

Karratha Airport MIRL Upgrade Estimation Option 3 - Replace All Cables - New
MAGS

Airside Lighting, Instrumentation and Visual Aids

Item	Description	Unit	Qty	Unit Rate	TOTAL	Notes
1	RUNWAY EDGE LIGHTING MATERIAL SUPPLY					Budget Pricing provided by AMS - 30% added to rates for potential mark-up if through Principal Contractor.
1.1	Clear LED MOS Compliant Assembly (Runway Edge) MIRL	ea	70	230.00	\$ 16,100.00	
1.2	Clear Inset LED ATG Fitting (Runway Edge) MIRL	ea	4	1,014.00	\$ 4,056.00	
1.3	Blue LED MOS Compliant Assembly (Taxiway and Turning Node Edge)	ea	314	190.00	\$ 59,660.00	
1.4	Yellow LED MOS Compliant Assembly (Taxiway Holding Point Edge)	ea	6	190.00	\$ 1,140.00	
1.5	Green LED MOS Compliant Assembly (Runway Threshold Outer) MIRL	ea	4	260.00	\$ 1,040.00	
1.6	Red-Green LED MOS Compliant Inset Fitting (Runway Threshold Inner) MIRL	ea	12	1,014.00	\$ 12,168.00	
1.7	Inset Light Bases	ea	12	245.00	\$ 2,940.00	
1.8	LED Series Isolation Transformers (SIT) 6.6A/700 MIRL	ea	410	245.00	\$ 100,450.00	
1.9	Primary Plug and Socket - 54SUPERC6C6 Kits	ea	410	54.08	\$ 22,172.80	
	Sub Total				\$ 197,554.00	
2	ILLUMINATED WIND DIRECTION INDICATOR (IWDI) SUPPLY					
2.1	LED MOS Compliant IWDI - Cyclonic Primary	ea	1	13,650.00	\$ 13,650.00	
2.2	LED MOS Compliant IWDI - Cyclonic Secondary Series with compensation circuit	ea	2	16,250.00	\$ 32,500.00	
	Sub Total				\$ 46,150.00	
3	CABLE, CONDUIT, HARDWARE SUPPLY					
3.1	5kV Primary Cable 6mm	m	20,000	4.49	\$ 89,800.00	
3.2	Twin Secondary Cable 2.5mm	m	5,000	4.23	\$ 21,150.00	
3.3	Electrical Pits	ea	446	250.00	\$ 111,500.00	
3.4	Conduit Electrical HD 32mm	ea	20,000	3.38	\$ 67,600.00	
3.5	Conduit Electrical HD 32mm Sweeps	ea	820	6.42	\$ 5,264.40	
3.6	Conduit Electrical HD 20mm	ea	5,000	1.68	\$ 8,400.00	
3.7	Conduit Glue 500ml	ea	30	10.14	\$ 304.20	
3.8	Electrical Danger Tape 500m Rolls	ea	40	77.74	\$ 3,109.60	
3.9	Megapoxy for Inset Lights	ea	4	549.25	\$ 2,197.00	
3.10	Backing Rod	ea	1	121.68	\$ 121.68	
3.11	Emerseal Roadseal	ea	40	51.19	\$ 2,047.60	
3.12	Fixing Hardware	LS	1	2,175.03	\$ 2,175.03	
3.13	Conduit Flexible Roll 20mm	ea	4	42.25	\$ 169.00	
	Sub-total				\$ 313,838.51	
4	APRON FLOODLIGHT SUPPLY					
4.1	Apron Flood Lights	ea	6	6,629.00	\$ 39,774.00	
4.2	25m Mid-hinged Cyclonic Poles (includes freight)	ea	0	29,575.00	\$ -	
4.3	Apron Floodlight Hardware/Cable/Conduit	ea	6	591.50	\$ 3,549.00	
	Sub-total				\$ 43,323.00	
5	LIGHTING CONTROLS SUPPLY					
5.1	Pre-wired Control Cabinet	ea	1	50,000.00	\$ 50,000.00	
5.2	15kVA Constant Current Regulator	ea	5	20,000.00	\$ 100,000.00	
5.3	Pilot Activated Airfield Lighting Controller (PAALC)	ea	1	8,872.50	\$ 8,872.50	
5.4	PAALC Aerial Upgrade and Cavity Filter	ea	1	2,500.00	\$ 2,500.00	
	Sub-total				\$ 161,372.50	
6	INSTALLATION AND COMMISSIONING					
6.1	Mobilisation/Demobilisation - Personnel & Tools	LS	1	9,152.00	\$ 9,152.00	Assumed required flights provided by City of Karratha at no cost to Contractor - Crew of 4
