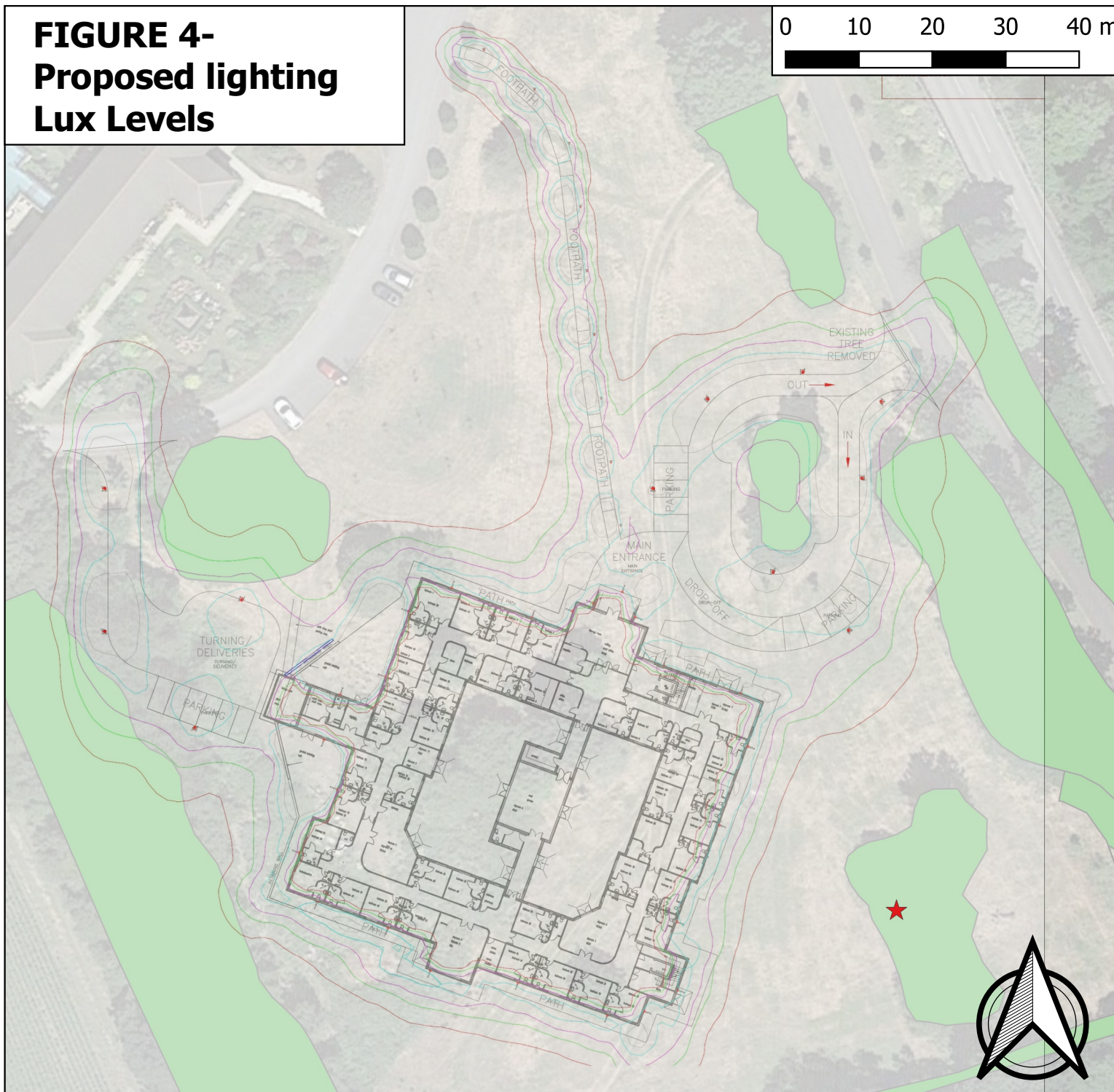


**FIGURE 4-
Proposed lighting
Lux Levels**



0 10 20 30 40 m

KEY

Areas of potentially sensitive habitat

★ Badger Sett

Retained woodland area

**Lighting Countour Plan fo
proposed lighting**

Isolines

1.0 lx

2.5 lx

5.0 lx

10.0 lx

15.0 lx

538915 - PENDINE PARK NEW CARE HOME

Partner for Contact:
Order No.:
Company:
Customer No.:

