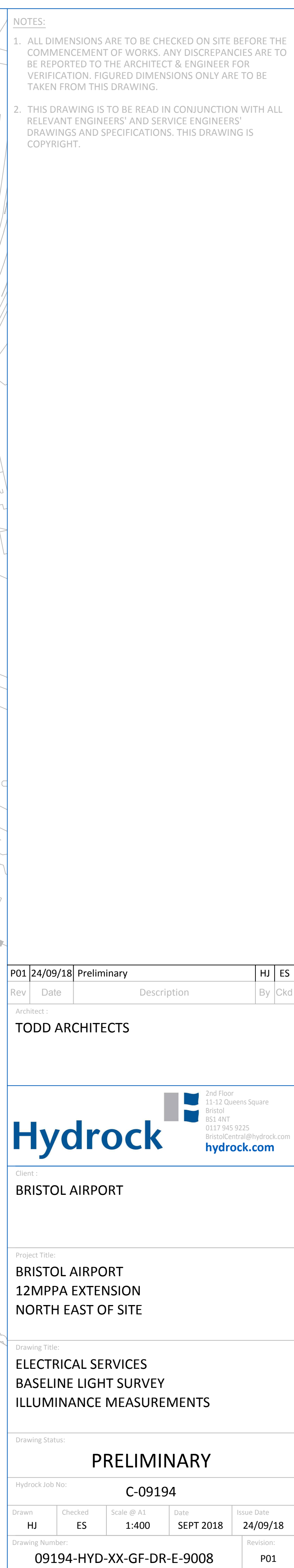
Drawing Title:

Drawing Status:

Hydrock Job No:

Drawn: HJ, Checked: ES, Scale: A1, Date: SEPT 2018, Issue Date: 24/09/18

Drawing Number: 09194-HYD-XX-GF-DR-E-9007, Revision: P01



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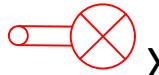
P01	24/09/18	Preliminary	HJ	ES
Rev	Date	Description	By	Ckd
Architect :				
TODD ARCHITECTS				
Hydrock 2nd Floor 11-12 Queens Square Bristol BS1 4NT 0117 945 9225 @hydrocentral@hydrock.com hydrock.com				
Client :				
BRISTOL AIRPORT				
Project Title:				
BRISTOL AIRPORT 12MPPA EXTENSION NORTH EAST OF SITE				
Drawing Title:				
ELECTRICAL SERVICES BASELINE LIGHT SURVEY ILLUMINANCE MEASUREMENTS				
Drawing Status:				
PRELIMINARY				
Hydrock Job No:				
C-09194				
Drawn	Checked	Scale @ A1	Date	Issue Date
HJ	ES	1:400	SEPT 2018	24/09/18
Drawing Number:				Revision:
09194-HYD-XX-GF-DR-E-9008				P01

Appendix D: Indicative Light Spill



- NOTES:
1. ALL DIMENSIONS ARE TO BE CHECKED ON SITE BEFORE THE COMMENCEMENT OF WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
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Legend:

 X Indicative column luminaire

P03	06/12/18	Layout Changes	HJ	ES
P02	15/11/18	For information	HJ	ES
P01	24/09/18	Preliminary	HJ	ES

Rev	Date	Description	By	Ckd
-----	------	-------------	----	-----

Architect :
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0117 945 9225
bristolcentral@hydrock.com
hydrock.com

Client :
BRISTOL AIRPORT

Project Title:
BRISTOL AIRPORT
12MPPA EXTENSION

Drawing Title:
ELECTRICAL SERVICES
INDICATIVE LIGHTING
SILVER ZONE CAR PARKING AREAS
LIGHT SPILL CALCULATIONS

Drawing Status:
PRELIMINARY

Hydrock Job No: C-09194

Drawn: HJ	Checked: ES	Scale @ A1: 1:1000	Date: SEPT 2018	Issue Date: 06/12/18
Drawing Number: 09194-HYD-XX-GF-DR-E-9011				Revision: P03



- NOTES:
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 2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS' AND SERVICE ENGINEERS' DRAWINGS AND SPECIFICATIONS. THIS DRAWING IS COPYRIGHT.

