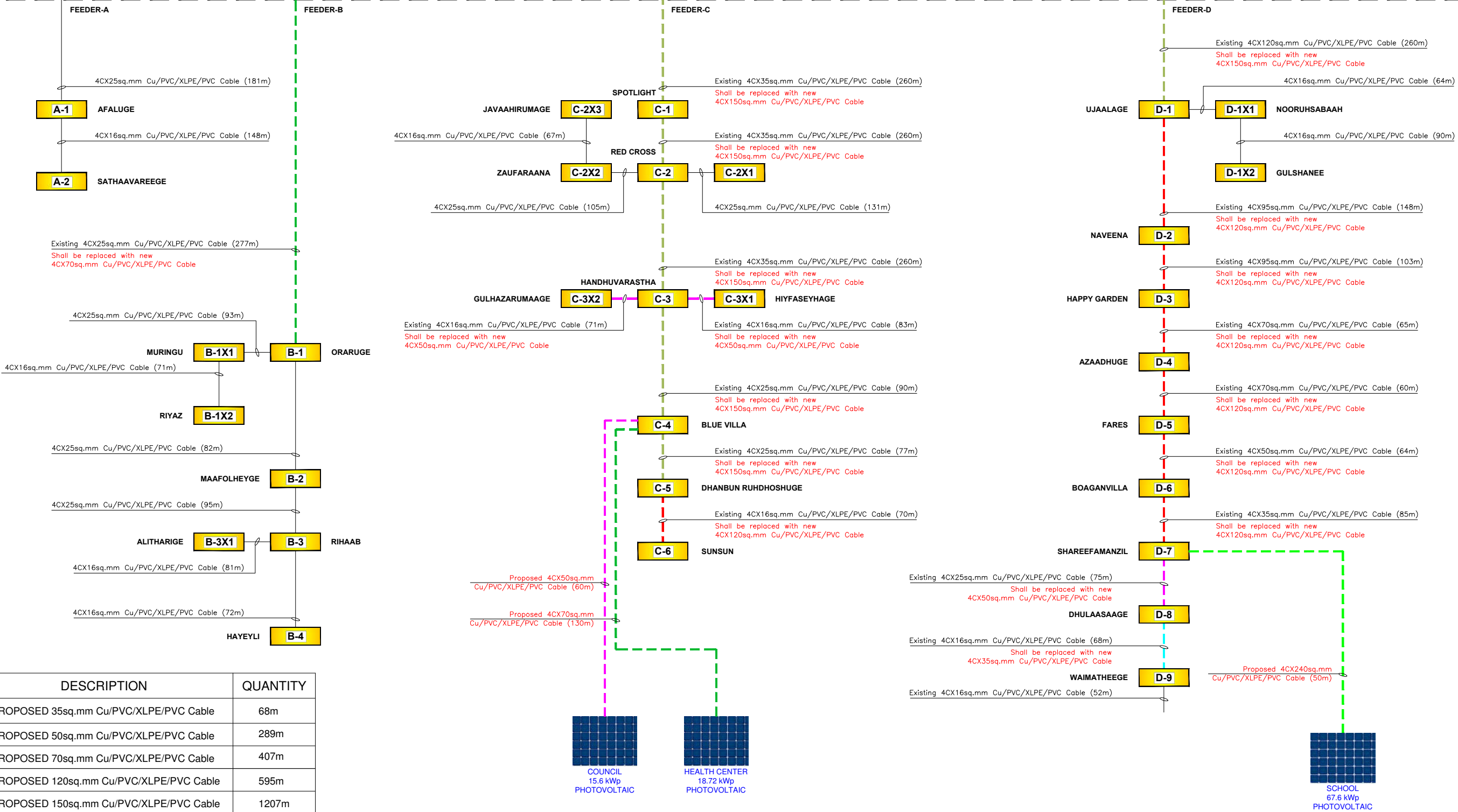


POWER HOUSE(KUMUNDHOO)
MAIN LV DISTRIBUTION BOARD



LEGEND:-

SYMBOL	DESCRIPTION	QUANTITY
	PROPOSED 35sq.mm Cu/PVC/XLPE/PVC Cable	68m
	PROPOSED 50sq.mm Cu/PVC/XLPE/PVC Cable	289m
	PROPOSED 70sq.mm Cu/PVC/XLPE/PVC Cable	407m
	PROPOSED 120sq.mm Cu/PVC/XLPE/PVC Cable	595m
	PROPOSED 150sq.mm Cu/PVC/XLPE/PVC Cable	1207m
	PROPOSED 240sq.mm Cu/PVC/XLPE/PVC Cable	50m
	EXISTING Cable	-
	DISTRIBUTION BOX	-
	EXISTING DISTRIBUTION BOX TO BE REPLACED	31 Nos.
	EXISTING DISTRIBUTION BOX TO BE MODIFIED	-

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.

