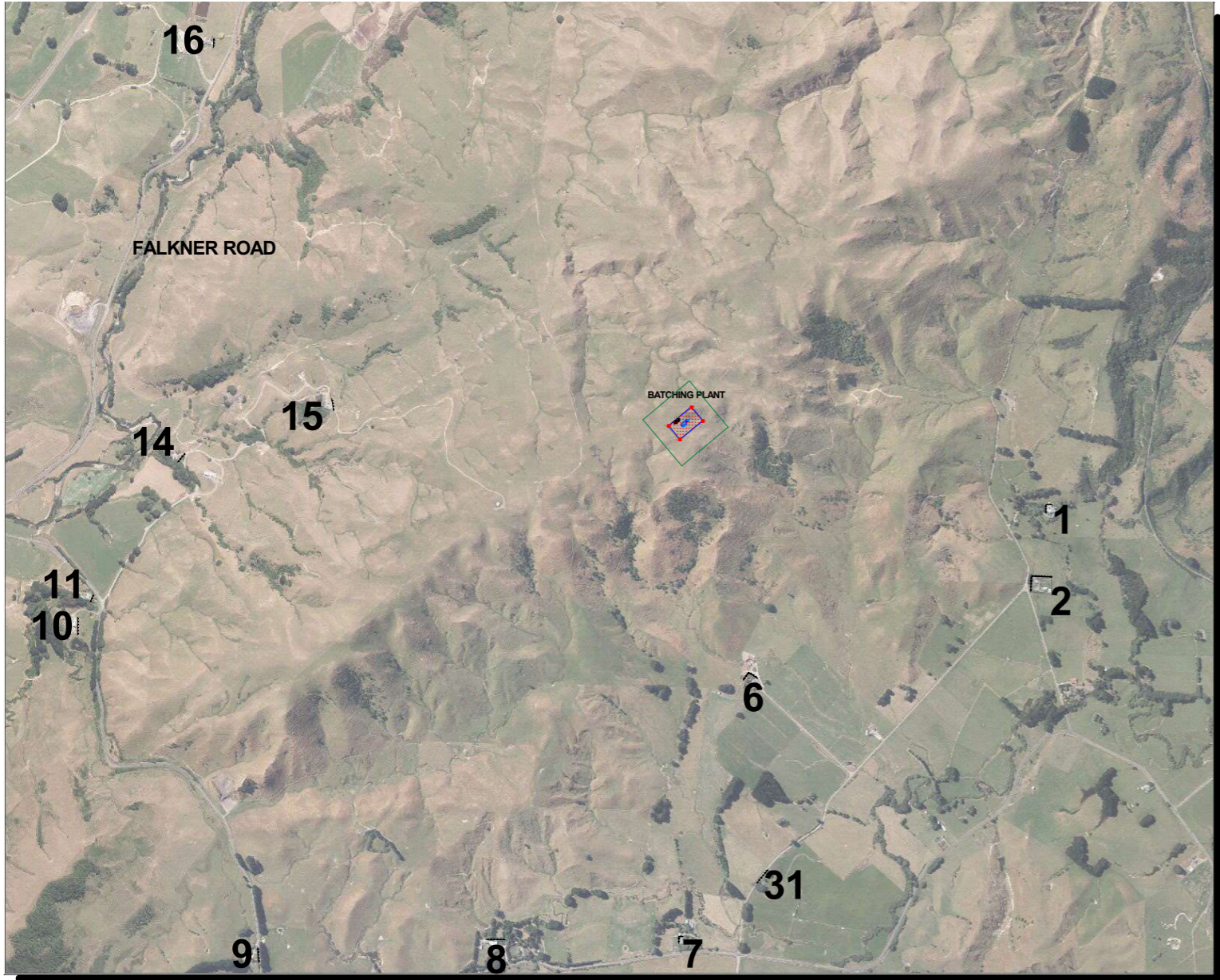


Scale= 1: 2500



Scale= 1: 20000

Luminaire Schedule							
Symbol	Qty	Arrangement	Description	Tag	LLF	Luminaire Lumens	Luminaire Watts
	5	Single	Ligman Leeds Wedge 2 LEW-30021-T4-W30	L5	1.000	2045	19.6
	4	Single	Ewo R4 EP09 LR RBL 4000K 1800mA	L2	1.000	122923	1537
	6	Single	Ligman Leeds Wedge 2 LEW-30011-T4-W30	L4	1.000	1385	13.8

