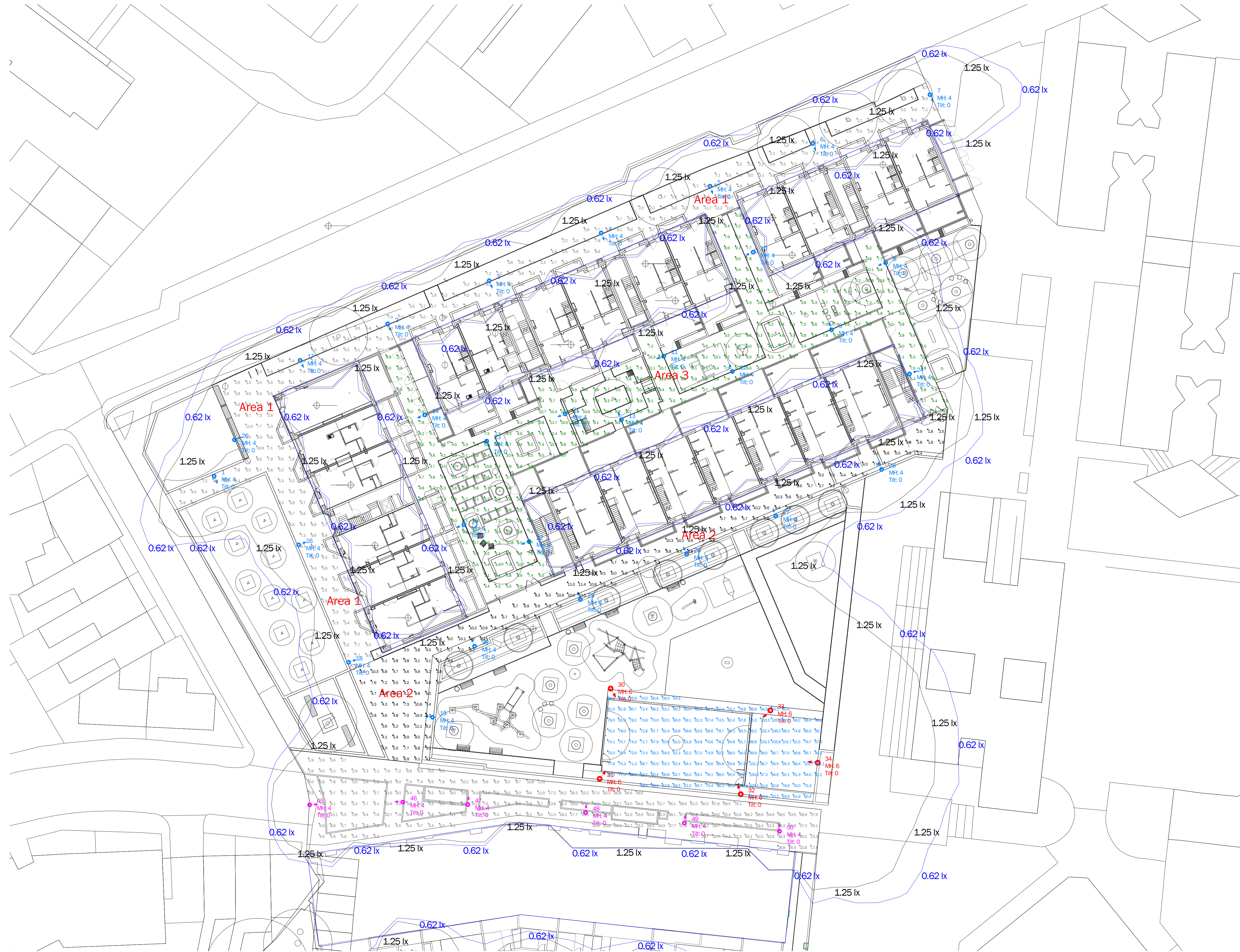
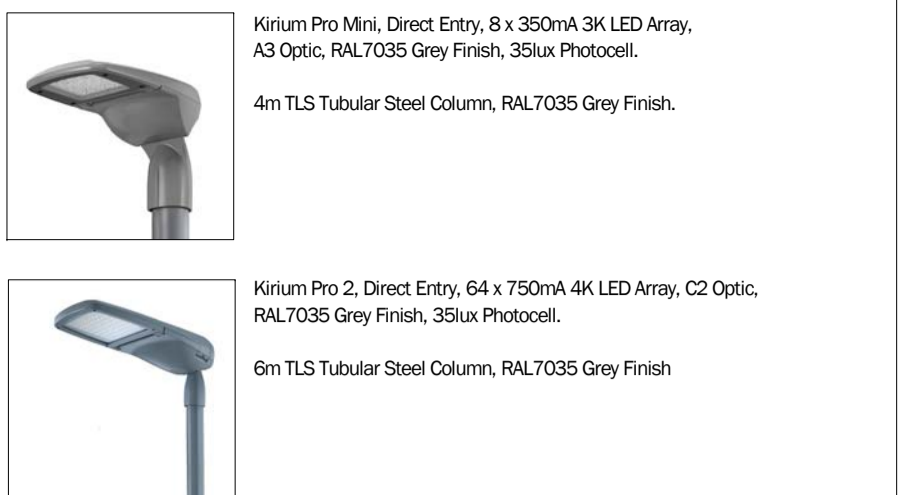