	PURPOSE OF SUBMISSION	REV	AUTHORISED BY	DATE	DRAWING TITLE NETWORK DIAGRAM FOR B13 KUMUNDHOO		DESIGN : ESM	SCALE : N.T.S
	INITIAL DOCUMENTS	A	GKH	28/03/16			DRAWN : MUM	DRW NO. :J431-GOPA-019-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 : KUMUNDHOO
							DATE: : 17APR16	PAGE : 1/4

KUMUNDHOO-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
Kumundhoo Feeder-1	DB-A1	1	4C x 25	181	150	90	10.15	18.20	20.20	98.92	1.08	1.08	YES	
DB-A1	DB-A2	1	4C x 16	148	115	69	5.02	9.12	13.20	98.24	0.68	1.76	YES	
Kumundhoo Feeder-2	DB-B1	1	4C x 25	277	150	90	37.92	66.24	73.60	93.89	6.11	6.11	NO	
DB-B1	DB-B1x1	1	4C x 25	93	150	90	9.85	18.85	20.90	93.32	0.58	6.68	NO	
DB-B1x1	DB-B1x2	1	4C x 16	71	115	69	4.89	9.44	13.70	92.98	0.34	7.02	NO	
DB-B1	DB-B2	1	4C x 25	82	150	90	19.96	38.01	42.20	92.86	1.03	7.14	NO	
DB-B2	DB-B3	1	4C x 25	95	150	90	14.79	28.57	31.70	91.97	0.89	8.03	NO	
DB-B3	DB-B3x1	1	4C x 16	81	115	69	4.87	9.53	13.80	91.58	0.39	8.42	NO	
DB-B3	DB-B4	1	4C x 16	72	115	69	4.87	9.53	13.80	91.63	0.35	8.37	NO	
Kumundhoo Feeder-3	DB-C1	1	4C x 35	280	180	108	65.52	111.20	102.90	92.74	7.26	7.26	NO	
DB-C1	DB-C2	1	4C x 35	280	180	108	54.51	101.70	94.20	86.2	6.54	13.80	NO	
DB-C2	DB-C2x1	1	4C x 25	131	150	90	4.77	9.96	11.10	85.77	0.43	14.23	NO	
DB-C2	DB-C2x2	1	4C x 25	105	150	90	9.59	19.98	22.20	85.51	0.69	14.49	NO	
DB-C2x2	DB-C2x3	1	4C x 16	67	115	69	4.76	10.01	14.50	85.18	0.34	14.82	NO	
DB-C2	DB-C3	1	4C x 35	260	180	108	30.27	61.88	57.30	82.27	3.93	17.73	NO	
DB-C3	DB-C3x1	1	4C x 16	83	115	69	4.71	10.30	14.90	81.84	0.43	18.16	NO	
DB-C3	DB-C3x2	1	4C x 16	71	115	69	4.70	10.30	14.90	81.9	0.37	18.10	NO	
DB-C3	DB-C4	1	4C x 25	90	150	90	14.30	31.10	34.60	81.35	0.92	18.65	NO	
DB-C4	DB-C5	1	4C x 25	77	150	90	9.42	20.80	23.10	80.82	0.53	19.18	NO	
DB-C5	DB-C6	1	4C x 16	70	115	69	4.68	10.43	15.10	80.45	0.37	19.55	NO	
Kumundhoo Feeder-4	DB-D1	1	4C x 120	280	360	216	57.25	102.10	47.30	97.77	2.23	2.23	YES	
DB-D1	DB-D1x1	1	4C x 16	64	115	69	10.00	18.38	26.60	97.18	0.59	2.82	YES	
DB-D1x1	DB-D1x2	1	4C x 16	90	115	69	4.97	9.20	13.30	96.76	0.42	3.24	YES	
DB-D1	DB-D2	1	4C x 95	148	315	189	40.77	74.55	39.40	96.66	1.11	3.34	YES	
DB-D2	DB-D3	1	4C x 95	103	315	189	35.26	65.34	34.60	95.98	0.68	4.02	YES	
DB-D3	DB-D4	1	4C x 70	65	265	159	30.03	56.09	35.30	95.49	0.48	4.51	YES	
DB-D4	DB-D5	1	4C x 70	60	265	159	24.92	46.81	29.40	95.12	0.37	4.88	YES	
DB-D5	DB-D6	1	4C x 50	64	215	129	19.88	37.51	29.10	94.68	0.44	5.32	NO	
DB-D6	DB-D7	1	4C x 35	85	180	108	14.86	28.18	26.10	94.1	0.58	5.90	NO	
DB-D7	DB-D8	1	4C x 25	75	150	90	9.84	18.81	20.90	93.63	0.46	6.37	NO	
DB-D8	DB-D9	1	4C x 16	68	115	69	4.90	9.42	13.60	93.31	0.32	6.69	NO	

