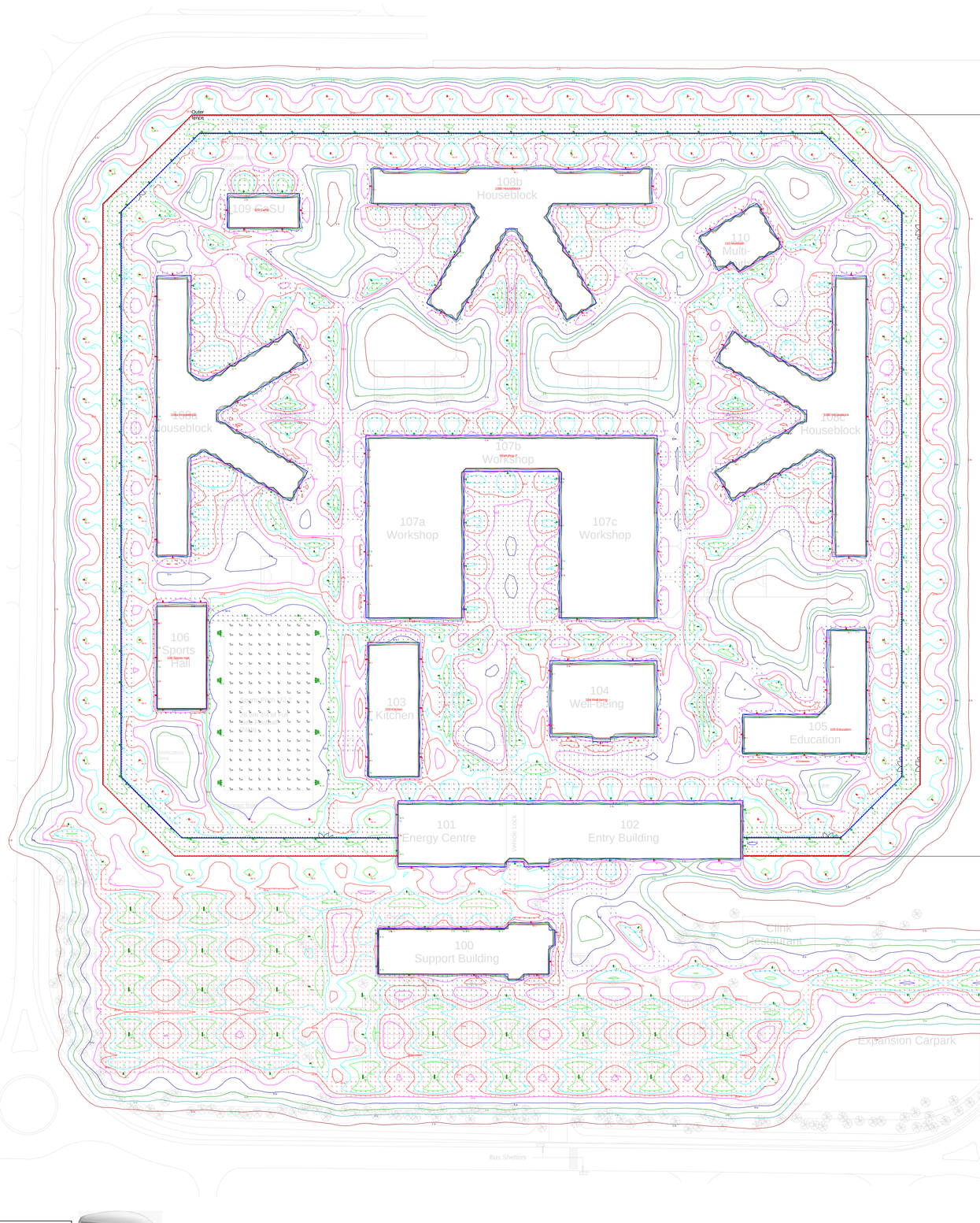
Dimensions are not to be scaled from this drawing.



