Alpha
Consulting Engineers Pte Ltd

PROJECT QUALITY PLAN

Alexandra Technopark Asset Enhancement Initiatives (AEI) works

For

Frasers Centrepoint Asset Management (Commercial) Pte Ltd

Copy No.	1

Prepared By: Jasmine Tan/Chong Lai Meng/Mohamed Yassin Noor

Authorised By: Loh Fook Yuen

Date: 13 November 2017

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SECTION 1

QUALITY PLAN CONTROL AND DISTRIBUTION

1.1 List of Copy Holders

Copy No.	Copy Holder	Date of Issue
1	6229-PQP	13 November 2017

1.2 Revision Record

Revision	Date of Issue	Section Reference	Page(s)	Remarks
0	13 November 2017	1 to 11	29	+ 1 page (Section 4.1 – Overall Programme)

SECTION 2

PROJECT INFORMATION

2.1 Project Description

Type of Development	Commercial - Industrial

Statistics of Development	
Site Area, m²	47,719.90
Nett Floor Area, m²	-
Gross Floor Area, m²	123,178.51 (New Canteen Plaza 1914.06)
Covered Carpark, m²	-
No. of Covered Carpark Lots	-
No. of Apartments/Houses	NA
No. of Beds (for Hospitals)	NA
No. of Guestroom (for Hotels)	NA
No. of Blocks / No. of Storeys	Existing 2 Blocks 8 and 9 Storey/New 3rd Block Canteen Plaza 3 Storey
Green Mark Category	Existing Building - Gold Plus/New Canteen Plaza - NA
No. of Phases	4 Phases for AEI Works

2.2 Project Cost

M&E Services Cost Plan (S$ x 1M)										
Services	EI	ACVI	LEI	FFAI	PSI	SPFI				
Estimate	-	-	-	-	-	-				
Awarded	2.026	0.771	3.0999	0.29	1.103	-				

Total Project Construction Cost (S$ x1M)			
	Site Clearance	Piling Works	Main Contract
Estimate	-	-	-
Awarded	-	-	32.5

Site Clearance shall include earth work, soil improvement, service diversion and termination.

2.3 Scope of Works

2.3.1 Scope of Consultancy Services

Conceptual/Schematic Design	✓
Detailed Design	✓
Tender Documentation	✓
Tender Evaluation	✓
Contract Supervision	✓
M&E Costing	✓
Submissions to Authority	✓

(✓*where applicable*)

2.3.2 Scope of M&E Services

ELECTRICAL	✓	AIR CONDITIONING	✓	SPRINKLER	✓	SANITARY		SWIMMING POOL	
LIFT	✓	MECHANICAL VENTILATION	✓	FIRE ALARM	✓	COLD WATER		STEAM BOILER	
ESCALATOR	✓	MECHANICAL SMOKE EXTRACT	✓	HOSEREEL	✓	HOT WATER		FUEL STORAGE	
PABX		COMPUTER A/C		WET RISER		TOWN GAS	✓		
SECURITY	✓	BST CARPARK EXH		DRY RISER	✓	LPG GAS			
TELELIFT		HEATING				MEDICAL GAS			
DATA COMM.									
FLUSHFLOOR TRUNKING									

(✓*where applicable*)