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								DATE: : 17APR16		PAGE : 2/4	

KUMUNDHOO-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
Kumundhoo Feeder-1	DB-A1	1	4C x 25	181	150	90	10.15	18.20	20.20	98.92	1.08	1.08	YES	
DB-A1	DB-A2	1	4C x 16	148	115	69	5.02	9.12	13.20	98.24	0.68	1.76	YES	
Kumundhoo Feeder-4	DB-B1	1	4C x 70	277	265	159	36.29	64.59	40.60	97.62	2.38	2.38	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 70 sq.mm LVCable
DB-B1	DB-B1x1	1	4C x 25	93	150	90	9.99	18.39	20.40	97.05	0.56	2.95	YES	
DB-B1x1	DB-B1x2	1	4C x 16	71	115	69	4.96	9.21	13.30	96.73	0.33	3.27	YES	
DB-B1	DB-B2	1	4C x 25	82	150	90	20.22	37.05	41.20	96.62	1.00	3.38	YES	
DB-B2	DB-B3	1	4C x 25	95	150	90	14.99	27.84	30.90	95.75	0.87	4.25	YES	
DB-B3	DB-B3x1	1	4C x 16	81	115	69	4.94	9.29	13.50	95.37	0.36	4.63	YES	
DB-B3	DB-B4	1	4C x 16	72	115	69	4.94	9.29	13.50	95.41	0.34	4.59	YES	
Kumundhoo Feeder-3	DB-C1	1	4C x 150	280	405	243	56.91	101.90	41.90	98.10	1.90	1.90	YES	Existing 4C x 35 sq.mm LV Cable Replaced with New 4C x 150 sq.mm LVCable
DB-C1	DB-C2	1	4C x 150	260	405	243	50.71	92.81	38.20	96.38	1.73	3.62	YES	Existing 4C x 35 sq.mm LV Cable Replaced with New 4C x 150 sq.mm LVCable
DB-C2	DB-C2x1	1	4C x 25	131	150	90	4.95	9.25	10.30	95.98	0.40	4.02	YES	
DB-C2	DB-C2x2	1	4C x 25	105	150	90	9.95	18.55	20.60	95.74	0.64	4.26	YES	
DB-C2x2	DB-C2x3	1	4C x 16	67	115	69	4.94	9.28	13.50	95.42	0.31	4.58	YES	
DB-C2	DB-C3	1	4C x 150	260	405	243	29.87	55.79	23.00	95.34	1.04	4.66	YES	Existing 4C x 35 sq.mm LV Cable Replaced with New 4C x 150 sq.mm LVCable
DB-C3	DB-C3x1	1	4C x 50	83	215	129	4.92	9.30	7.20	95.20	0.14	4.80	YES	Existing 4C x 16 sq.mm LV Cable Replaced with New 4C x 50 sq.mm LVCable
DB-C3	DB-C3x2	1	4C x 50	71	215	129	4.92	9.30	7.20	95.22	0.12	4.78	YES	Existing 4C x 16 sq.mm LV Cable Replaced with New 4C x 50 sq.mm LVCable
DB-C3	DB-C4	1	4C x 150	90	405	243	14.76	27.91	11.50	95.16	0.18	4.84	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 150 sq.mm LVCable
DB-C4	DB-C5	1	4C x 150	77	405	243	9.82	18.62	7.70	95.06	0.10	4.94	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 150 sq.mm LVCable
DB-C5	DB-C6	1	4C x 120	70	360	216	4.91	9.31	4.30	95.00	0.05	5.00	YES	Existing 4C x 16 sq.mm LV Cable Replaced with New 4C x 120 sq.mm LVCable
Kumundhoo Feeder-4	DB-D1	1	4C x 150	260	405	243	56.65	101.50	41.80	98.11	1.89	1.89	YES	Existing 4C x 120 sq.mm LV Cable Replaced with New 4C x 150 sq.mm LVCable
DB-D1	DB-D1x1	1	4C x 16	64	115	69	10.02	18.34	26.60	97.52	0.59	2.48	YES	
DB-D1x1	DB-D1x2	1	4C x 16	90	115	69	4.98	9.18	13.30	97.10	0.42	2.90	YES	
DB-D1	DB-D2	1	4C x 120	148	360	216	40.45	74.00	34.30	97.19	0.92	2.81	YES	Existing 4C x 95 sq.mm LV Cable Replaced with New 4C x 120 sq.mm LVCable
DB-D2	DB-D3	1	4C x 120	103	360	216	35.05	64.83	30.00	96.63	0.56	3.37	YES	Existing 4C x 95 sq.mm LV Cable Replaced with New 4C x 120 sq.mm LVCable
DB-D3	DB-D4	1	4C x 120	65	360	216	29.87	55.62	25.70	96.33	0.30	3.67	YES	Existing 4C x 70 sq.mm LV Cable Replaced with New 4C x 120 sq.mm LVCable
DB-D4	DB-D5	1	4C x 120	60	360	216	24.83	46.39	21.50	96.10	0.23	3.90	YES	Existing 4C x 70 sq.mm LV Cable Replaced with New 4C x 120 sq.mm LVCable
DB-D5	DB-D6	1	4C x 70	64	265	159	19.84	37.14	23.40	95.78	0.32	4.22	YES	Existing 4C x 50 sq.mm LV Cable Replaced with New 4C x 70 sq.mm LVCable
DB-D6	DB-D7	1	4C x 70	85	265	159	14.83	27.88	17.50	95.47	0.31	4.53	YES	Existing 4C x 35 sq.mm LV Cable Replaced with New 4C x 70 sq.mm LVCable
DB-D7	DB-D8	1	4C x 50	75	215	129	9.86	18.60	14.40	95.21	0.26	4.79	YES	Existing 4C x 25 sq.mm LV Cable Replaced with New 4C x 50 sq.mm LVCable
DB-D8	DB-D9	1	4C x 35	68	180	108	4.92	9.31	8.60	95.06	0.15	4.94	YES	Existing 4C x 16 sq.mm LV Cable Replaced with New 4C x 35 sq.mm LVCable