Calculation Summary					
Label	CalcType	Units	Avg	Max	Min
1_Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	602	579
1_Obtrusive_Cd_Seg2	Obtrusive - Cd	N.A.	N.A.	592	567
1_Obtrusive_III_Seg1	Obtrusive - III	Lux	N.A.	0	0
1_Obtrusive_III_Seg2	Obtrusive - III	Lux	N.A.	0	0
10_Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	427	415
10_Obtrusive_III_Seg1	Obtrusive - III	Lux	N.A.	0	0
11_Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	433	421
11_Obtrusive_III_Seg1	Obtrusive - III	Lux	N.A.	0	0
14_Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	476	457
14_Obtrusive_III_Seg1	Obtrusive - III	Lux	N.A.	0	0
15_Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	689	647
15_Obtrusive_III_Seg1	Obtrusive - III	Lux	N.A.	0	0
16_Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	454	438
16_Obtrusive_III_Seg1	Obtrusive - III	Lux	N.A.	0	0
17_Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	445	430
17_Obtrusive_III_Seg1	Obtrusive - III	Lux	N.A.	0	0
2_Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	863	825
2_Obtrusive_Cd_Seg2	Obtrusive - Cd	N.A.	N.A.	848	762
2_Obtrusive_III_Seg1	Obtrusive - III	Lux	N.A.	0	0
2_Obtrusive_III_Seg2	Obtrusive - III	Lux	N.A.	0	0
31_Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	642	592
31_Obtrusive_III_Seg1	Obtrusive - III	Lux	N.A.	0	0
6_Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	862	818
6_Obtrusive_Cd_Seg2	Obtrusive - Cd	N.A.	N.A.	864	828
6_Obtrusive_III_Seg1	Obtrusive - III	Lux	N.A.	0	0
6_Obtrusive_III_Seg2	Obtrusive - III	Lux	N.A.	0	0
7_Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	0	0
7_Obtrusive_Cd_Seg2	Obtrusive - Cd	N.A.	N.A.	488	473
7_Obtrusive_III_Seg1	Obtrusive - III	Lux	N.A.	0	0
7_Obtrusive_III_Seg2	Obtrusive - III	Lux	N.A.	0	0
8_Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	445	429
8_Obtrusive_III_Seg1	Obtrusive - III	Lux	N.A.	0	0
9_Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	394	378
9_Obtrusive_III_Seg1	Obtrusive - III	Lux	N.A.	0	0
Batching	Illuminance	Lux	47.36	83	0

Expanded Luminaire Location Summary					
Luminaire Number	Orient	Tilt	Tag	Mounting Height (m)	Dimming
1	259	0	L2	470	1.00
2	41	0	L4	453	1.00
3	130	0	L4	453	1.00
4	40	0	L5	456	1.00
5	310	0	L4	453	1.00
6	180	0	L2	470	1.00
7	130	0	L4	453	1.00
8	130	0	L5	456	1.00
9	310	0	L4	453	1.00
10	220	0	L4	453	1.00
11	130	0	L5	456	1.00
12	310	0	L5	456	1.00
13	0	0	L2	470	1.00
14	310	0	L5	456	1.00
15	90	0	L2	470	1.00

NOTES:

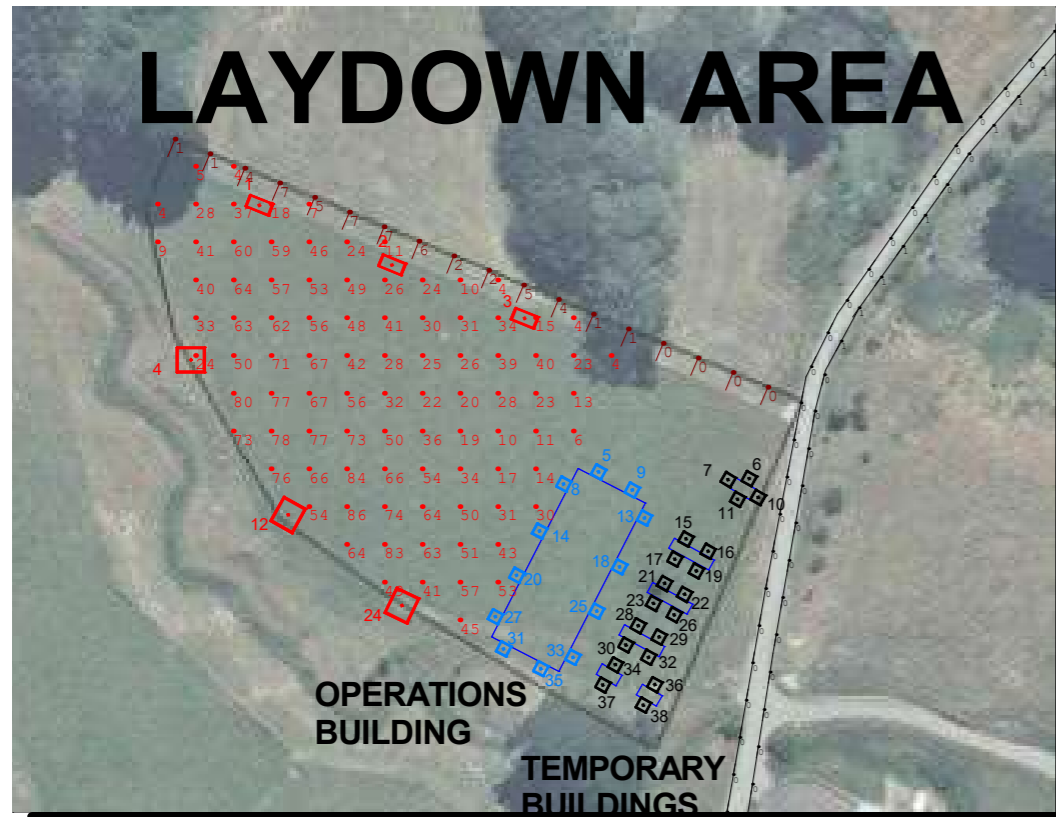
1. All type L2 floodlights mounted at 20 metres above ground level.
2. All type L4 fittings mounted at 3 metres above ground level.
3. All type L5 fittings mounted at 6 metres above ground level.

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LIGHTING

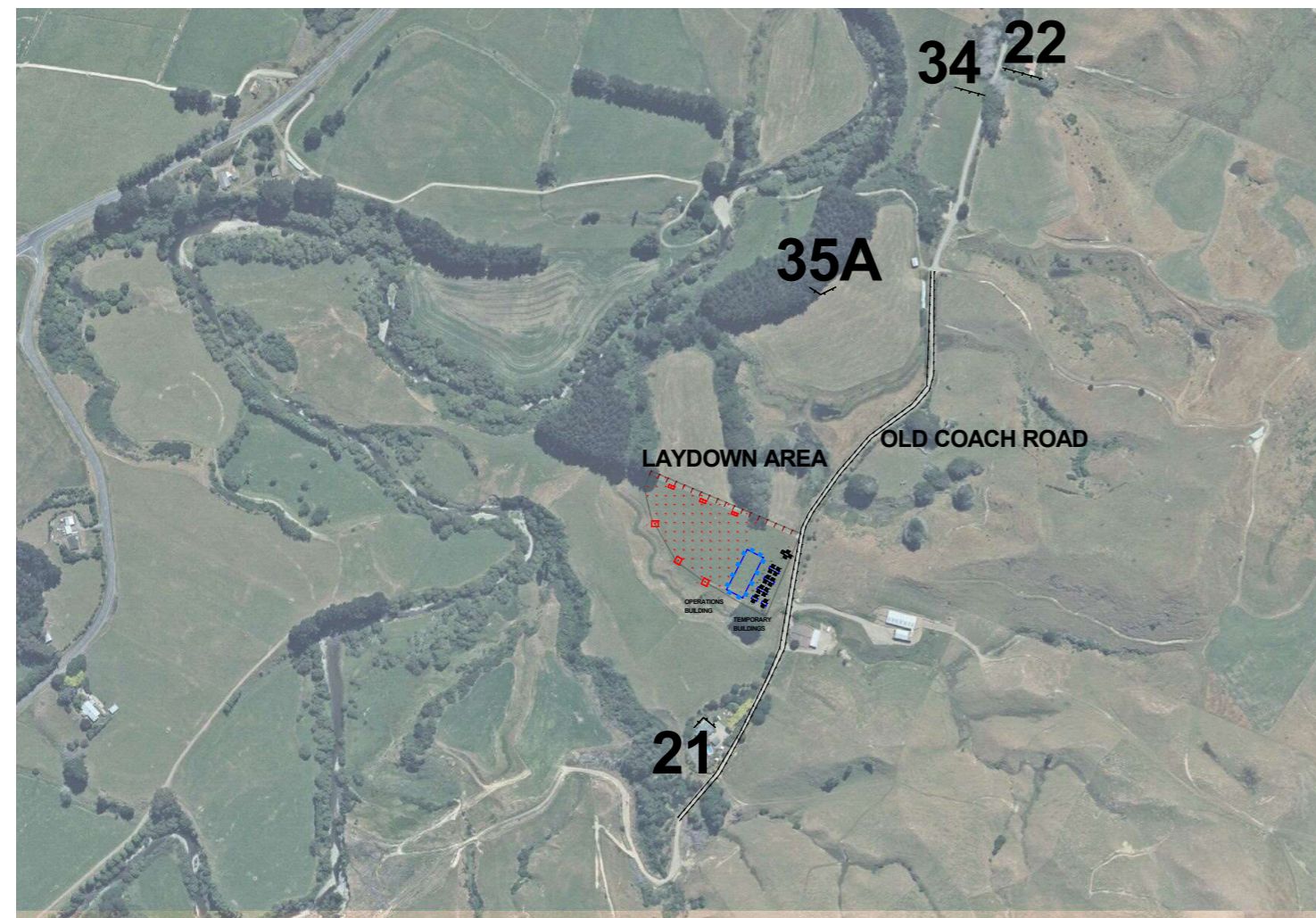
MT. MUNRO WIND FARM
AEE LIGHTING CALCULATION
BATCHING PLANT
REV 2.