2.3.3 Submission to Relevant Authorities by Others

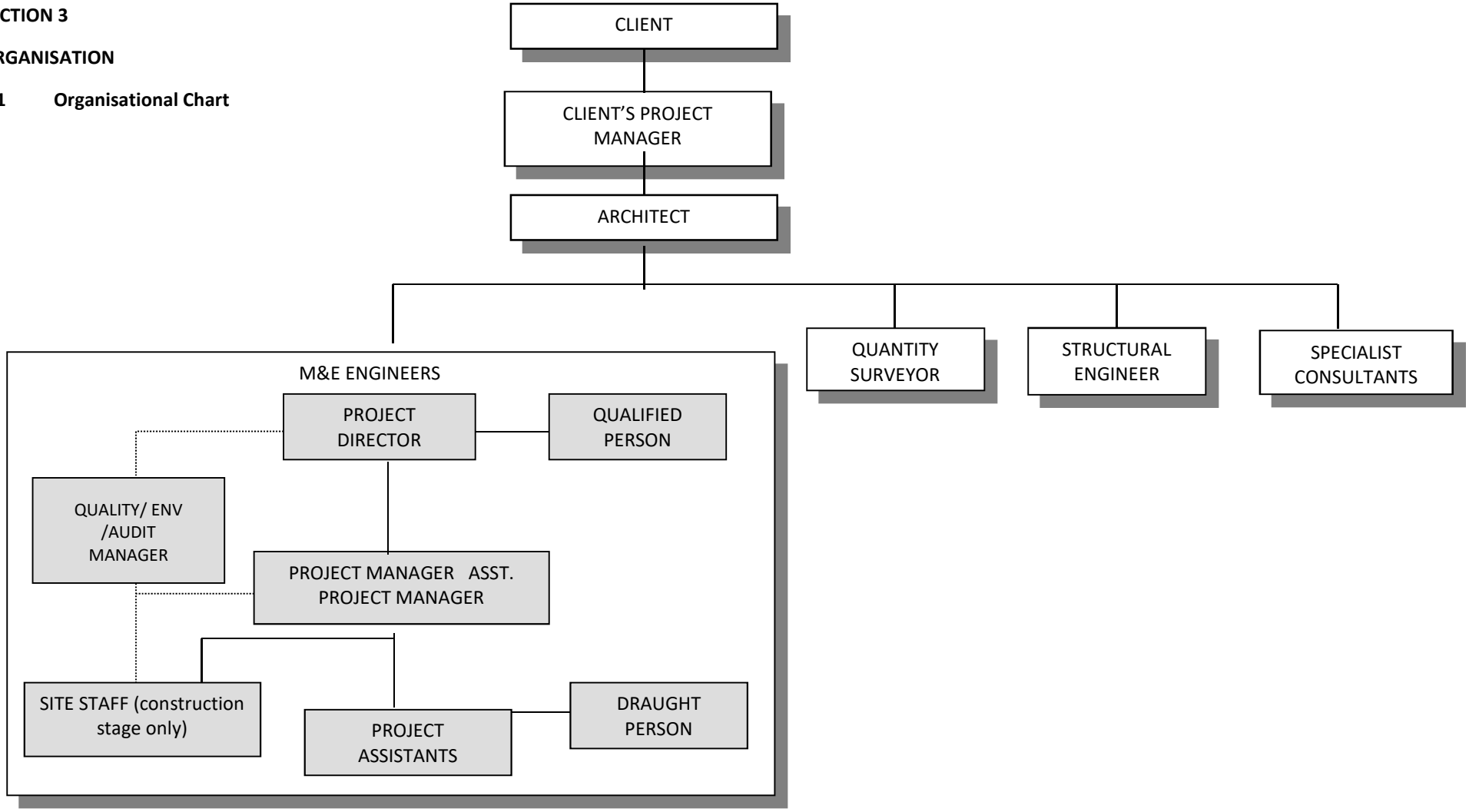
EJECTOR & DIVERTER		SUMP PUMP		FUEL OIL TANK		LIFT & ESCALATOR	✓	PRESSURE VESSEL		HOISTS		FOAM	

(✓*where applicable*)

SECTION 3

ORGANISATION

3.1 Organisational Chart



SECTION 3

ORGANISATION

3.2 ACEPL's Project Team Member

TITLE		NAME
Project Director		Loh Fook Yuen (LFY)
Qualified Person	Mechanical	Choong Choon Guan (CCG)
	Electrical	Loh Fook Yuen (LFY)
Project Manager		Chong Lai Meng (CLM)
Assistant Project Manager		-
Project Assistant (Mech)		Tan Qianping, Jasmine (TQP)
Project Assistant (Elect)		Mohamed Yassin Bin Mohamed Noor (MYN)
Draughtsperson		Common Pool
Resident Engineer (M&E)		-
Assistant Resident Engineer (M&E)		-
Clerk-of-Work (M&E)		-

3.3 Client/Client's Representatives

Client: Frasers Centrepoint Asset Management (Commercial) Pte Ltd

Address: 438 Alexandra Road
#02-00 Alexandra Point
Singapore 119958

Tel: 6276 4882

Fax: -

Client's Representatives:-

Name of Company	Contact Person	Contact
Fraser Centrepoint Asset Management (Commercial) Pte Ltd	Name: M/s Janet Soh/Cynthia Chow Position: Senior Manager/Senior Analyst	Tel: 6276 4882 Fax: 6276 8942 Handphone: - Email: janet.soh@fraserscentrepoint.com/ cynthia.chow@frasercentrepoint.com
FCL Management Services Pte Ltd	Name: Ms Brenda Tham Position: Project Manager	Tel: 6276 4882 Fax: 6276 6330 Handphone: - Email: brenda@frasercentrepoint.com
	Name: Position:	Tel: Fax: Handphone: Email:
	Name: Position:	Tel: Fax: Handphone: Email:
	Name: Position:	Tel: Fax: Handphone: Email:

