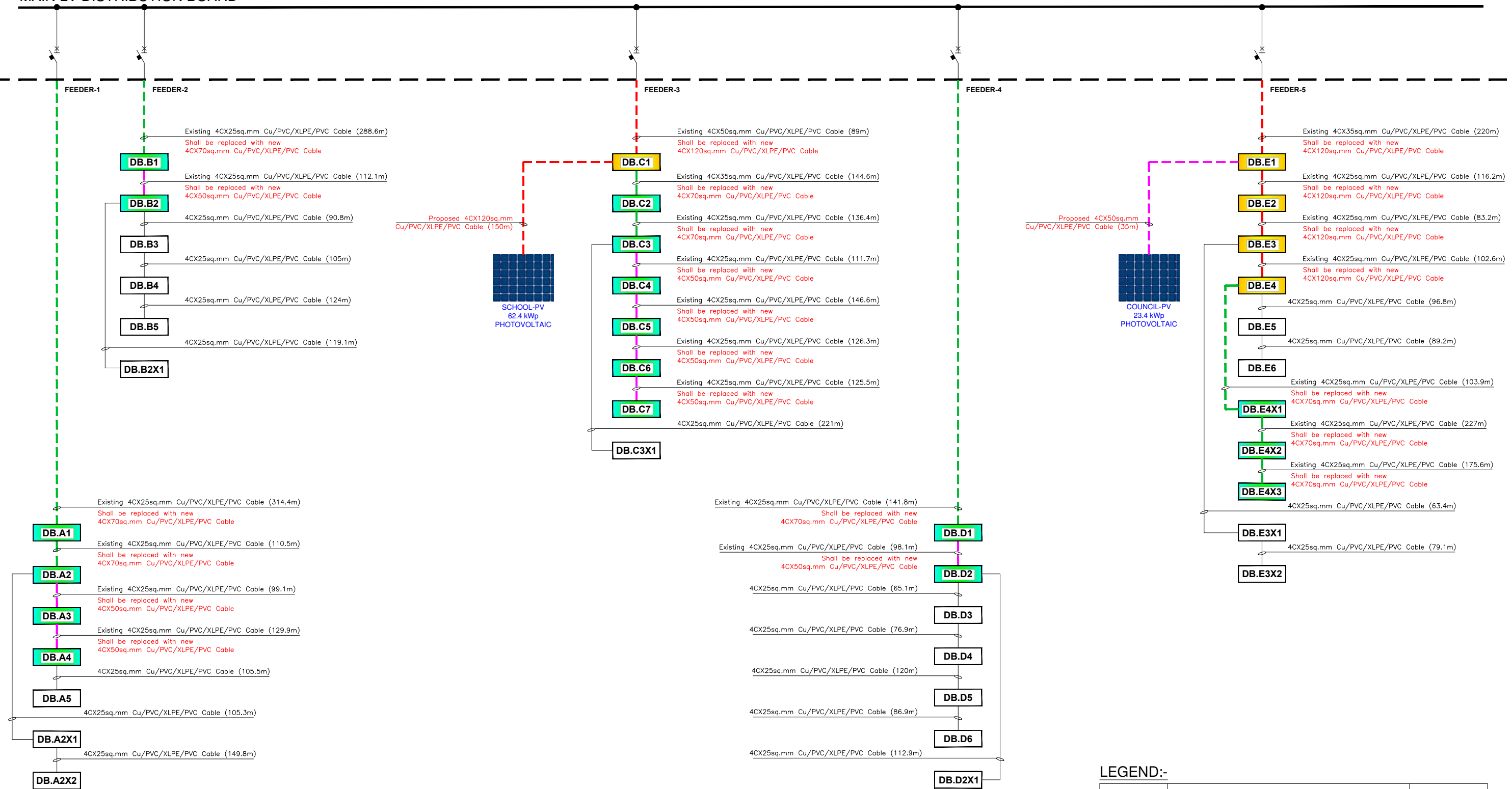


POWER HOUSE(NEYKURENDHOO)
MAIN LV DISTRIBUTION BOARD



NOTES:-

- THESE DRAWINGS ARE PRELIMINARY AND ARE FOR TENDERING PURPOSES ONLY.
- CONTRACTOR SHALL CARRY OUT DETAILED SITE SURVEY AND ENGINEERING / STUDY TO EVALUATE AND PROPOSE THE EXTENT OF REPLACEMENT / MODIFICATION REQUIRED IN THE EXISTING DISTRIBUTION NETWORK. THIS IS SUBJECT TO REVIEW AND APPROVAL BY THE EMPLOYER DURING THE ENGINEERING PHASE OF THE PROJECT.