PROJECT: 50471
DATE: 16/08/23
SHEET SIZE: A3

L001



Scale= 1: 2000



Scale= 1: 7500

Luminaire Schedule							
Symbol	Qty	Arrangement	Description	Tag	LLF	Luminaire Lumens	Luminaire Watts
□	12	Single	Ligman Leeds Wedge 2 LEW-30021-T4-W30	L5	1.000	2045	19.6
□	3	Single	Ewo R4 EP09 LR RBL 3000K 1800mA	L1	1.000	119247	1580.4
□	20	Single	Ligman Leeds Wedge 2 LEW-30011-T4-W30	L4	1.000	1385	13.8
□	3	Single	EWO R2 EP09 LR RBL 3000K 800mA	L3	1.000	32053	341.6

Calculation Summary					
Label	CalcType	Units	Avg	Max	Min
21 Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	478	402
21 Obtrusive_Cd_Seg2	Obtrusive - Cd	N.A.	N.A.	481	388
21 Obtrusive_Ill_Seg1	Obtrusive - Ill	Lux	N.A.	0	0
21 Obtrusive_Ill_Seg2	Obtrusive - Ill	Lux	N.A.	0	0
22 Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	136	105
22 Obtrusive_Ill_Seg1	Obtrusive - Ill	Lux	N.A.	0	0
34 Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	148	115
34 Obtrusive_Ill_Seg1	Obtrusive - Ill	Lux	N.A.	0.0	0.0
35A Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	309	227
35A Obtrusive_Cd_Seg2	Obtrusive - Cd	N.A.	N.A.	303	214
35A Obtrusive_Ill_Seg1	Obtrusive - Ill	Lux	N.A.	0	0
35A Obtrusive_Ill_Seg2	Obtrusive - Ill	Lux	N.A.	0	0
Laydown	Illuminance	Lux	41.05	86	4
Laydown_Spill_North	Illuminance	Lux	2.94	7	0
Old_Coach_NB_TI	Obtrusive - TI	%	N.A.	0	0
Old_Coach_SB_TI	Obtrusive - TI	%	N.A.	2	0

Expanded Luminaire Location Summary				
LumNo	Orient	Tilt	Mounting Height (m)	Tag
1	248	0	12	L3
2	248	0	12	L3
3	248	0	12	L3
4	0	0	20	L1
5	61	0	6	L5
6	61	0	3	L4
7	149	0	3	L4
8	152	0	6	L5
9	61	0	6	L5
10	330	0	3	L4
11	241	0	3	L4
12	61	0	20	L1
13	332	0	6	L5
14	152	0	6	L5
15	61	0	3	L4
16	61	0	3	L4
17	241	0	3	L4
18	332	0	6	L5
19	241	0	3	L4
20	152	0	6	L5
21	61	0	3	L4
22	61	0	3	L4
23	241	0	3	L4
24	64	0	20	L1
25	332	0	6	L5
26	241	0	3	L4
27	152	0	6	L5
28	61	0	3	L4
29	61	0	3	L4
30	241	0	3	L4
31	242	0	6	L5
32	241	0	3	L4
33	332	0	6	L5
34	61	0	3	L4
35	242	0	6	L5
36	61	0	3	L4
37	241	0	3	L4
38	241	0	3	L4

NOTES:

- All type L1 floodlights mounted at 20 metres above ground level.
- All type L3 floodlights mounted at 12 metres above ground level.
- All type L4 fittings mounted at 3 metres above ground level.
- All type L5 fittings mounted at 6 metres above ground level.