Luminaire Schedule				Lumens	Wattage	S/P Ratio	Total MF
Symbol	Qty	Label	Description	1050	11	1.20	0.748
→	29	KIRILUM PRO MINI BLEED 3K A3_35	Kirium Pro Mini, Direct Entry, 8 x 350mA 3K LED Array, A3 Optic, 4m TLS	17136	148	1.50	0.748
→	5	KIRILUM PRO2 64LED 4K C2_750mA	Kirium Pro 2, Direct Entry, 64 x 750mA 4K LED Array, C2 Optic, 6m TLS	1050	11	1.20	0.748
→	10	1A KIRILUM PRO MINI BLEED 3K A3_35	[Phase 1A] Kirium Pro Mini, Direct Entry, 8 x 350mA 3K LED Array, A3 Optic, 4m TLS				

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Min/Avg	Min/Max
Area 1	Illuminance	Lux	5.37	11.7	1.6	0.30	0.14
Area 2	Illuminance	Lux	6.49	11.4	1.8	0.28	0.16
Area 3	Illuminance	Lux	6.60	13.6	2.1	0.32	0.15
MUGA	Illuminance	Lux	77.93	106.1	48.2	0.62	0.45
Phase 1A North Area	Illuminance	Lux	21.57	76.1	1.9	0.09	0.02
Phase 1A South Area	Illuminance	Lux	5.40	10.3	1.6	0.30	0.16



**Lighting Classes:**  
Areas 1-4:

This scheme has been designed to:

- BS EN 12193:2015 Road lighting - Part 2: Performance requirements
- Category P4
- Subsidiary roads
- Horizontal illuminance
- >5 lux Maintained average illuminance (Eav)
- >7.5 lux Maintained average illuminance (Eav)
- >1 lux Maintained minimum point illuminance (Emin)

This scheme has been designed to:

- BS EN 12193:2015 Road lighting - Part 2: Performance requirements (Section 18)
- BS 5489:2013 All street lighting for both adopted highways and footpaths, private estate roads and footpaths, and car parks must comply with BS 5489:2013.
- BS 5833 (Bollard lighting is not compliant with BS5489:2013 because it does not project sufficient light at the right height to aid focal recognition and reduce fear of crime.
- BS 5489:2013 Care should be taken to ensure that landscaping, tree planting and lighting schemes work together to mitigate the effects of seasonal variations.
- BS 5489:2013 The colour rendering qualities of lamps used in an SED development should achieve a minimum of at least 90Ra on the Colour Rendering Index
- BS 5489:2013 Light Pollution must be minimised
- BS 5489:2013 Low energy light sources should be utilised <math><40\text{lm}</math> CCT W

MUGA:  
BS EN 12193:1999 Sports Lighting;  
Tabel A21  
Class III - Local/ Training & Schools Level of Play  
75lux Average  
50% Uniformity  
RA>20

E	24/09/18	Location Adjustment Column 33
D	19/09/18	Location Adjustments, Phase 1A columns shown
C	06/09/18	Location Adjustments
B	20/07/17	Colour revised to RAL7035
A	12/06/17	Based on client CAD DWG

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

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Project:  
**Agar Grove Phase 1B**

Client: Hill Partnership  
Project Management: Martin Collins  
Contact: Matt Daley  
Lighting Design: Michael Walker

All measurements in metres and lux.  
Do not scale from this drawing. Product images are indicative.

Date: 24/09/18  
Project Number:  
Scale: 1:250 @ A1  
Page: 1 of 1

**13462-1-E**