Legend:

 **F**
Indicative floodlight

P02	06/12/18	Preliminary	HJ	ES
P01	24/09/18	Preliminary	HJ	ES
Rev	Date	Description	By	Ckd

Architect :
TODD ARCHITECTS

**Hydrock**

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BristolCentral@hydrock.com
hydrock.com

Client :
BRISTOL AIRPORT

Project Title:
**BRISTOL AIRPORT
12MPPA EXTENSION**

Drawing Title:
**ELECTRICAL SERVICES
INDICATIVE LIGHTING
EAST PIER
LIGHT SPILL**

Drawing Status:
PRELIMINARY

Hydrock Job No: **C-09194**

Drawn: HJ	Checked: ES	Scale @ A1: 1:500	Date: SEPT 2018	Issue Date: 06/12/18
Drawing Number: 09194-HYD-XX-GF-DR-E-9012				Revision: P02

*Appendix E: Calibrated Light
Meter Certificate*

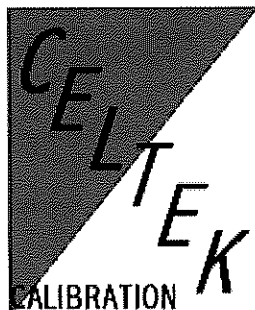
CERTIFICATE OF CALIBRATION

Issued By Celtek Calibration Ltd.

Date of Issue 09 April 2018

Certificate Number
CEL25596

Page 1 of 3 Pages



Celtek, NPL Hillhouse IBC
Bourne Road, Standards Building
Thornton Cleveleys
Lancashire, FY5 4QD
Tel: 01253 820200 Fax: 01253 827700

TER Calibration Ltd
01942 882275 me@ter.co.uk
Ref 675257/321511
Ident
Date 09/04/2018 Subcontract
Due 08/04/2019
Cert CEL25596

Approved Signature

☐ J. Johnson ☐ P. Goncalves ☐ P. Stevens ☐ I. Wilkinson ☒ N.R. Harrison

Customer : TER CALIBRATIONS LTD
Unit 1 Armstron Point, Swan Lane
Hindley Green WN2 4AU

Date Received : 09 April 2018

Instrument :	System ID :	A00060124	Job Number :	JCE22686-1
	Description :	Light Meter		
	Manufacturer :	Amprobe	Site :	
	Model Number :	LM100	Location :	
	Serial Number :	17060124		
	Procedure Version :	F46		

Environmental Conditions

Temperature : 20°C +/- 3°C
Relative Humidity : 50% +/- 10%

Mains Voltage : 240V +/- 10V
Mains Frequency : 50Hz +/- 1Hz

Comments

Instrument was placed in lab and allowed to stabilise before calibration.
Adjustments made.

All tests passed calibration.

Traceability Information

Instrument description	Serial number	Certificate number	Cal. Date	Cal. Period
Megatron Light	968/R2	113457/ABU	14/11/2017	105

Calibrated By : J. Johnson

Date of Calibration : 09 April 2018

This certificate provides traceability of measurement to recognised National Standards, and to the units of measurement realised at the National Physical Laboratory or other recognised National Standards laboratories.
Copyright of this certificate is owned by the issuing laboratory and may not be reproduced except with the prior written approval of the issuing laboratory.
This certificate complies with the requirements of BS EN ISO 10012:2003.

CERTIFICATE OF CALIBRATION

AS FOUND RESULTS

Certificate Number
CEL25596

Page 2 of 3 Pages

Test Title	Tolerance	Applied Value	Reading	Pass/Fail
Tungsten Light				
200 Lux range	15Lux	100.0Lux	103.3Lux	Pass
2000 Lux range	15Lux	100Lux	102Lux	Pass
..	22.5Lux	250Lux	255Lux	Pass
..	35Lux	500Lux	522Lux	Pass
..	60Lux	1 000Lux	1 105Lux	Fail
20000 Lux range	175Lux	1.50kLux	1.66kLux	Pass
..	250Lux	3.00kLux	3.50kLux	Fail
..	600Lux	5.00kLux	5.90kLux	Fail
200000 Lux range	---	---	Pass	

Uncertainties

LIGHT +/- 10.3% 20-199; +/- 3.3% 200-995; +/- 2.7% 1000-1990; +/- 8% 2000-20000 LUX

CERTIFICATE OF CALIBRATION

AFTER ADJUSTMENT RESULTS

Certificate Number
CEL25596

Page 3 of 3 Pages

Test Title	Tolerance	Applied Value	Reading	Pass/Fail
Tungsten Light				
200 Lux range	15Lux	100.0Lux	101.2Lux	Pass
2000 Lux range	15Lux	100Lux	97Lux	Pass
..	22.5Lux	250Lux	240Lux	Pass
..	35Lux	500Lux	489Lux	Pass
..	60Lux	1 000Lux	1 018Lux	Pass
20000 Lux range	175Lux	1.50kLux	1.44kLux	Pass
..	250Lux	3.00kLux	3.00kLux	Pass
..	600Lux	5.00kLux	5.04kLux	Pass
200000 Lux range	---	---	Pass	

Uncertainties

LIGHT +/- 10.3% 20-199: +/- 3.3% 200-995: +/- 2.7% 1000-1990: +/- 8% 2000-20000 LUX