Date: 27.11.2020
Operator: Iman Khorramie

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538915 - PENDINE PARK NEW CARE HOME

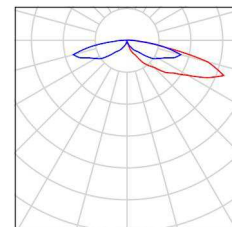
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Planning data	4
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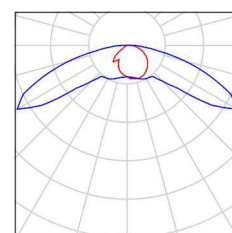
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External Lighting / Luminaire parts list

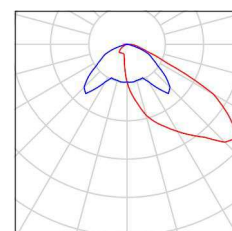
- 9 Pieces THORLUX PW19913 Passway 11W - Pathway
Distribution - 1100mm Root Mounted - 4000K
Article No.: PW19913
Luminous flux (Luminaire): 780 lm
Luminous flux (Lamps): 780 lm
Luminaire Wattage: 14.0 W
Luminaire classification according to CIE: 98
CIE flux code: 09 34 80 98 100
Fitting: 1 x Passway 11W Pathway (Correction Factor 1.000).



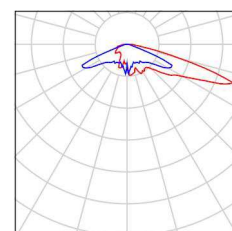
- 19 Pieces THORLUX RL19071 Realta LED Polycarbonate
Cover - 8W - Wide Distribution - 4000K
Article No.: RL19071
Luminous flux (Luminaire): 1320 lm
Luminous flux (Lamps): 1320 lm
Luminaire Wattage: 11.0 W
Luminaire classification according to CIE: 98
CIE flux code: 27 60 90 98 100
Fitting: 1 x Realta LED - 8W - Wide Distribution -
Polycarbonate Cover - 4000K (Correction Factor 1.000).



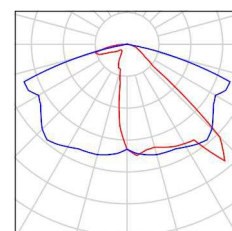
- 5 Pieces THORLUX RL19116 Realta LED - 20W - Area
Distribution - 4000K
Article No.: RL19116
Luminous flux (Luminaire): 2840 lm
Luminous flux (Lamps): 2840 lm
Luminaire Wattage: 23.0 W
Luminaire classification according to CIE: 100
CIE flux code: 32 74 96 100 100
Fitting: 1 x Realta LED - 20W - Area Distribution -
4000K (Correction Factor 1.000).



- 5 Pieces THORLUX SB19677 Starbeam ECO - Area
Distribution - 31W - 4000K
Article No.: SB19677
Luminous flux (Luminaire): 4135 lm
Luminous flux (Lamps): 4135 lm
Luminaire Wattage: 35.0 W
Luminaire classification according to CIE: 100
CIE flux code: 20 47 89 100 100
Fitting: 1 x Starbeam ECO 31W Area (Correction Factor 1.000).