LEGEND:-

SYMBOL	DESCRIPTION	QUANTITY
	PROPOSED 50sq.mm Cu/PVC/XLPE/PVC Cable	984.3m
	PROPOSED 70sq.mm Cu/PVC/XLPE/PVC Cable	1642.8m
	PROPOSED 120sq.mm Cu/PVC/XLPE/PVC Cable	761m
	EXISTING Cable	-
	DISTRIBUTION BOX	-
	EXISTING DISTRIBUTION BOX TO BE REPLACED	5 Nos.
	EXISTING DISTRIBUTION BOX TO BE MODIFIED	17 Nos.

	PURPOSE OF SUBMISSION	REV	AUTHORISED BY	DATE	DRAWING TITLE NETWORK DIAGRAM FOR B14-NEYKURENDHOO		DESIGN : ESM	SCALE : N.T.S
	INITIAL DOCUMENTS	A	GKH	28/03/16			DRAWN : DAI	DRW NO. : J431-GOPA-020-GR-E-D-0001-RevB
	FIRST REVISION	B	GKH	17/04/16	PROJECT PREPARING OUTER ISLANDS SUSTAINABLE DEVELOPMENT	CLIENT: GOVERNMENT OF THE REPUBLIC OF MALDIVES	LICENCE NO:	ISLAND NAME : NEYKURENDHOO
							DATE: : 17APR16	PAGE : 1/4