Revision	Date	Description	Initials

Kingfisher
Exterior Lighting

Members Of

HEMSA

ILP Institution of Lightning Engineers

Lighting Industry Association

SAFCA Ancillary Contractor

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Project Title

HMP Wrexham
Sheet 1 of 2

Scale	Project No
1:1000 at A1	D23765D
Date	**Drawing No**
5/9/2014	D23765/PY/D

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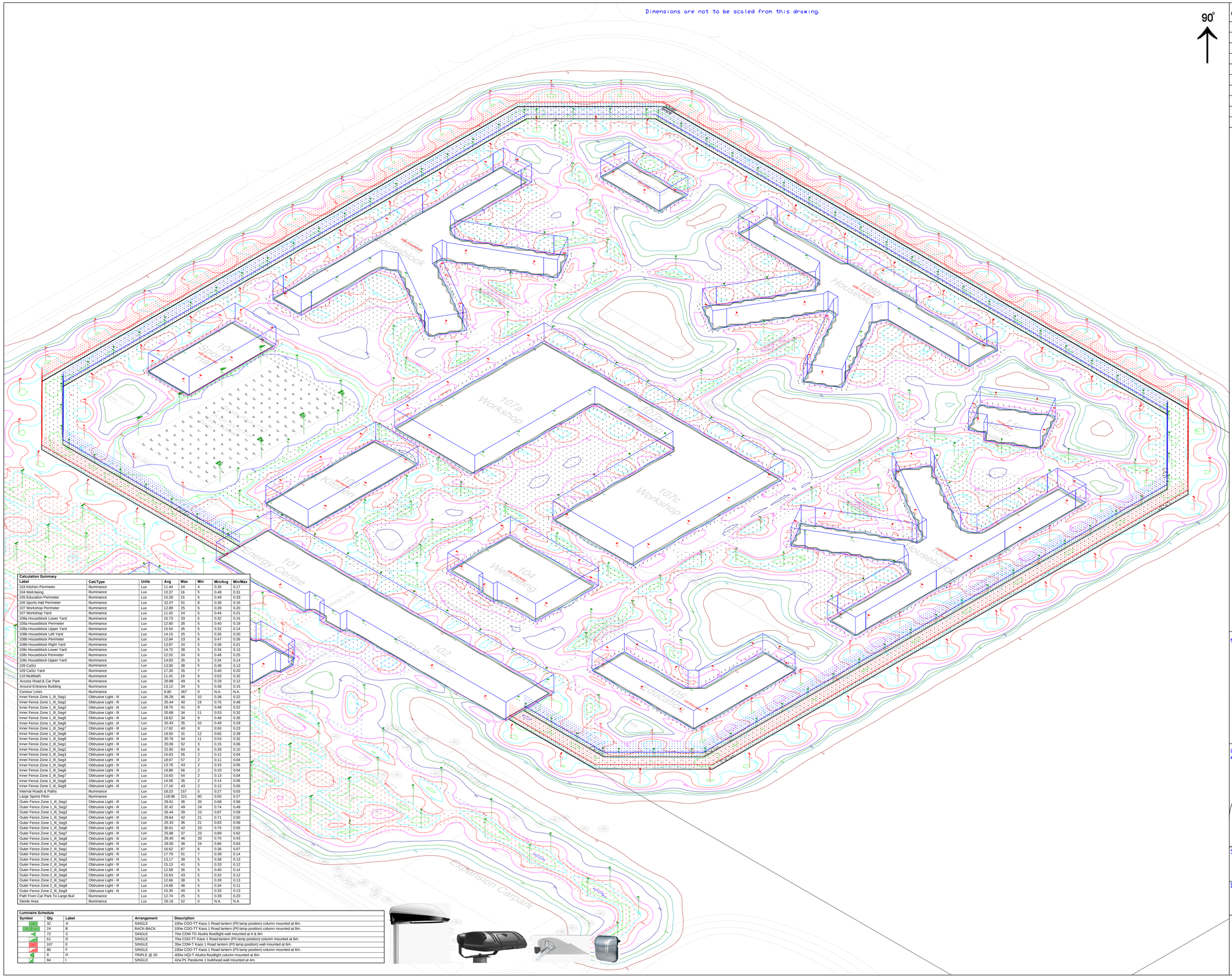
Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Min/Avg	Min/Max
103 Kitchen Perimeter	Illuminance	Lux	11.44	24	4	0.35	0.17
104 Well-being	Illuminance	Lux	10.37	16	5	0.48	0.31
105 Education Perimeter	Illuminance	Lux	10.28	15	5	0.49	0.33
106 Sports Hall Perimeter	Illuminance	Lux	22.07	51	8	0.36	0.16
107 Workshop Perimeter	Illuminance	Lux	12.89	25	5	0.39	0.20
107 Workshop Yard	Illuminance	Lux	11.42	24	5	0.44	0.21
108a Houseblock Lower Yard	Illuminance	Lux	15.73	33	5	0.32	0.15
108a Houseblock Perimeter	Illuminance	Lux	12.60	26	5	0.40	0.19
108a Houseblock Upper Yard	Illuminance	Lux	15.54	35	5	0.32	0.14
108b Houseblock Left Yard	Illuminance	Lux	14.15	25	5	0.35	0.20
108b Houseblock Perimeter	Illuminance	Lux	12.84	23	6	0.47	0.26
108b Houseblock Right Yard	Illuminance	Lux	13.87	24	5	0.36	0.21
108c Houseblock Lower Yard	Illuminance	Lux	14.72	38	5	0.34	0.13
108c Houseblock Perimeter	Illuminance	Lux	12.52	24	6	0.48	0.25
108c Houseblock Upper Yard	Illuminance	Lux	14.83	35	5	0.34	0.14
109 CaSU	Illuminance	Lux	13.00	38	5	0.38	0.13
109 CaSU Yard	Illuminance	Lux	17.30	35	7	0.40	0.20
110 Multifaith	Illuminance	Lux	11.41	19	6	0.53	0.32
