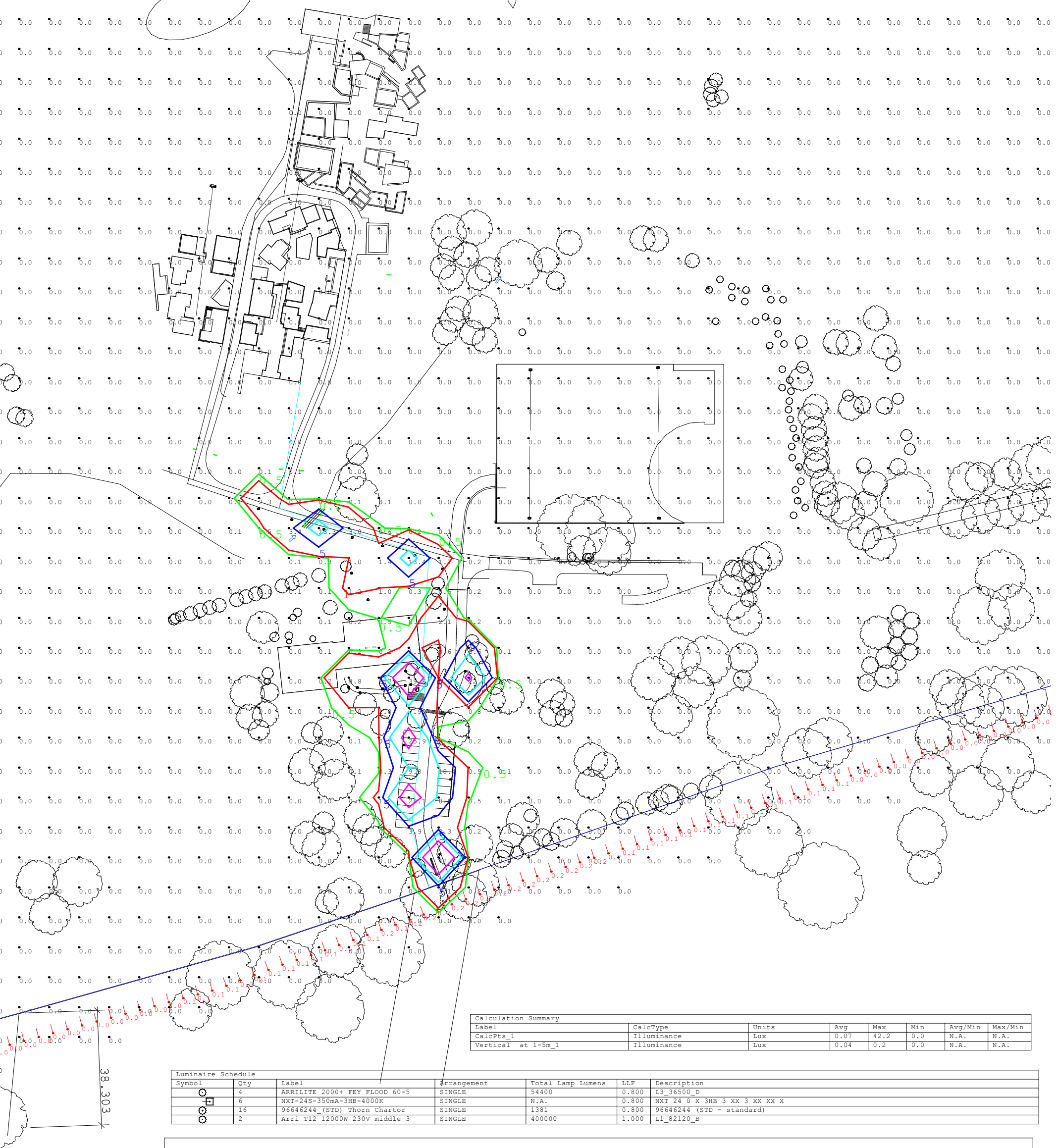


Assessment Prepared by: Phillip Joe

Alterations and Additions to Religious Establishment Obtrusive Light Spill Assessment

12-14 Zouch Road, Denham Court, NSW 2565

Note: The intention of this assessment is to identify light spill issues that could potentially impact neighbouring properties during the use of the existing International Bible Students Association (IBSA) facility as a filming location. The assessment covers the effects of low level carpark lighting as well as three different filming scenarios, facing the property boundary, which could occur during filming. Topographical features and various lighting types have been taken into consideration during the generation of the light spill model.



Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CalcPts_1	Illuminance	Lux	0.07	42.2	0.0	N.A.	N.A.
Vertical at 1-5m_1	Illuminance	Lux	0.04	0.2	0.0	N.A.	N.A.

Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
⊙	4	ARRILITE 2000+ FEY FLOOD 60-5	SINGLE	54400	0.800	L3_36500_D
⊞	6	NXT-24S-350mA-3HB-4000K	SINGLE	N.A.	0.800	NXT 24 0° X 3HB 3 XX 3 XX XX X
⊙	16	96646244_(STD) Thorn Chantor	SINGLE	1381	0.800	96646244_(STD - standard)
⊙	2	Arri T12 12000W 230V middle 3	SINGLE	400000	1.000	L1_82120_B

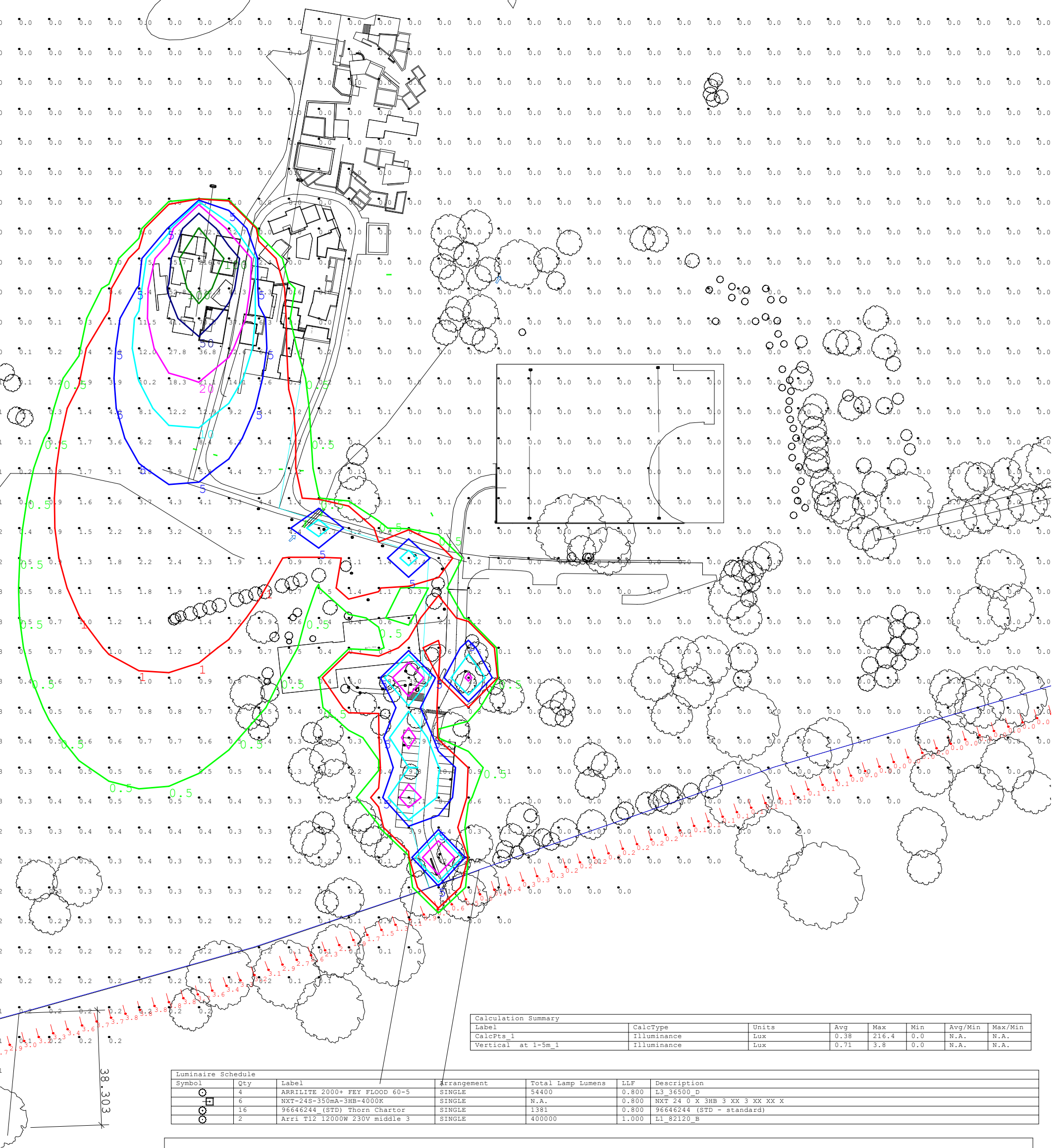
OBTRUSIVE LIGHTING ASSESSMENT
COMPLIES WITH
AS/NZS 4282:2019
ENVIRONMENTAL ZONE A2- LOW DISTRICT BRIGHTNESS (SPARSELY INHABITED RURAL AND SEMI RURAL AREA)
MAX VERT ILLUMINANCE (Ev) LUX:
NON CURFEW (6AM-11PM)- 5 LUX _ ACHIEVED <5 LUX
CURFEW HOURS (11PM-6AM)- 1 LUX _ACHIEVED <1 LUX ALSO TIME SWITCH CONTROLLED OFF