MT. MUNRO WIND FARM
AEE LIGHTING CALCULATION
LAYDOWN AREA
REV 1.

PROJECT: 50471
DATE: 16/08/23
SHEET SIZE: A3

L002

SITE SUBSTATION



Scale= 1: 2500

Luminaire Schedule							
Symbol	Qty	Arrangement	Description	Tag	LLF	Luminaire Lumens	Luminaire Watts
□	7	Single	Ligman Leeds Wedge 2 LEW-30011-T4-W30	L4	1.000	1385	13.8
□	4	Single	Ewo R4 EP09 LR RBL 3000K 1800mA	L1	1.000	119247	1580.4

Calculation Summary					
Label	CalcType	Units	Avg	Max	Min
10 Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	909	821
10 Obtrusive_Ill_Seg1	Obtrusive - Ill	Lux	N.A.	0	0
11 Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	786	734
11 Obtrusive_Ill_Seg1	Obtrusive - Ill	Lux	N.A.	0	0
14 Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	656	609
14 Obtrusive_Ill_Seg1	Obtrusive - Ill	Lux	N.A.	0	0
15 Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	577	547
15 Obtrusive_Ill_Seg1	Obtrusive - Ill	Lux	N.A.	0	0
6 Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	296	283
6 Obtrusive_Cd_Seg2	Obtrusive - Cd	N.A.	N.A.	295	282
7 Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	274	269
7 Obtrusive_Cd_Seg2	Obtrusive - Cd	N.A.	N.A.	274	269
7 Obtrusive_Ill_Seg1	Obtrusive - Ill	Lux	N.A.	0	0
7 Obtrusive_Ill_Seg2	Obtrusive - Ill	Lux	N.A.	0	0
8 Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	361	342
8 Obtrusive_Cd_Seg2	Obtrusive - Cd	N.A.	N.A.	359	344
8 Obtrusive_Ill_Seg1	Obtrusive - Ill	Lux	N.A.	0	0
8 Obtrusive_Ill_Seg2	Obtrusive - Ill	Lux	N.A.	0	0
9 Obtrusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	745	701
9 Obtrusive_Cd_Seg2	Obtrusive - Cd	N.A.	N.A.	733	673
9 Obtrusive_Ill_Seg1	Obtrusive - Ill	Lux	N.A.	0	0
9 Obtrusive_Ill_Seg2	Obtrusive - Ill	Lux	N.A.	0	0
Obtuki-Kaiparoro_NB_TI	Obtrusive - TI	%	N.A.	0	0
Obtuki-Kaiparoro_SB_TI	Obtrusive - TI	%	N.A.	0	0
SiteSubstation	Illuminance	Lux	41.93	52	26

Expanded Luminaire Location Summary					
LumNo	Orient	Tilt	Tag	Mounting Height (m)	Dimming
1	227	0	L1	420	0.75
2	317	0	L1	420	0.75
3	0	0	L4	403	1.00
4	180	0	L4	403	1.00
5	180	0	L4	403	1.00
6	0	0	L4	403	1.00
7	270	0	L4	403	1.00
8	270	0	L4	403	1.00
9	270	0	L4	403	1.00
11	133	0	L1	420	0.75
12	49	0	L1	420	0.75