Access Road & Car Park	Illuminance	Lux	20.88	49	6	0.29	0.12
Around Entrance Building	Illuminance	Lux	13.12	34	5	0.38	0.15
Contour Lines	Illuminance	Lux	6.80	267	0	N.A.	N.A.
Inner Fence Zone 1_Ill_Seg1	Obtrusive Light - Ill	Lux	26.28	46	10	0.38	0.22
Inner Fence Zone 1_Ill_Seg2	Obtrusive Light - Ill	Lux	25.44	40	19	0.75	0.48
Inner Fence Zone 1_Ill_Seg3	Obtrusive Light - Ill	Lux	18.75	41	9	0.48	0.22
Inner Fence Zone 1_Ill_Seg4	Obtrusive Light - Ill	Lux	20.68	34	11	0.53	0.32
Inner Fence Zone 1_Ill_Seg5	Obtrusive Light - Ill	Lux	18.62	34	9	0.48	0.26
Inner Fence Zone 1_Ill_Seg6	Obtrusive Light - Ill	Lux	20.43	35	10	0.49	0.29
Inner Fence Zone 1_Ill_Seg7	Obtrusive Light - Ill	Lux	17.92	40	9	0.50	0.23
Inner Fence Zone 1_Ill_Seg8	Obtrusive Light - Ill	Lux	18.50	31	12	0.65	0.39
Inner Fence Zone 1_Ill_Seg9	Obtrusive Light - Ill	Lux	20.76	34	11	0.53	0.32
Inner Fence Zone 2_Ill_Seg1	Obtrusive Light - Ill	Lux	20.06	52	3	0.15	0.06
Inner Fence Zone 2_Ill_Seg2	Obtrusive Light - Ill	Lux	22.82	63	6	0.26	0.10
Inner Fence Zone 2_Ill_Seg3	Obtrusive Light - Ill	Lux	16.03	55	2	0.12	0.04
Inner Fence Zone 2_Ill_Seg4	Obtrusive Light - Ill	Lux	18.67	57	2	0.11	0.04
Inner Fence Zone 2_Ill_Seg5	Obtrusive Light - Ill	Lux	13.78	43	2	0.15	0.05
Inner Fence Zone 2_Ill_Seg6	Obtrusive Light - Ill	Lux	19.88	56	2	0.10	0.04
Inner Fence Zone 2_Ill_Seg7	Obtrusive Light - Ill	Lux	15.63	54	2	0.13	0.04
Inner Fence Zone 2_Ill_Seg8	Obtrusive Light - Ill	Lux	14.58	36	2	0.14	0.06
Inner Fence Zone 2_Ill_Seg9	Obtrusive Light - Ill	Lux	17.16	43	2	0.12	0.05