NEYKURENDHOO-EXISTING

From	To	No. of Runs	Cable Size (sq.mm)	Length (M)	Cable Current Capacity (A)	Cable Current Capacity After Deration (0.6) (A)	Power (kW)	Current (A)	Cable Loading (%)	Voltage (%) at DB Main Bus	Total Voltage Drop (%) in Cable Section	% Voltage Drop upto Distribution Boards	% Voltage Drop Acceptable (Less Than 5%)	Remarks
Neykurendhoo Feeder-1	DB-A1	1	4C x 25	314.40	150	90	38.99	67.43	74.90	92.89	7.11	7.11	NO	
DB-A1	DB-A2	1	4C x 25	110.50	150	90	30.33	57.99	64.40	90.77	2.12	9.23	NO	
DB-A2	DB-A2x1	1	4C x 25	105.30	150	90	9.76	19.30	21.40	90.11	0.67	9.89	NO	
DB-A2x1	DB-A2x2	1	4C x 25	149.80	150	90	4.84	9.67	10.70	89.63	0.47	10.37	NO	
DB-A2	DB-A3	1	4C x 25	99.10	150	90	14.76	29.11	32.30	89.82	0.95	10.18	NO	
DB-A3	DB-A4	1	4C x 25	129.90	150	90	9.74	19.45	21.60	88.99	0.83	11.01	NO	
DB-A4	DB-A5	1	4C x 25	105.50	150	90	4.81	9.74	10.80	88.66	0.34	11.34	NO	
Neykurendhoo Feeder-2	DB-B1	1	4C x 25	288.60	150	90	32.62	56.91	63.20	94.52	5.48	5.48	NO	
DB-B1	DB-B2	1	4C x 25	112.10	150	90	25.25	47.57	52.90	92.76	1.76	7.24	NO	
DB-B2	DB-B2x1	1	4C x 25	119.10	150	90	4.88	9.48	10.50	92.39	0.37	7.61	NO	
DB-B2	DB-B3	1	4C x 25	90.80	150	90	14.83	28.65	31.80	91.90	0.86	8.10	NO	
DB-B3	DB-B4	1	4C x 25	105.00	150	90	9.79	19.14	21.30	91.24	0.66	8.76	NO	
DB-B4	DB-B5	1	4C x 25	124.00	150	90	4.86	9.58	10.60	90.85	0.39	9.15	NO	
Neykurendhoo Feeder-3	DB-C1	1	4C x 50	89.00	215	129	43.45	75.88	58.80	98.73	1.27	1.27	YES	
DB-C1	DB-C2	1	4C x 25	144.60	150	90	37.75	66.79	74.20	95.50	3.23	4.50	YES	
DB-C2	DB-C3	1	4C x 25	136.40	150	90	31.13	57.52	63.90	92.90	2.60	7.10	NO	
DB-C3	DB-C3x1	1	4C x 25	221.00	150	90	4.90	9.49	10.50	92.21	0.69	7.79	NO	
DB-C3	DB-C4	1	4C x 25	111.70	150	90	20.16	38.59	42.90	91.47	1.43	8.53	NO	
DB-C4	DB-C5	1	4C x 25	146.60	150	90	14.88	29.05	32.30	90.07	1.40	9.93	NO	
DB-C5	DB-C6	1	4C x 25	126.30	150	90	9.74	19.42	21.60	89.26	0.81	10.74	NO	
DB-C6	DB-C7	1	4C x 25	125.50	150	90	4.82	9.72	10.80	88.86	0.40	11.14	NO	
Neykurendhoo Feeder-4	DB-D1	1	4C x 25	141.80	150	90	37.23	65.49	72.80	96.91	3.09	3.09	YES	
DB-D1	DB-D2	1	4C x 25	98.10	150	90	30.68	56.30	62.60	95.09	1.82	4.91	YES	
DB-D2	DB-D2x1	1	4C x 25	112.90	150	90	4.92	9.33	10.40	94.74	0.35	5.26	NO	
DB-D2	DB-D3	1	4C x 25	65.10	150	90	20.03	37.67	41.90	94.28	0.81	5.72	NO	
DB-D3	DB-D4	1	4C x 25	76.90	150	90	14.89	28.32	31.50	93.56	0.72	6.44	NO	
DB-D4	DB-D5	1	4C x 25	120.00	150	90	9.85	18.92	21.00	92.82	0.75	7.18	NO	
DB-D5	DB-D6	1	4C x 25	86.90	150	90	4.88	9.47	10.50	92.55	0.27	7.45	NO	
Neykurendhoo Feeder-5	DB-E1	1	4C x 35	220.00	180	108	63.83	109.00	101.00	94.00	6.00	6.00	NO	
DB-E1	DB-E2	1	4C x 25	116.20	150	90	53.94	99.66	110.70	90.11	3.89	9.89	NO	
DB-E2	DB-E3	1	4C x 25	83.20	150	90	46.08	90.03	100.00	87.62	2.49	12.38	NO	
DB-E3	DB-E3x1	1	4C x 25	63.40	150	90	9.60	19.71	21.90	87.21	0.41	12.79	NO	
DB-E3x1	DB-E3x2	1	4C x 25	79.10	150	90	4.78	9.87	11.00	86.95	0.26	13.05	NO	
DB-E3	DB-E4	1	4C x 25	102.60	150	90	29.92	60.52	67.20	85.56	2.06	14.44	NO	
DB-E4	DB-E4x1	1	4C x 25	103.90	150	90	14.64	30.49	33.90	84.52	1.05	15.48	NO	
DB-E4x1	DB-E4x2	1	4C x 25	227.00	150	90	9.67	20.43	22.70	82.99	1.53	17.01	NO	
DB-E4x2	DB-E4x3	1	4C x 25	175.60	150	90	4.73	10.24	11.40	82.40	0.59	17.60	NO	
DB-E4	DB-E5	1	4C x 25	96.80	150	90	9.56	20.08	22.30	84.92	0.64	15.08	NO	
DB-E5	DB-E6	1	4C x 25	89.20	150	90	4.74	10.06	11.20	84.63	0.29	15.37	NO	

	PURPOSE OF SUBMISSION		REV	AUTHORISED BY	DATE	DRAWING TITLE		DESIGN : ESM		SCALE : N.T.S	
	INITIAL DOCUMENTS		A	GKH	28/03/16	NETWORK DIAGRAM FOR B14–NEYKURENDHOO		DRAWN : DAI		DRW NO. : J431–G0PA–020–GR–E–D–0001–RevB	
	FIRST REVISION		B	GKH	17/04/16	PROJECT PREPARING OUTER ISLANDS SUSTAINABLE DEVELOPMENT	CLIENT: GOVERNMENT OF THE REPUBLIC OF MALDIVES	LICENCE NO:		ISLAND NAME : NEYKURENDHOO	
								DATE: : 17APR16		PAGE : 2/4	