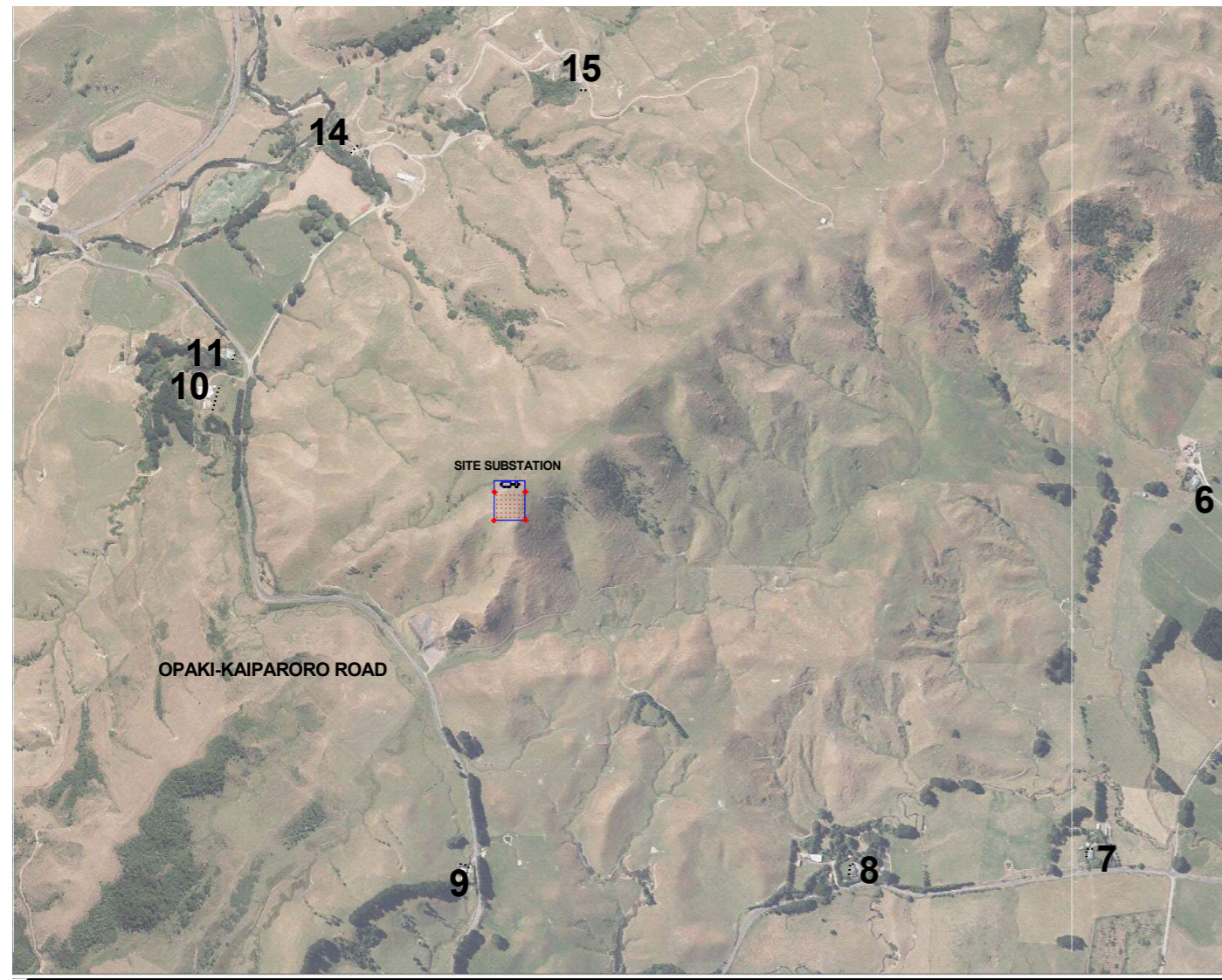
NOTES:

1. All type L1 floodlights mounted at 20m above ground level.
2. All type L4 fittings mounted at 3m above ground level.

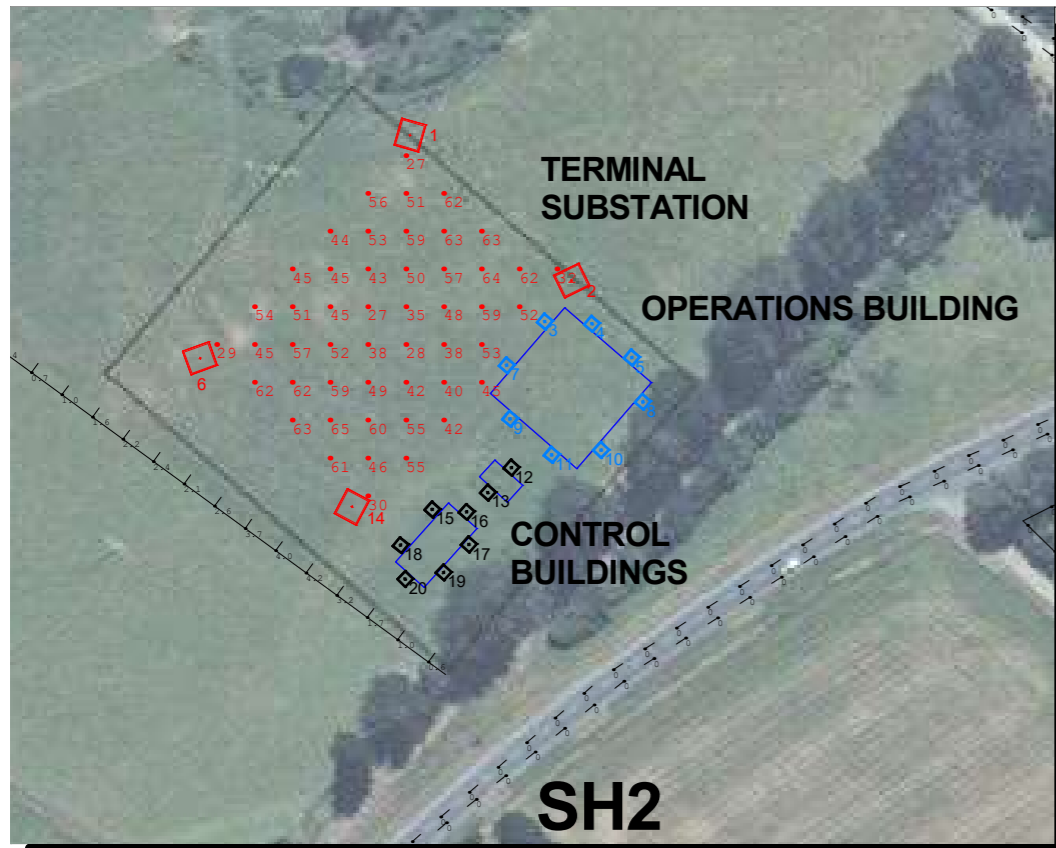


MT. MUNRO WIND FARM
AEE LIGHTING CALCULATION
SITE SUBSTATION
REV 1.

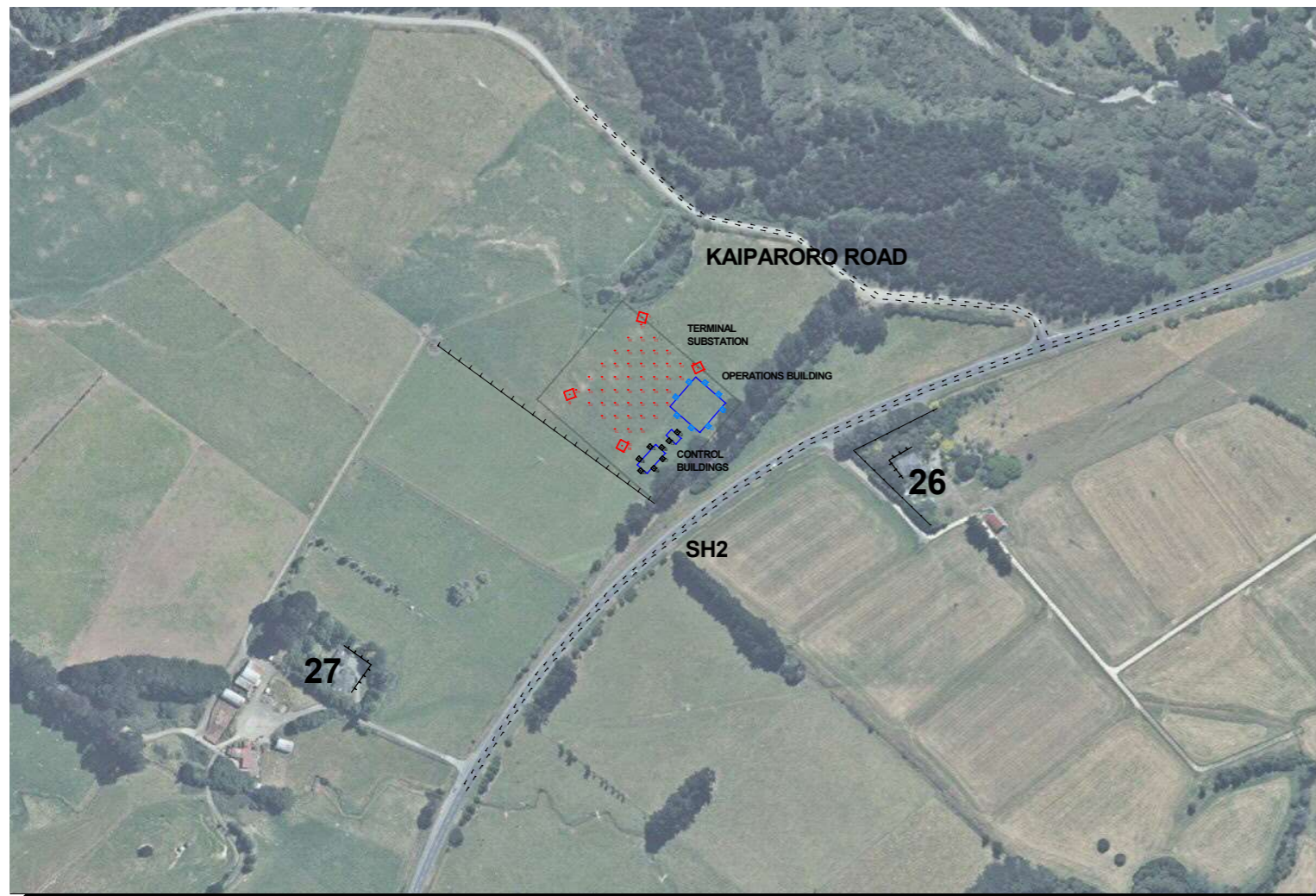
PROJECT: 50471
DATE: 16/08/23
SHEET SIZE: A3 **L003**