Internal Roads & Paths	Illuminance	Lux	18.23	157	5	0.27	0.03
Large Sports Pitch	Illuminance	Lux	118.96	221	60	0.50	0.27
Outer Fence Zone 1_Ill_Seg1	Obtrusive Light - Ill	Lux	29.61	36	20	0.68	0.56
Outer Fence Zone 1_Ill_Seg2	Obtrusive Light - Ill	Lux	32.42	49	24	0.74	0.49
Outer Fence Zone 1_Ill_Seg3	Obtrusive Light - Ill	Lux	26.44	39	23	0.87	0.59
Outer Fence Zone 1_Ill_Seg4	Obtrusive Light - Ill	Lux	29.64	42	21	0.71	0.50
Outer Fence Zone 1_Ill_Seg5	Obtrusive Light - Ill	Lux	25.33	36	21	0.83	0.58
Outer Fence Zone 1_Ill_Seg6	Obtrusive Light - Ill	Lux	30.61	42	23	0.75	0.55
Outer Fence Zone 1_Ill_Seg7	Obtrusive Light - Ill	Lux	25.88	37	23	0.89	0.62
Outer Fence Zone 1_Ill_Seg8	Obtrusive Light - Ill	Lux	28.40	46	20	0.70	0.43
Outer Fence Zone 1_Ill_Seg9	Obtrusive Light - Ill	Lux	28.00	38	24	0.86	0.63
Outer Fence Zone 2_Ill_Seg1	Obtrusive Light - Ill	Lux	16.62	87	6	0.36	0.07
Outer Fence Zone 2_Ill_Seg2	Obtrusive Light - Ill	Lux	17.79	51	7	0.39	0.14
Outer Fence Zone 2_Ill_Seg3	Obtrusive Light - Ill	Lux	13.17	39	5	0.38	0.13
Outer Fence Zone 2_Ill_Seg4	Obtrusive Light - Ill	Lux	15.13	41	5	0.33	0.12
Outer Fence Zone 2_Ill_Seg5	Obtrusive Light - Ill	Lux	12.58	36	5	0.40	0.14
Outer Fence Zone 2_Ill_Seg6	Obtrusive Light - Ill	Lux	15.63	43	5	0.32	0.12
Outer Fence Zone 2_Ill_Seg7	Obtrusive Light - Ill	Lux	12.66	38	5	0.39	0.13
Outer Fence Zone 2_Ill_Seg8	Obtrusive Light - Ill	Lux	14.68	46	5	0.34	0.11
Outer Fence Zone 2_Ill_Seg9	Obtrusive Light - Ill	Lux	15.35	40	5	0.33	0.13
Path From Car Park To Large Buil	Illuminance	Lux	12.74	25	5	0.39	0.20
Sterile Area	Illuminance	Lux	26.16	52	0	N.A.	N.A.