MODEL CALCULATIONS BASED ON AGI32 LIGHTING ANALYST SOFTWARE AND
MANUFACTURERS PROVIDED IES PHOTOMETRIC FILES

ASSESSMENT BY
PHILLIP JOE
ELECTRICAL ENGINEER
AMIEAust (1373431) NZCE (Elect)
PH 0419824746
13 FEBRUARY 2020

INTERNATIONAL BIBLE STUDENTS ASSOCIATION
12-14 ZOUCR RD DENHAM COURT NSW2565

SCENARIO 1-
EXTERNAL CARPARK LIGHTS AND BOLLARDS



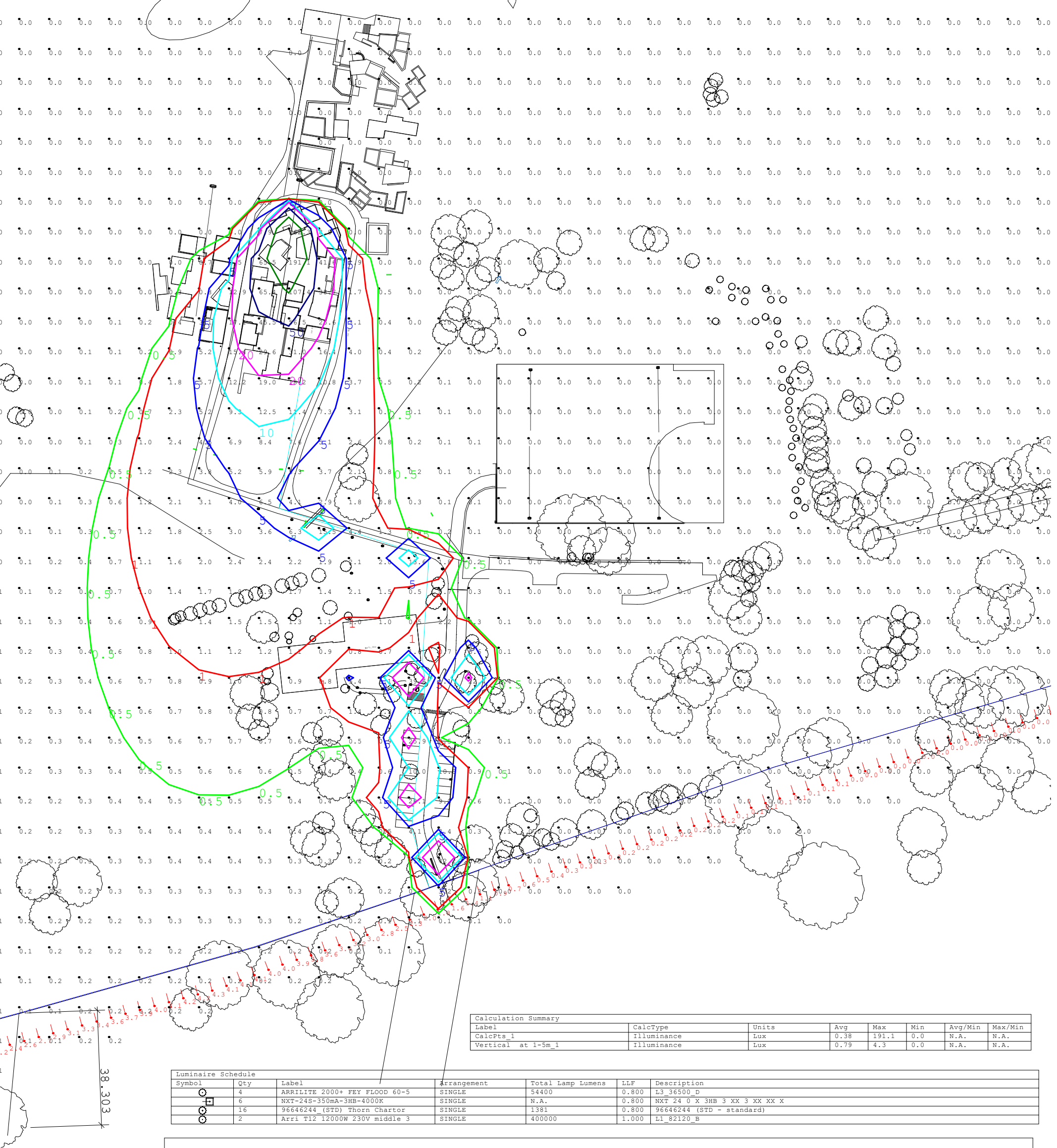
OBTRUSIVE LIGHTING ASSESSMENT
COMPLIES WITH
AS/NZS 4282:2019
ENVIRONMENTAL ZONE A2- LOW DISTRICT BRIGHTNESS (SPARSELY INHABITED RURAL AND SEMI RURAL AREA)
MAX VERT ILLUMINANCE (Ev) LUX:
NON CURFEW (6AM-11PM)- 5 LUX _ ACHIEVED <5 LUX
CURFEW HOURS (11PM-6AM_- 1 LUX ACHIEVED BY NOT FILMING DURING CURFEW HOURS AND FILM MANAGEMENT PLAN