3.4 Other Consultants (Local)

Function / Name of Company	Contact Person	Contact
Architect Point Architects Pte Ltd	Name: M/s Chuah Chuan Keat/ Bryan Kheow Position: Director/Project Architect	Tel: 6276 9662 Fax: 6276 5840 Handphone: - Email: chuankeat@pointarchitects.com.sg/ bryan@pointarchitects.com.sg
Quantity Surveyor Arcadis Singapore Pte Ltd	Name: Ms Yeo Lay Khim/Mr Kevin Chang Position: Senior Quantity Surveyor/ Quantity Surveyor	Tel: 6222 3888 Fax: 6224 7089 Handphone: - Email: 6730@arcadis.sg
Structural Engineer KTP Consultants Pte Ltd (KTP)	Name: M/s Aaron Foong/Chua Tong Liang Position: Director/Structural Engineer	Tel: 6273 5622 Fax: 6273 8454 Handphone: - Email: 16.00048_alextechno@ktp.com.sg
Interior Designer	Name: Position:	Tel: Fax: Handphone: Email:
Lighting Consultant	Name: Position:	Tel: Fax: Handphone: Email:
Acoustic Consultant	Name: Position:	Tel: Fax: Handphone: Email:
Landscape Architect Chig Landscape Architecture (CLA)	Name: Ms Chig Yeok Heng Position: Director	Tel: - Fax: - Handphone: 9690 7219 Email: project@chiglarch.com.sg
_____	Name: Position:	Tel: Fax: Handphone: Email:

3.4 Other Consultants (Overseas) – **NOT APPLICABLE**

Function / Name of Company	Contact Person	Contact
Architect	Name: Position:	Tel: Fax: Handphone: Email:
M&E Consultant	Name: Position:	Tel: Fax: Handphone: Email:
Quantity Surveyor	Name: Position:	Tel: Fax: Handphone: Email:
Structural Engineer	Name: Position:	Tel: Fax: Handphone: Email:
Interior Designer	Name: Position:	Tel: Fax: Handphone: Email:
Lighting Consultant	Name: Position:	Tel: Fax: Handphone: Email:
Acoustic Consultant	Name: Position:	Tel: Fax: Handphone: Email:
_____	Name: Position:	Tel: Fax: Handphone: Email:

3.5 Contractors/Sub-Contractors

Function / Name of Company	Contract *	Contact Person	Contact
Main Contractor Nakano Singapore (Pte) Ltd	-	Name: M/s Teh Tiong Lai/ T Kaki Position: Project Director/ Senior Project Manager	Tel: 6333 4933 Fax: 6338 8568 Handphone: - Email: teh@nakano.com.sg/ kaki@nakano.com.sg
Air Conditioning & Ventilation Installation Sub-Contractor Design Aire Engineering (S) Pte Ltd	DSC	Name: Mr Pang Kwon Yoo Position: Site Manager	Tel: 6746 9611 Fax: 6747 4922 Handphone: 9003 0764 Email: project@dae.com.sg
Plumbing & Sanitary Installation Sub-Contractor Stars Plumbing & Engineering Pte Ltd	DSC	Name: Mr V Mugil Position: Director	Tel: 6841 7644 Fax: 6841 7157 Handphone: 9650 4859 Email: mugil.spe@gmail.com
Electrical Installation Sub-Contractor Brilliant Corp (S) Pte Ltd	DSC	Name: Mr Lawrence Yeo Position: M&E Director	Tel: 6783 3733 Fax: 6784 8817 Handphone: 9662 3166 Email: lawrenceyeo@brilliantcorp.com.sg
Lift & Escalator Installation Sub-Contractor Fujitec Singapore Corpn Limited	DSC	Name: Mr Mark Lee Siew Hong Position: Senior Manager	Tel: 6704 5302 Fax: 6747 5526 Handphone: - Email: mark.lee@sg.fujitec.com
Fire Fighting & Alarm Installation Sub-Contractor Rico Engineering Works Pte Ltd	DSC	Name: Mr Wong Chin Seng Position: Project Manager	Tel: 6482 0153 Fax: 6482 0553 Handphone: 8338 2869 Email: chinseng@ricoeng.com.sg
Swimming Pool Filtration Plant Installation Sub-Contractor		Name: Position:	Tel: Fax: Handphone: Email:
Carpark System Installation Sub-Contractor		Name: Position:	Tel: Fax: Handphone: Email:
_____		Name: Position:	Tel: Fax: Handphone: Email:

** Type of Contract*
- *NSC (Nominated Sub-Contract)*
- *DSC (Domesticated Sub-Contract)*
- *DC (Direct Contract)*
- *NS (Nominated Supplier)*

3.6 Authorities

Authorities/Department	Contact Person	Tel/Fax Nos./E-mail
SP PowerGrid:		
(a) Sub-Station		
(b) Diversion		
SP Services:		
(a) Customer Supply		
(b) Installation		
(c) Meter Section		
(d) Road Lighting		
TFCC:		
(a) SCV		
(b) SingTel		
(c) IDA		
BCA:		
(a) Building Plan		
(b) Green Mark		
FSSD:		
(a) Building Plan		
(b) M&E Plan		
PUB (Water Supply) Network Dept:		
(a) Water Conservation		
(b) Plumbing Plan		
(c) Diversion		
(d) NEWater		
PUB Water Reclamation (Network) Dept:		
(a) Building Plan/CBPU	Ms Chua Khai Ting	6571 4080/chua_khai_ting@pub.gov.sg
(b) M&E Plan		
(c) Diversion		
City Gas Pte Ltd:		
(a) Planning/Submission	Mr Toh Jyh Yong, Ben	6578 7898/jyhyong@citygas.com.sg
(b) Installation/Inspection	Mr Toh Jyh Yong, Ben	6578 7898/jyhyong@citygas.com.sg
PowerGas Pte Ltd		
(a) Diversion		
NEA (Pollution Control)		
(a) Planning/Submission	Mr Jason Yip	6731 9763/Jason_yip@nea.gov.sg
(b) Inspection	Mr Jason Yip	6731 9763/Jason_yip@nea.gov.sg