Luminaire Schedule

Symbol	Qty	Label	Arrangement	Description
	32	A	SINGLE	100w CDO-TT Kaos 1 Road lantern (P0 lamp position) column mounted at 8m.
	24	B	BACK-BACK	100w CDO-TT Kaos 1 Road lantern (P0 lamp position) column mounted at 8m.
	72	C	SINGLE	70w CDM-TD Aludra floodlight wall mounted at 6 & 8m
	61	D	SINGLE	70w CDO-TT Kaos 1 Road lantern (P3 lamp position) column mounted at 6m.
	107	E	SINGLE	35w CDM-T Kaos 1 Road lantern (P0 lamp position) wall mounted at 6m.
	86	F	SINGLE	100w CDO-TT Kaos 1 Road lantern (P3 lamp position) column mounted at 6m.
	8	H	TRIPLE @ 20	400w HQI-T Aludra floodlight column mounted at 8m.
	84	I	SINGLE	42w PL Paralume 1 bulkhead wall mounted at 4m.

Dimensions are not to be scaled from this drawing.



Revision	Date	Description	Initials

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Min/Avg	Min/Max
103 Kitchen Perimeter	Illuminance	Lux	11.44	24	4	0.35	0.17
104 Well-being	Illuminance	Lux	10.37	16	5	0.48	0.31
105 Education Perimeter	Illuminance	Lux	10.28	15	5	0.49	0.33
106 Sports Hall Perimeter	Illuminance	Lux	22.07	51	8	0.36	0.16
107 Workshop Perimeter	Illuminance	Lux	12.89	25	5	0.39	0.20
107 Workshop Yard	Illuminance	Lux	11.42	24	5	0.44	0.21
108a Houseblock Lower Yard	Illuminance	Lux	15.73	33	5	0.32	0.15
108a Houseblock Perimeter	Illuminance	Lux	12.60	26	5	0.40	0.19
108a Houseblock Upper Yard	Illuminance	Lux	15.54	35	5	0.32	0.14
108b Houseblock Left Yard	Illuminance	Lux	14.15	25	5	0.35	0.20
108b Houseblock Perimeter	Illuminance	Lux	12.84	23	6	0.47	0.26
108b Houseblock Right Yard	Illuminance	Lux	13.87	24	5	0.36	0.21
108c Houseblock Lower Yard	Illuminance	Lux	14.72	38	5	0.34	0.13
108c Houseblock Perimeter	Illuminance	Lux	12.52	24	6	0.48	0.25
108c Houseblock Upper Yard	Illuminance	Lux	14.83	35	5	0.34	0.14
109 CaSU	Illuminance	Lux	13.00	38	5	0.38	0.13
109 CaSU Yard	Illuminance	Lux	17.30	35	7	0.40	0.20
110 Multifaith	Illuminance	Lux	11.41	19	6	0.53	0.32
Access Road & Car Park	Illuminance	Lux	20.88	49	6	0.29	0.12
Around Entrance Building	Illuminance	Lux	13.12	34	5	0.38	0.15
Contour Lines	Illuminance	Lux	6.80	267	0	N.A.	N.A.
Inner Fence Zone 1_III_Seg1	Obtrusive Light - III	Lux	26.28	46	10	0.38	0.22
Inner Fence Zone 1_III_Seg2	Obtrusive Light - III	Lux	25.44	40	19	0.75	0.48
Inner Fence Zone 1_III_Seg3	Obtrusive Light - III	Lux	18.75	41	9	0.48	0.22
Inner Fence Zone 1_III_Seg4	Obtrusive Light - III	Lux	20.68	34	11	0.53	0.32
Inner Fence Zone 1_III_Seg5	Obtrusive Light - III	Lux	18.62	34	9	0.48	0.26
Inner Fence Zone 1_III_Seg6	Obtrusive Light - III	Lux	20.43	35	10	0.49	0.29