MODEL CALCULATIONS BASED ON AGI32 LIGHTING ANALYST SOFTWARE AND
MANUFACTURERS PROVIDED IES PHOTOMETRIC FILES

ASSESSMENT BY
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12-14 ZOUCR RD DENHAM COURT NSW2565

SCENARIO 2-
EXTERNAL CARPARK LIGHTS AND BOLLARDS
AREA 1 FILMING



Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CalcPts_1	Illuminance	Lux	0.38	191.1	0.0	N.A.	N.A.
Vertical at 1-5m_1	Illuminance	Lux	0.79	4.3	0.0	N.A.	N.A.

Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
⊙	4	ARRILITE 2000+ FEY FLOOD 60-5	SINGLE	54400	0.800	L3_36500_D
⊞	6	NXT-24S-350mA-3HB-4000K	SINGLE	N.A.	0.800	NXT 24 0° X 3HB 3 XX 3 XX XX X
⊙	16	96646244 (STD) Thorn Chartor	SINGLE	1381	0.800	96646244 (STD - standard)
⊙	2	Arri T12 12000W 230V middle 3	SINGLE	400000	1.000	L1_82120_B

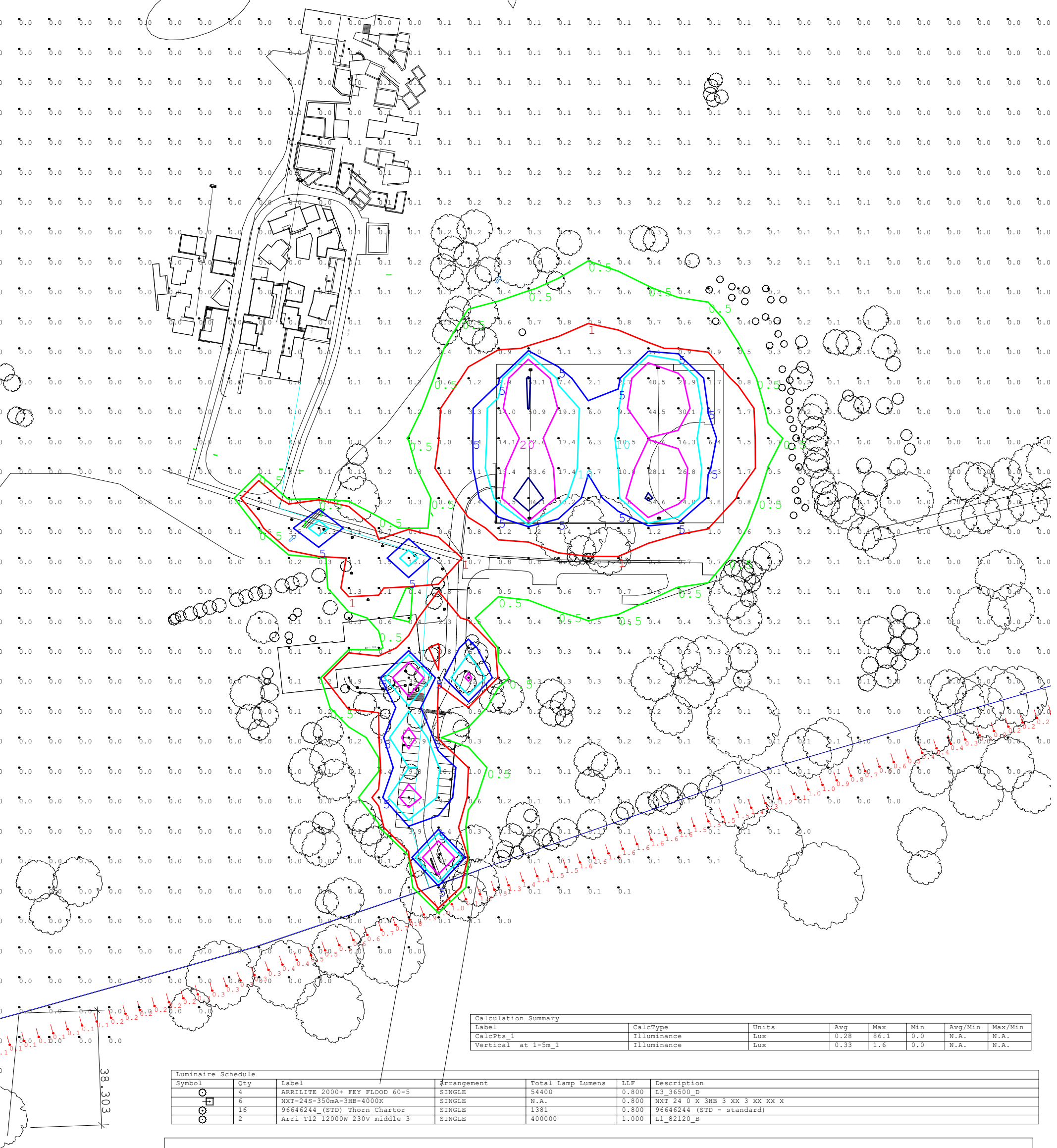
OBTRUSIVE LIGHTING ASSESSMENT
COMPLIES WITH
AS/NZS 4282:2019
ENVIRONMENTAL ZONE A2- LOW DISTRICT BRIGHTNESS (SPARSELY INHABITED RURAL AND SEMI RURAL AREA)
MAX VERT ILLUMINANCE (Ev) LUX:
NON CURFEW (6AM-11PM)- 5 LUX _ ACHIEVED <5 LUX
CURFEW HOURS (11PM-6AM)- 1 LUX _ ACHIEVED BY NOT FILMING DURING CURFEW HOURS AND FILM MANAGEMENT PLAN

MODEL CALCULATIONS BASED ON AGI32 LIGHTING ANALYST SOFTWARE AND
MANUFACTURERS PROVIDED IES PHOTOMETRIC FILES

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13 FEBRUARY 2020