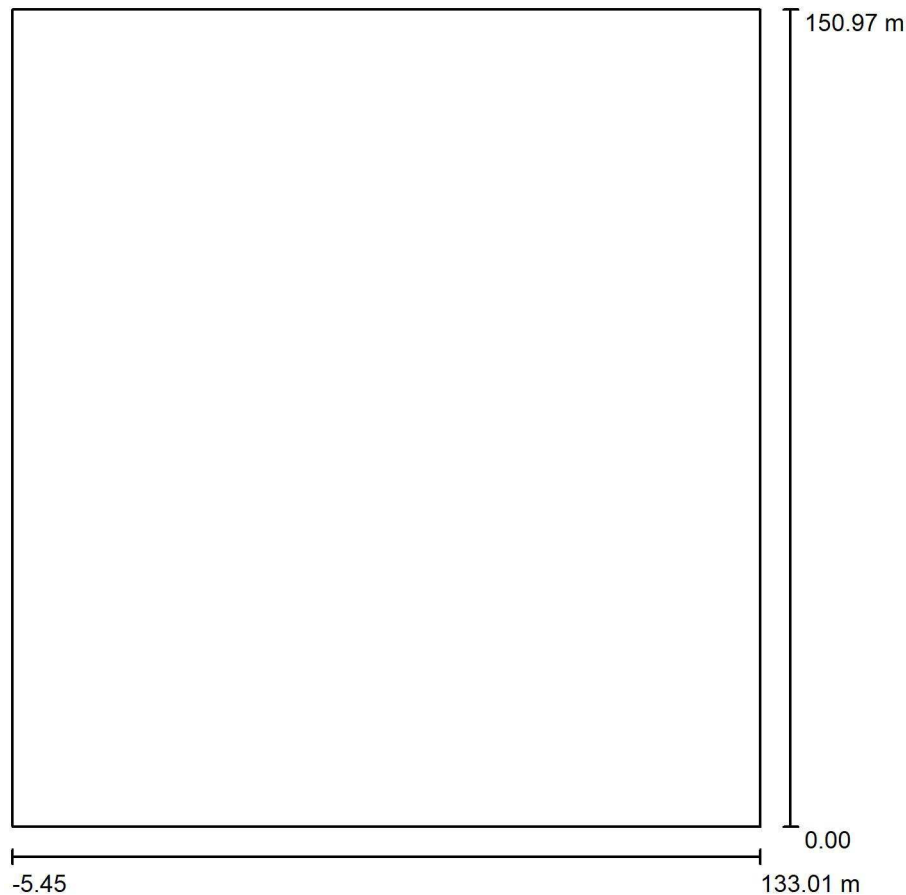
- 6 Pieces THORLUX SB19679 Starbeam ECO - Roadway
Distribution - 31W - 4000K
Article No.: SB19679
Luminous flux (Luminaire): 4225 lm
Luminous flux (Lamps): 4225 lm
Luminaire Wattage: 35.0 W
Luminaire classification according to CIE: 100
CIE flux code: 40 73 96 100 101
Fitting: 1 x Starbeam ECO 31W Roadway
(Correction Factor 1.000).



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External Lighting / Exterior Scene / Planning data