6.2	Mobilisation/Demobilisation - Trenching Machine	LS	1	10,985.00	\$ 10,985.00	To and from Perth
6.3	Accommodation and Messing	day	50	0.00	\$ -	Assumed provided by City of Karratha at no cost to Contractor - Crew of 4
6.4	Survey and Set-out	LS	1	6,760.00	\$ 6,760.00	
6.5	Trenching and Backfilling to 600mm depth	m	20,000	15.00	\$ 300,000.00	Does not include any excavation in rock
6.6	Installation Runway - Labour	day	50	7,457.36	\$ 372,868.00	Crew of 4
6.7	Machine Hire for Compaction and Water Trailer	day	50	354.90	\$ 17,745.00	
6.8	Excavation and Concrete Footings for IWDI and MAGS	LS	1	16,849.30	\$ 16,849.30	
6.9	Freight for Lighting Materials	LS	1	16,055.00	\$ 16,055.00	
6.10	Craneage for Erecting Flood Light Masts	LS	1	6,500.00	\$ 6,500.00	
6.11	Airfield Lighting Commissioning Flight Test	ea	1	7,500.00	\$ 7,500.00	Carried out by CASA-approved pilot
6.12	As-Constructed Drawings - Airfield Lighting	LS	1	2,535.00	\$ 2,535.00	
6.13	VHF Aerials, Cavity Filter and ACMA 12 Months Broadcast Licence for VHF Comms	LS	1	4,000.00	\$ 4,000.00	
	Sub-total				\$ 770,949.30	

7	MAGS					
7.1	Runway exit sign = 800 mm – illuminated	ea	1	3,407.30	\$ 3,407.30	E →
7.2	Runway exit sign = 800 mm – illuminated	ea	1	3,407.30	\$ 3,407.30	← E
7.3	Taxiway Echo Intersection departure = 800 mm – illuminated	ea	1	8,711.30	\$ 8,711.30	E 08 -26
7.4	Taxiway Echo Intersection departure = 800 mm – illuminated	ea	1	14,367.00	\$ 14,367.00	08 -26 E 26 - 1827
7.5	Taxiway Foxtrot to Echo = 600 mm – illuminated	ea	1	5,656.30	\$ 5,656.30	F E →
7.6	Taxiway Echo to Foxtrot = 600 mm – illuminated	ea	1	5,656.30	\$ 5,656.30	← F E
7.7	Runway Exit Sign = 800 mm – illuminated	ea	1	3,407.30	\$ 3,407.30	B →
7.8	Runway Exit Sign = 800 mm – illuminated	ea	1	3,407.30	\$ 3,407.30	← B
7.9	Taxiway Bravo Intersection departure = 800 mm – illuminated	ea	1	14,367.60	\$ 14,367.60	08 - 1655 B 08 -26
7.10	Taxiway Bravo Intersection departure = 800 mm – illuminated	ea	1	8,711.30	\$ 8,711.30	08 -26 B
7.11	Taxiway Bravo Intersection with Foxtrot = 600 mm – illuminated	ea	1	5,324.80	\$ 5,324.80	← F B F →
7.12	Runway Exit Sign = 800 mm – illuminated	ea	1	3,407.30	\$ 3,407.30	L →
7.13	Runway Designation on Taxiway Lima = 800 mm – illuminated	ea	1	5,972.20	\$ 5,972.20	08 L
7.14	Runway Designation on Taxiway Lima = 800 mm – illuminated	ea	1	5,972.20	\$ 5,972.20	L 08
7.15	Taxiway Lima to Foxtrot = 600 mm – illuminated	ea	1	5,656.30	\$ 5,656.30	L F →
7.16	Taxiway Foxtrot to Golf = 600 mm – illuminated	ea	1	5,656.30	\$ 5,656.30	← G F
7.17	Taxiway Foxtrot to Golf = 600 mm – illuminated	ea	1	5,656.30	\$ 5,656.30	F G →
7.18	Taxiway Golf to Kilo = 600 mm – non-illuminated	ea	1	357.11	\$ 357.11	G K →
7.19	Taxiway Golf to Foxtrot = 600 mm – non-illuminated	ea	1	551.46	\$ 551.46	← F G F →