NEYKURENDHOO-PROPOSED

From	To	No. of Runs	Cable Size (sq.mm)	Length (M)	Cable Current Capacity (A)	Cable Current Capacity After Deration (0.6) (A)	Power (kW)	Current (A)	Cable Loading (%)	Voltage (%) at DB Main Bus	Total Voltage Drop (%) in Cable Section	% Voltage Drop upto Distribution Boards	% Voltage Drop Acceptable (Less Than 5%)	Remarks
Neykurendhoo Feeder-1	DB-A1	1	4C x 70	314.40	265	159	36.35	64.69	40.70	97.29	2.71	2.71	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 70 sq.mm LVCable
DB-A1	DB-A2	1	4C x 70	110.50	265	159	30.14	55.55	34.90	96.47	0.82	3.53	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 70 sq.mm LVCable
DB-A2	DB-A2x1	1	4C x 25	105.30	150	90	9.96	18.55	20.60	95.83	0.64	4.17	YES	
DB-A2x1	DB-A2x2	1	4C x 25	149.80	150	90	4.95	9.29	10.30	95.38	0.46	4.62	YES	
DB-A2	DB-A3	1	4C x 50	99.10	215	129	14.93	27.82	21.60	95.97	0.51	4.03	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 50 sq.mm LVCable
DB-A3	DB-A4	1	4C x 50	129.90	215	129	9.91	18.58	14.40	95.52	0.44	4.48	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 50 sq.mm LVCable
DB-A4	DB-A5	1	4C x 25	105.50	150	90	4.93	9.30	10.30	95.2	0.32	4.80	YES	
Neykurendhoo Feeder-2	DB-B1	1	4C x 70	288.60	265	159	31.11	55.37	34.80	97.87	2.13	2.13	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 70 sq.mm LVCable
DB-B1	DB-B2	1	4C x 50	112.10	215	129	25.28	46.24	35.80	96.91	0.96	3.09	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 50 sq.mm LVCable
DB-B2	DB-B2x1	1	4C x 25	119.10	150	90	4.96	9.22	10.20	96.55	0.36	3.45	YES	
DB-B2	DB-B3	1	4C x 25	90.80	150	90	15.05	27.83	30.90	96.08	0.83	3.92	YES	
DB-B3	DB-B4	1	4C x 25	105.00	150	90	9.94	18.59	20.70	95.44	0.64	4.58	YES	
DB-B4	DB-B5	1	4C x 25	124.00	150	90	4.93	9.31	10.30	95.06	0.38	4.94	YES	
Neykurendhoo Feeder-3	DB-C1	1	4C x 120	89.00	360	216	41.22	73.59	34.10	99.45	0.55	0.55	YES	Existing 4C x 50 sq.mm LV Cable Replaced with New 4C x 120 sq.mm LVCable
DB-C1	DB-C2	1	4C x 70	144.60	265	159	35.97	64.54	40.60	98.21	1.24	1.79	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 70 sq.mm LVCable
DB-C2	DB-C3	1	4C x 70	136.40	265	159	30.42	55.43	34.90	97.2	1.01	2.80	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 70 sq.mm LVCable
DB-C3	DB-C3x1	1	4C x 25	221.00	150	90	4.98	9.22	10.20	96.53	0.67	3.47	YES	
DB-C3	DB-C4	1	4C x 50	111.70	215	129	20.09	37.05	28.70	96.44	0.78	3.58	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 50 sq.mm LVCable
DB-C4	DB-C5	1	4C x 50	146.60	215	129	14.95	27.84	21.60	95.69	0.75	4.31	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 50 sq.mm LVCable
DB-C5	DB-C6	1	4C x 50	126.30	215	129	9.89	18.60	14.40	95.25	0.43	4.75	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 50 sq.mm LVCable
DB-C6	DB-C7	1	4C x 50	125.50	215	129	4.93	9.32	7.20	95.04	0.21	4.96	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 50 sq.mm LVCable
Neykurendhoo Feeder-4	DB-D1	1	4C x 70	141.80	265	159	36.11	64.37	40.50	98.78	1.22	1.22	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 70 sq.mm LVCable
DB-D1	DB-D2	1	4C x 50	98.10	215	129	30.56	55.28	42.90	97.78	1.00	2.22	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 50 sq.mm LVCable
DB-D2	DB-D2x1	1	4C x 25	112.90	150	90	4.98	9.16	10.20	97.44	0.34	2.58	YES	
DB-D2	DB-D3	1	4C x 25	65.10	150	90	20.21	36.98	41.10	96.99	0.79	3.01	YES	
DB-D3	DB-D4	1	4C x 25	76.90	150	90	15.03	27.80	30.90	96.29	0.70	3.71	YES	
DB-D4	DB-D5	1	4C x 25	120.00	150	90	9.95	18.57	20.60	95.55	0.73	4.45	YES	
DB-D5	DB-D6	1	4C x 25	86.90	150	90	4.93	9.30	10.30	95.29	0.26	4.71	YES	
Neykurendhoo Feeder-5	DB-E1	1	4C x 120	220.00	360	216	56.59	101.20	46.90	98.13	1.87	1.87	YES	Existing 4C x 35 sq.mm LV Cable Replaced with New 4C x 120 sq.mm LVCable
DB-E1	DB-E2	1	4C x 120	116.20	360	216	50.42	92.18	42.70	97.23	0.90	2.77	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 120 sq.mm LVCable
DB-E2	DB-E3	1	4C x 120	83.20	360	216	44.98	83.14	38.50	96.65	0.58	3.35	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 120 sq.mm LVCable
DB-E3	DB-E3x1	1	4C x 25	63.40	150	90	9.93	18.48	20.50	96.27	0.38	3.73	YES	
DB-E3x1	DB-E3x2	1	4C x 25	79.10	150	90	4.95	9.27	10.30	96.03	0.24	3.97	YES	
DB-E3	DB-E4	1	4C x 120	102.60	360	216	29.88	55.58	25.70	96.17	0.48	3.83	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 120 sq.mm LVCable
DB-E4	DB-E4x1	1	4C x 70	103.90	265	159	14.89	27.84	17.50	95.79	0.38	4.21	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 70 sq.mm LVCable
DB-E4x1	DB-E4x2	1	4C x 70	227.00	265	159	9.90	18.59	11.70	95.23	0.56	4.77	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 70 sq.mm LVCable
DB-E4x2	DB-E4x3	1	4C x 70	175.60	265	159	4.93	9.34	5.90	95.01	0.22	4.99	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 70 sq.mm LVCable
DB-E4	DB-E5	1	4C x 25	96.80	150	90	9.93	18.56	20.60	95.59	0.59	4.41	YES	
DB-E5	DB-E6	1	4C x 25	89.20	150	90	4.94	9.31	10.30	95.31	0.27	4.69	YES	