Maintenance factor: 0.80, ULR (Upward Light Ratio): 0.5%

Scale 1:1400

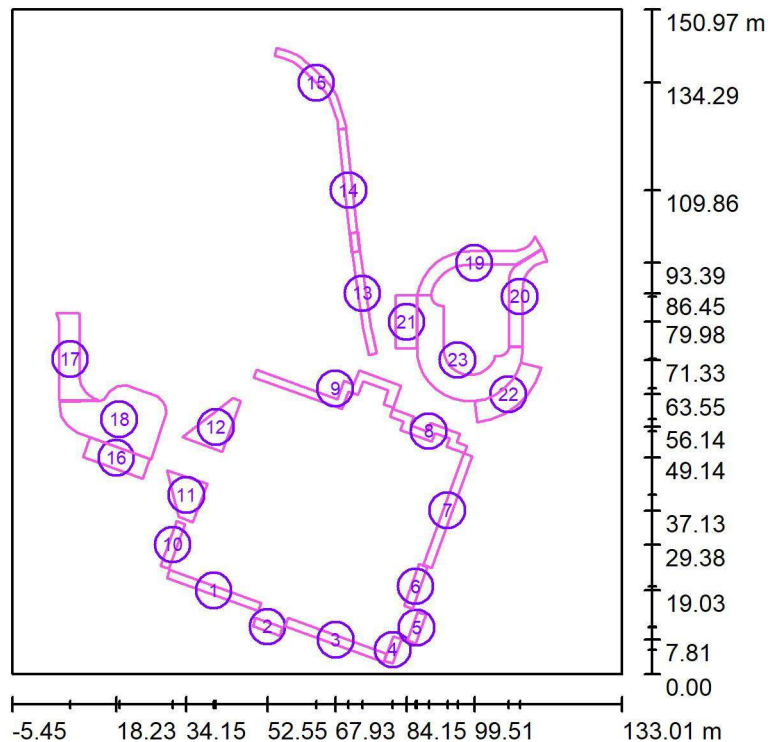
Luminaire Parts List

No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	9	THORLUX PW19913 Passway 11W - Pathway Distribution - 1100mm Root Mounted - 4000K (1.000)	780	780	14.0
2	19	THORLUX RL19071 Realta LED Polycarbonate Cover - 8W - Wide Distribution - 4000K (1.000)	1320	1320	11.0
3	5	THORLUX RL19116 Realta LED - 20W - Area Distribution - 4000K (1.000)	2840	2840	23.0
4	5	THORLUX SB19677 Starbeam ECO - Area Distribution - 31W - 4000K (1.000)	4135	4135	35.0
5	6	THORLUX SB19679 Starbeam ECO - Roadway Distribution - 31W - 4000K (1.000)	4225	4225	35.0
Total:			92325	Total: 92325	835.0

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External Lighting / Exterior Scene / Calculation surfaces (results overview)



Scale 1 : 1718

Calculation Surface List

No.	Designation	Type	Grid	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u_0	E_{min} / E_{max}
1	Pathway 1	perpendicular	55 x 5	15	9.00	24	0.616	0.373
2	Pathway 2	perpendicular	15 x 5	14	9.62	17	0.708	0.558
3	Pathway 3	perpendicular	55 x 5	13	5.77	16	0.453	0.354
4	Pathway 4	perpendicular	15 x 5	17	10	26	0.614	0.395
5	Pathway 5	perpendicular	15 x 5	13	9.57	15	0.738	0.621
6	Pathway 6	perpendicular	15 x 5	13	8.87	16	0.700	0.561
7	Pathway 7	perpendicular	15 x 5	14	6.59	19	0.483	0.339
8	Pathway 8	perpendicular	33 x 7	14	5.43	23	0.379	0.235
9	Pathway 9	perpendicular	25 x 7	17	8.95	27	0.531	0.334

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External Lighting / Exterior Scene / Calculation surfaces (results overview)

Calculation Surface List

No.	Designation	Type	Grid	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u0	E_{min} / E_{max}
10	Pathway 10	perpendicular	15 x 5	13	9.28	21	0.690	0.443
11	Service Yard 1	perpendicular	11 x 11	45	15	66	0.328	0.222
12	Service Yard 2	perpendicular	11 x 9	46	20	68	0.425	0.291
13	Footpath Section 1	perpendicular	59 x 5	18	4.56	48	0.250	0.095
14	Footpath Section 2	perpendicular	59 x 5	16	4.27	45	0.263	0.095
15	Footpath Section 3	perpendicular	49 x 9	18	4.05	45	0.222	0.089
16	Car Park 1	perpendicular	19 x 7	11	7.17	17	0.667	0.423
17	Road 1	perpendicular	21 x 9	16	7.68	30	0.476	0.258
18	Turning Deliveries	perpendicular	13 x 9	11	7.18	28	0.661	0.259
19	Road 2	perpendicular	37 x 9	29	16	39	0.543	0.401
20	Road 3	perpendicular	21 x 7	24	12	35	0.482	0.336
21	Car Park 2	perpendicular	5 x 11	12	7.56	18	0.608	0.427
22	Car Park 3	perpendicular	21 x 9	12	6.49	19	0.537	0.347
23	Drop-off Point	perpendicular	15 x 9	11	5.38	20	0.505	0.274