7.20	Taxiway Delta to Foxtrot = 600 mm – non-illuminated	ea	1	551.46	\$ 551.46	← F D F →
7.21	Taxiway Foxtrot to Delta = 600 mm – illuminated	ea	1	5,656.30	\$ 5,656.30	← D F
7.22	Taxiway Foxtrot to Delta = 600 mm – illuminated	ea	1	4,204.20	\$ 4,204.20	F D → F →
7.23	Taxiway Charlie to Foxtrot = 600 mm – non-illuminated	ea	1	551.46	\$ 551.46	← F C F →
7.24	Taxiway Foxtrot to Charlie = 600 mm – illuminated	ea	1	4,204.20	\$ 4,204.20	← C F
7.25	Taxiway Foxtrot to Charlie = 600 mm – illuminated	ea	1	4,204.20	\$ 4,204.20	F C →
7.26	Taxiway Golf to Kilo = 600 mm – non-illuminated	ea	1	357.11	\$ 357.11	← K G
7.27	Taxiway Hotel to Kilo = 600 mm – non-illuminated	ea	1	551.46	\$ 551.46	← K H K →
7.28	Taxiway Delta to Kilo = 600 mm – non-illuminated	ea	1	551.46	\$ 551.46	← K D K →
7.29	Taxiway Charlie to Kilo = 600 mm – non-illuminated	ea	1	562.62	\$ 562.62	↙ K C K →
7.30	Taxiway crossing Foxtrot and Bravo = 600 mm – illuminated	ea	1	16,439.80	\$ 16,439.80	← Apron ← B F B →
7.31	Taxiway crossing Foxtrot and Bravo = 600 mm – illuminated	ea	1	16,439.80	\$ 16,439.80	← B F B → Apron →
7.32	Taxiway Bravo Intersection with Foxtrot = 600 mm – illuminated	ea	1	16,439.80	\$ 16,439.80	TWR 127.35 ← F B F →
7.33	Taxiway Foxtrot to Alpha = 600 mm – illuminated	ea	1	5,656.30	\$ 5,656.30	F A →
7.34	Taxiway Foxtrot to Alpha = 600 mm – illuminated	ea	1	5,656.30	\$ 5,656.30	← A F
7.35	Taxiway Alpha Intersection with Foxtrot = 600 mm – non-illuminated	ea	1	1,169.82	\$ 1,169.82	TWR 127.35 ← F A F →
7.36	Taxiway Juliet to Kilo = 600 mm – non-illuminated	ea	1	559.13	\$ 559.13	← K J K →
7.37	Primary Plug and Socket - 54SUPERC6C6 Kits	ea	72	54.08	\$ 3,893.76	
7.38	Secondary Plug and Socket	ea	36	42.25	\$ 1,521.00	
7.39	Secondary Joint Kits	ea	36	10.99	\$ 395.64	
7.40	Pits for Series Isolation Transformers	ea	36	115.00	\$ 4,140.00	
	Sub-total				\$ 203,358.79	
8	SPARE PARTS (CASA REQUIREMENT)					
8.1	Clear LED MOS Compliant Fitting (Runway Edge)	ea	7	230.00	\$ 1,610.00	
8.2	Clear Inset LED ATG Fitting (Runway Edge)	ea	1	1,014.00	\$ 1,014.00	
8.3	Blue LED MOS Compliant Fitting (Taxiway and Turning Node Edge)	ea	30	190.00	\$ 5,700.00	
8.4	Yellow LED MOS Compliant Fitting (Taxiway Holding Point Edge)	ea	2	190.00	\$ 380.00	
8.5	Green LED MOS Compliant Fitting (Runway Threshold Outer)	ea	2	190.00	\$ 380.00	
8.6	Red-Green LED MOS Compliant Fitting (Runway Threshold Inner)	ea	2	1,014.00	\$ 2,028.00	
8.7	LED Series Isolation Transformers (SIT) 6.6A/700 & 6.6A/350	ea	12	245.00	\$ 2,940.00	
8.8	5kV Primary Cable 6mm	ea	500	4.49	\$ 2,245.00	
8.9	Twin Secondary Cable 2.5mm	ea	100	4.23	\$ 423.00	
8.10	IWDI LED Fittings	ea	4	330.00	\$ 1,320.00	
8.11	IWDI Series Isolation Transformer	ea	1	1,320.00	\$ 1,320.00	
	Sub-total				\$ 19,360.00	
	SUB-TOTAL AIRSIDE LIGHTING AND INSTRUMENTATION				\$ 1,755,906.10	Ex GST
9	2% Contingency	LS	2%		\$ 35,118.12	
	TOTAL AIRSIDE LIGHTING AND INSTRUMENTATION				\$ 1,791,024.22	Ex GST