	PURPOSE OF SUBMISSION		REV	AUTHORISED BY	DATE	DRAWING TITLE		DESIGN : ESM		SCALE : N.T.S	
	INITIAL DOCUMENTS		A	GKH	28/03/16	NETWORK DIAGRAM FOR B14–NEYKURENDHOO		DRAWN : DAI		DRW NO. : J431–G0PA–020–GR–E–D–0001–RevB	
	FIRST REVISION		B	GKH	17/04/16	PROJECT PREPARING OUTER ISLANDS SUSTAINABLE DEVELOPMENT	CLIENT: GOVERNMENT OF THE REPUBLIC OF MALDIVES	LICENCE NO:		ISLAND NAME : NEYKURENDHOO	
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NEYKURENDHOO-PROPOSED PV FEEDER

From	To	No. of Runs	Cable size (Sq mm)	Length (M)	Losses (%)
POWER HOUSE	DB-C1	1	4C X 120	89	1.06%
DB-C1	SCHOOL-PV	1	4C X 120	150	
DB-C1	DB-C2	1	4C X 70	145	
DB-C2	DB-C3	1	4C X 70	136	
DB-C3	DB-C3x1	1	4C X 25	221	
DB-C3	DB-C4	1	4C X 50	112	
DB-C4	DB-C5	1	4C X 50	147	
DB-C5	DB-C6	1	4C X 50	126	
DB-C6	DB-C7	1	4C X 50	126	
POWER HOUSE	DB-E1	1	4C X 120	220	1.40%
DB-E1	COUNCIL-PV	1	4C X 50	35	
DB-E2	DB-E3	1	4C X 120	83	
DB-E3	DB-E3x1	1	4C X 25	63	
DB-E3	DB-E4	1	4C X 120	103	
DB-E3x1	DB-E3x2	1	4C X 25	79	
DB-E4	DB-E4x1	1	4C X 70	104	
DB-E4	DB-E5	1	4C X 25	97	
DB-E4x1	DB-E4x2	1	4C X 70	227	
DB-E4x2	DB-E4x3	1	4C X 70	176	
DB-E5	DB-E6	1	4C X 25	89	

	PURPOSE OF SUBMISSION	REV	AUTHORISED BY	DATE	DRAWING TITLE NETWORK DIAGRAM FOR B14–NEYKURENDHOO		DESIGN : ESM	SCALE : N.T.S
	INITIAL DOCUMENTS	A	GKH	28/03/16			DRAWN : DAI	DRW NO. : J431–G0PA–020–GR–E–D–0001–RevB
	FIRST REVISION	B	GKH	17/04/16	PROJECT PREPARING OUTER ISLANDS SUSTAINABLE DEVELOPMENT	CLIENT: GOVERNMENT OF THE REPUBLIC OF MALDIVES	LICENCE NO:	ISLAND NAME : NEYKURENDHOO
							DATE: : 17APR16	PAGE : 4/4