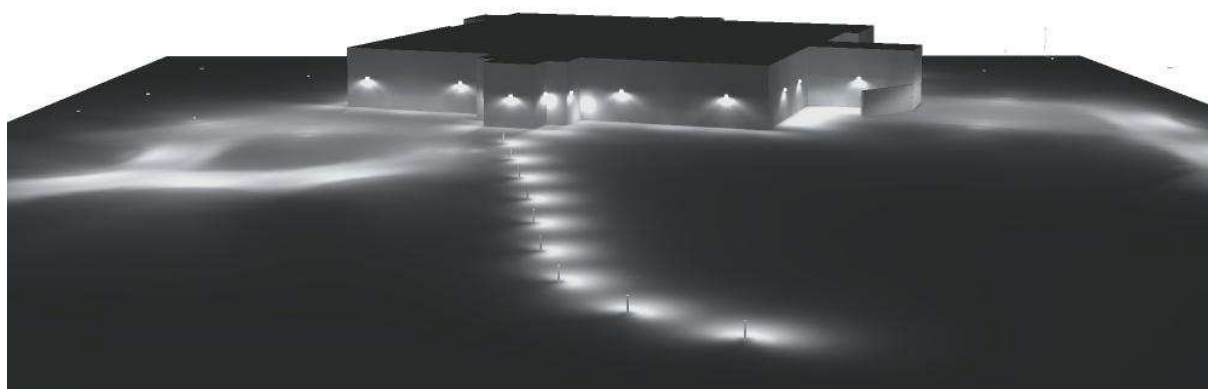
Summary of Results

Type	Quantity	Average [lx]	Min [lx]	Max [lx]	u0	E_{min} / E_{max}
perpendicular	23	17	4.48	68	0.26	0.07

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External Lighting / Exterior Scene / 3D Rendering