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SCENARIO 3-
EXTERNAL CARPARK LIGHTS AND BOLLARDS
AREA 2 FILMING



Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CalcPts_1	Illuminance	Lux	0.28	86.1	0.0	N.A.	N.A.
Vertical at 1-5m_1	Illuminance	Lux	0.33	1.6	0.0	N.A.	N.A.

Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
⊙	4	ARRILITE 2000+ FEY FLOOD 60-5	SINGLE	54400	0.800	L3_36500_D
⊞	6	NXT-24S-350mA-3HB-4000K	SINGLE	N.A.	0.800	NXT 24 0° X 3HB 3 XX 3 XX XX X
⊙	16	96646244 (STD) Thorn Chactor	SINGLE	1381	0.800	96646244 (STD - standard)
⊙	2	Arri T12 12000W 230V middle 3	SINGLE	400000	1.000	L1_82120_B

OBTRUSIVE LIGHTING ASSESSMENT
COMPLIES WITH
AS/NZS 4282:2019
ENVIRONMENTAL ZONE A2- LOW DISTRICT BRIGHTNESS (SPARSELY INHABITED RURAL AND SEMI RURAL AREA)
MAX VERT ILLUMINANCE (Ev) LUX:
NON CURFEW (6AM-11PM)- 5 LUX _ ACHIEVED <5 LUX
CURFEW HOURS (11PM-6AM)- 1 LUX _ACHIEVED BY NOT FILMING DURING CURFEW HOURS AND FILM MANAGEMENT
PLAN

MODEL CALCULATIONS BASED ON AGI32 LIGHTING ANALYST SOFTWARE AND
MANUFACTURERS PROVIDED IES PHOTOMETRIC FILES

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13 FEBRUARY 2020

INTERNATIONAL BIBLE STUDENTS ASSOCIATION
12-14 ZOUCH RD DENHAM COURT NSW2565

SCENARIO 4-
EXTERNAL CARPARK LIGHTS AND BOLLARDS
AREA 3 FILMING