Scale= 1: 15000



Scale= 1: 2000



Scale= 1: 5000

Luminaire Schedule							
Symbol	Qty	Arrangement	Description	Tag	LLF	Luminaire Lumens	Luminaire Watts
□	8	Single	Ligman Leeds Wedge 2 LEW-30021-T4-W30	L5	1.000	2045	19.6
■	8	Single	Ligman Leeds Wedge 2 LEW-30011-T4-W30	L4	1.000	1385	13.8
■	4	Single	Ewo R4 EP09 LR RBL 3000K 1800mW	L1	1.000	119247	1580.4

Calculation Summary					
Label	CalcType	Units	Avg	Max	Min
26_Obtusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	453	322
26_Obtusive_Cd_Seg2	Obtrusive - Cd	N.A.	N.A.	458	338
26_Obtusive_Ill_Seg1	Obtrusive - Ill	Lux	N.A.	0	0
26_Obtusive_Ill_Seg2	Obtrusive - Ill	Lux	N.A.	0	0
26_Spill_Horz	Illuminance	Lux	0.00	0	0
27_Obtusive_Cd_Seg1	Obtrusive - Cd	N.A.	N.A.	346	303
27_Obtusive_Cd_Seg2	Obtrusive - Cd	N.A.	N.A.	347	304
27_Obtusive_Ill_Seg1	Obtrusive - Ill	Lux	N.A.	0	0
27_Obtusive_Ill_Seg2	Obtrusive - Ill	Lux	N.A.	0	0
Kaiparoro_EB_TI	Obtrusive - TI	%	N.A.	0	0
Kaiparoro_WB_TI	Obtrusive - TI	%	N.A.	1	0
SH2_NB_TI	Obtrusive - TI	%	N.A.	1	0
SH2_SB_TI	Obtrusive - TI	%	N.A.	0	0
Substation_Boundary_Spill_Sth	Illuminance	Lux	N.A.	4.2	0.1
Substation1	Illuminance	Lux	49.45	65	27

Expanded Luminaire Location Summary				
LumNo	Orient	Tilt	Tag	Mounting Height (m)
1	254	0	L1	20
2	206	0	L1	20
3	140	0	L5	6
4	50	0	L5	6
5	50	0	L5	6
6	20	0	L1	20
7	140	0	L5	6
8	320	0	L5	6
9	230	0	L5	6
10	316	0	L5	6
11	230	0	L5	6
12	49	0	L4	3
13	228	0	L4	3
14	62	0	L1	20
15	138	0	L4	3
16	49	0	L4	3
17	318	0	L4	3
18	141	0	L4	3
19	317	0	L4	3
20	226	0	L4	3

NOTES:

1. All type L1 floodlights mounted at 20m above ground level.
2. All type L4 fittings mounted at 3m above ground level.
3. All type L5 fittings mounted at 6m above ground level.

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MT. MUNRO WIND FARM
AEE LIGHTING CALCULATION
TERMINAL SUBSTATION
REV 1.

PROJECT: 50471
DATE: 16/08/23
SHEET SIZE: A3

L004