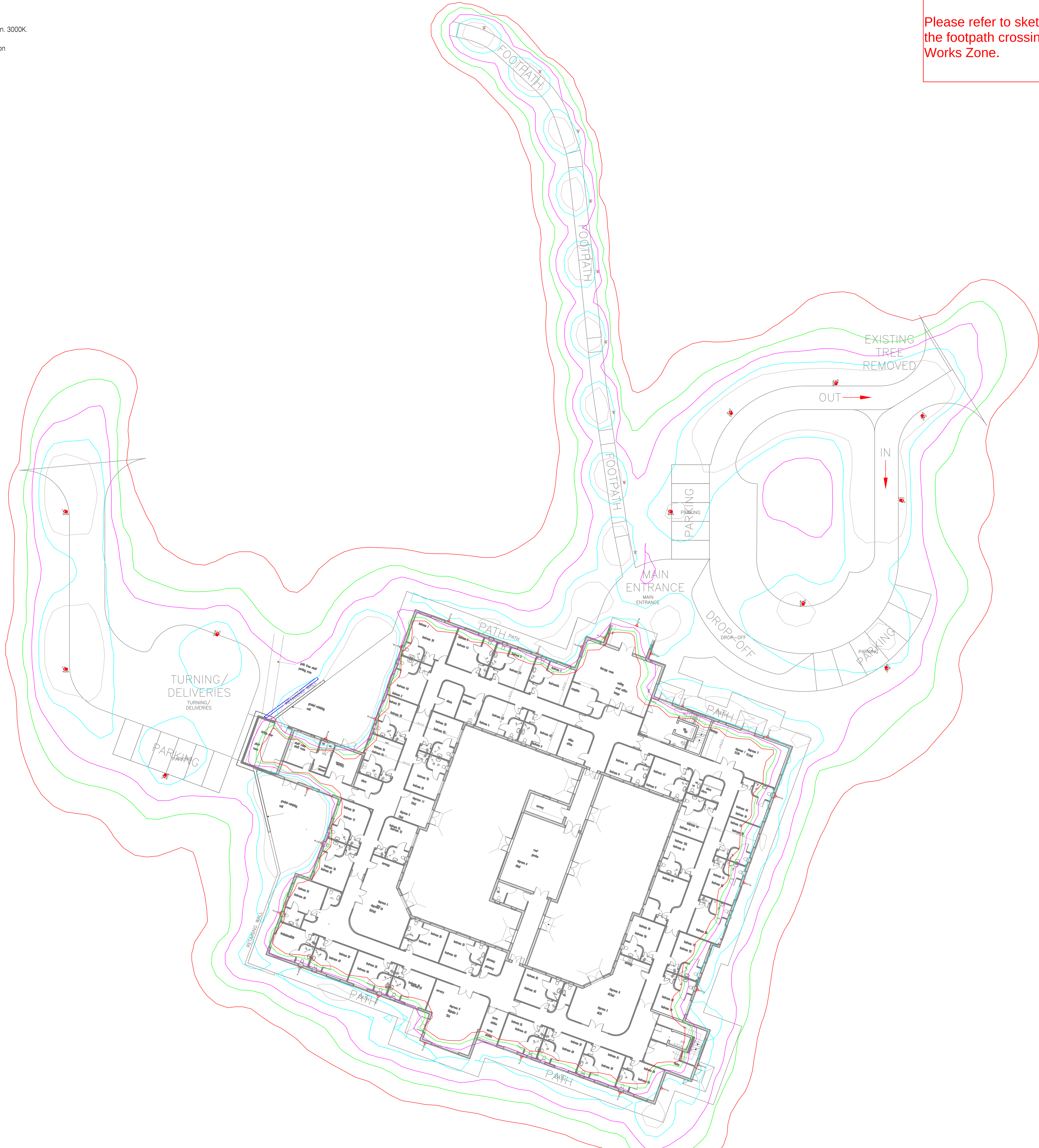


THORLUX KEY

CLM	11	FC6 6m galvanised tubular steel column.
EXT1A	19	RL19071LF 8w LED Realta polycarbonate refractor LED high performance exterior luminaire. Wide Distribution. 3000K.
EXT1B	5	RL13118LF 20w LED 3000K Realta high performance exterior luminaire. Polycarbonate Cover. Area Distribution
EXT2A	6	SB19679LF 31W LED 3000K Starbeam ECO floodlight. Fixed output. Roadway Distribution. 76mm pole top.
EXT2B	5	SB19677LF 31W LED 3000K Starbeam ECO floodlight. Fixed output. Area Distribution. 76mm pole top.
EXT3	9	PW19913LF 11w LED 3000K Passway bollard luminaire, IP66. Pathway Distribution, 1100mm Root mounting

Isolines

- 1.0 lx
- 2.5 lx
- 5.0 lx
- 10.0 lx
- 15.0 lx



This note is to confirm that this design is Badger/Bat Compliant to the best of our ability without causing danger to public/residents by specification of 3000K colour temperature.

Please refer to sketch SK-001 for further information on the footpath crossing the 10m-20m Badger Supervised Works Zone.

Notes

- The provided Lighting Design has been completed by others and Thorlux Lighting accept no design responsibility relating to this scheme.
- In designing this initial scheme we have prejudged areas which are likely to require emergency lighting in compliance with BS5266-1, -7 & -8, according to a future employers risk assessment. Before a final emergency lighting scheme can be adopted it will be necessary to review this risk assessment, in addition to ensuring coverage of all "positions of emphasis" such as final locations for fire fighting equipment etc. Consequently our design/tender responsibility is limited pending these findings but we will gladly conclude once all the relevant facts have been determined.

The proposed lighting scheme is subject to our terms and conditions which can be found here: <http://www.thorlux.com/terms>



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PROPOSED LIGHTING LAYOUT
Pendine Park New Care Home

SCALE	1:200 @ A0
DATE	27/11/20
DRN. BY	IK
DESIGNER	IK

DRAWING No.

538915-00

BASED ON CUSTOMER DRG.	REV.
ORIGINATOR:	DATE

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Please note that lighting in this footpath, which crosses the "10m-20m Badger Supervised Works Zone" is required for the safe egress of public/residents.

Revision: A	By: DCI	Date: 12/11/20	Chckd:MR
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CHRISTLETON, CHESTER. CH3 7AE
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web: www.mccormick-architecture.co.uk

Project: **DEVELOPMENT AT SUMMERHILL**

DRAFT

Drawn By:	Date:	Scale:
DCI	07/10/20	1:500 @ A1

Checked By:	Date:	Signature:
MR	08/10/20	M. ROBERTS

Job No: 4135/01 Drg No: A(200)03 Revision: A