Inner Fence Zone 1_III_Seg7	Obtrusive Light - III	Lux	17.92	40	9	0.50	0.23
Inner Fence Zone 1_III_Seg8	Obtrusive Light - III	Lux	18.50	31	12	0.65	0.39
Inner Fence Zone 1_III_Seg9	Obtrusive Light - III	Lux	20.76	34	11	0.53	0.32
Inner Fence Zone 2_III_Seg1	Obtrusive Light - III	Lux	20.06	52	3	0.15	0.06
Inner Fence Zone 2_III_Seg2	Obtrusive Light - III	Lux	22.82	63	6	0.26	0.10
Inner Fence Zone 2_III_Seg3	Obtrusive Light - III	Lux	16.03	55	2	0.12	0.04
Inner Fence Zone 2_III_Seg4	Obtrusive Light - III	Lux	18.67	57	2	0.11	0.04
Inner Fence Zone 2_III_Seg5	Obtrusive Light - III	Lux	13.78	43	2	0.15	0.05
Inner Fence Zone 2_III_Seg6	Obtrusive Light - III	Lux	19.88	56	2	0.10	0.04
Inner Fence Zone 2_III_Seg7	Obtrusive Light - III	Lux	15.63	54	2	0.13	0.04
Inner Fence Zone 2_III_Seg8	Obtrusive Light - III	Lux	14.58	36	2	0.14	0.06
Inner Fence Zone 2_III_Seg9	Obtrusive Light - III	Lux	17.16	43	2	0.12	0.05
Internal Roads & Paths	Illuminance	Lux	18.23	157	5	0.27	0.03
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Outer Fence Zone 1_III_Seg3	Obtrusive Light - III	Lux	26.44	39	23	0.87	0.59
Outer Fence Zone 1_III_Seg4	Obtrusive Light - III	Lux	29.64	42	21	0.71	0.50
Outer Fence Zone 1_III_Seg5	Obtrusive Light - III	Lux	25.33	36	21	0.83	0.58
Outer Fence Zone 1_III_Seg6	Obtrusive Light - III	Lux	30.61	42	23	0.75	0.55
Outer Fence Zone 1_III_Seg7	Obtrusive Light - III	Lux	25.88	37	23	0.89	0.62
Outer Fence Zone 1_III_Seg8	Obtrusive Light - III	Lux	28.40	46	20	0.70	0.43
Outer Fence Zone 1_III_Seg9	Obtrusive Light - III	Lux	28.00	38	24	0.86	0.63
Outer Fence Zone 2_III_Seg1	Obtrusive Light - III	Lux	16.62	87	6	0.36	0.07
Outer Fence Zone 2_III_Seg2	Obtrusive Light - III	Lux	17.79	51	7	0.39	0.14
Outer Fence Zone 2_III_Seg3	Obtrusive Light - III	Lux	13.17	39	5	0.38	0.13
Outer Fence Zone 2_III_Seg4	Obtrusive Light - III	Lux	15.13	41	5	0.33	0.12
Outer Fence Zone 2_III_Seg5	Obtrusive Light - III	Lux	12.58	36	5	0.40	0.14
Outer Fence Zone 2_III_Seg6	Obtrusive Light - III	Lux	15.63	43	5	0.32	0.12
Outer Fence Zone 2_III_Seg7	Obtrusive Light - III	Lux	12.66	38	5	0.39	0.13
Outer Fence Zone 2_III_Seg8	Obtrusive Light - III	Lux	14.68	46	5	0.34	0.11
Outer Fence Zone 2_III_Seg9	Obtrusive Light - III	Lux	15.35	40	5	0.33	0.13
Path From Car Park To Large Buil	Illuminance	Lux	12.74	25	5	0.39	0.20
Sterile Area	Illuminance	Lux	26.16	52	0	N.A.	N.A.

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Project Title

HMP Wrexham
Sheet 2 of 2

Scale	Project No
N.T.S at A1	D23765D
Date	**Drawing No**
5/9/2014	D23765/PY/D

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