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								DATE: : 17APR16		PAGE : 3/4	

KUMUNDHOO-PROPOSED PV FEEDER

From	To	No. of Runs	Cable Size (sq.mm)	Length (M)	Losses (%)
Power House	DB-C1	1	4C X150	260	1.45%
DB-C2	DB-C2x2	1	4C X25	105	
DB-C2	DB-C3	1	4C X150	260	
DB-C2x1	DB-C2	1	4C X25	131	
DB-C2x2	DB-C2x3	1	4C X16	67	
DB-C3	DB-C4	1	4C X150	90	
DB-C3	DB-C3x2	1	4C X50	71	
DB-C3	DB-C3x 1	1	4C X50	83	
DB-C4	COUNCIL-PV	1	4C X50	60	
DB-C4	HEALTH CENTRE-PV	1	4C X70	130	
DB-C4	DB-C5	1	4C X150	77	
DB-C5	DB-C6	1	4C X120	70	
Power House	DB-D1	1	4C X150	260	3.33%
DB-D1	DB-D1x 1	1	4C X16	64	
DB-D1	DB-D2	1	4C X120	148	
DB-D1x1	DB-D1x2	1	4C X16	90	
DB-D2	DB-D3	1	4C X120	103	
DB-D3	DB-D4	1	4C X120	65	
DB-D4	DB-D5	1	4C X120	60	
DB-D6	DB-D7	1	4C X120	85	
DB-D6	DB-D5	1	4C X120	64	
DB-D7	SCHOOL-PV	1	4C X120	50	
DB-D7	DB-D8	1	4C X50	75	
DB-D8	DB-D9	1	4C X35	68	

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