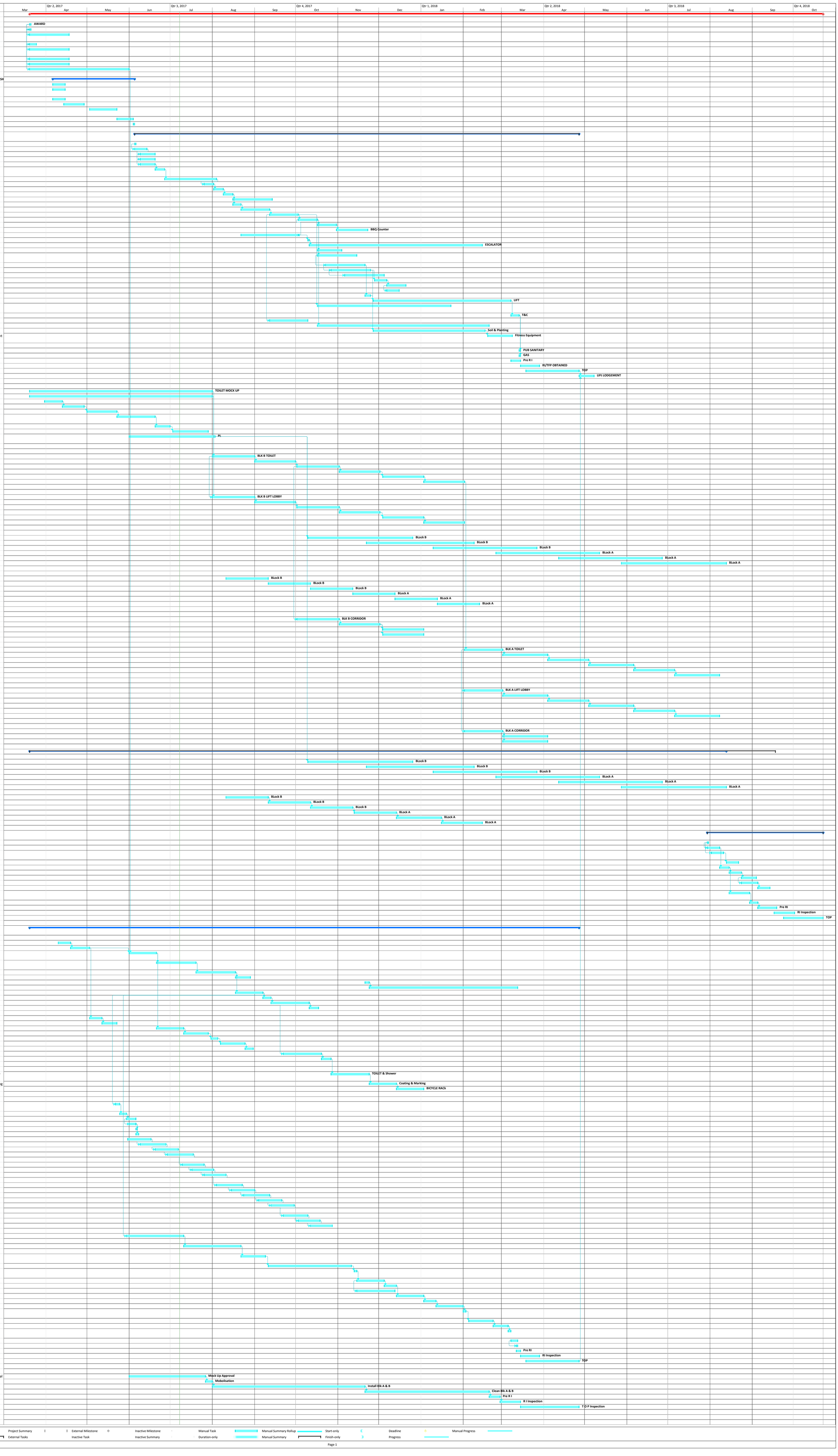
SECTION 4

PROGRAMME

4.1 Overall Programme (SEE ATTACHED MASTER PROGRAMME)

ID	TASK NAME	MONTHS	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
1.	Preliminary Planning																									
2.	Planning Submission																									
3.	Detail Design																									
4.	BP Submission																									
5.	BP Submission (Amendments)																									
6.	Tender Period for Piling																									
7.	Tender Period for Sub-Structure																									
8.	Tender Period for Super-Structure																									
9.	Piling Period																									
10.	Sub-Structure Construction Period																									
11.	Super-Structure Construction Period																									
12.	TOP																									
13.	CSC																									

ID	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1	**ALEXANDRA TECHNOPARK A&A WORK**	416 days	Mon 20/3/17	Mon 22/10/18		
2						
3	**Award of Contract**	1 day	**Mon 20/3/17**	Mon 20/3/17		AWARD
4	Project Commencement	1 day	Mon 20/3/17	Mon 20/3/17	3SS	
5	Pre-Con Survey / Cable Detection / Insurance / Bond	21 days	Mon 20/3/17	Mon 17/4/17	4SS	
6	Factory Permit Application	5 days	Mon 20/3/17	**Fri 24/3/17**	3SS	
7	Installation of Instrumentation Monitoring System	21 days	Mon 20/3/17	Mon 17/4/17	4SS	
8	ECM Design / Installation	21 days	Mon 20/3/17	Mon 17/4/17	4SS	
9	Install Temporary Power/DB and Site Office	21 days	Mon 20/3/17	Mon 17/4/17	4SS	
10	Demolition Permit Application/Approval	53 days	Mon 20/3/17	Wed 31/5/17	6SS	
11						
12	**Phase 1 - Traffic Diversion - 11 Wks**	**42 days**	**Thu 6/4/17**	**Sun 4/6/17**		**PHASE 1 RD DIVERSION**
13	Hoarding Works	7 days	Thu 6/4/17	Fri 14/4/17		
14	Remove Existing Plants & Adjust Existing M&E Services	7 days	Thu 6/4/17	Fri 14/4/17		
15	U/G M&E Services Diversion	7 days	Thu 6/4/17	Fri 14/4/17		
16	Demolish Existing Drain/ Construct New	11 days	Fri 14/4/17	Fri 28/4/17		
17	Excavation work / Construct New Base & Kerb / Lighting	14 days	Wed 3/5/17	Mon 22/5/17		
18	Lay new pemix & Road marking	10 days	Tue 23/5/17	Sat 3/6/17		
19	Handover inspection to MA	1 day	Sun 4/6/17	Sun 4/6/17		
20						
21	**Phase 2A - New Canteen Block (Central Plaza) - 46 Wks - TOP1**	**234 days**	**Mon 5/6/17**	**Thu 26/4/18**		**NEW CANTEEN BLOCK**
22	Taking Over Existing Road from MA	1 day	Mon 5/6/17	Mon 5/6/17		
23	Hoarding Works / Signages	7 days	Mon 5/6/17	Tue 13/6/17	22SS	
24	Demolist Existing Road/Feature/Existing	7 days	Fri 9/6/17	Mon 19/6/17	23FS-3 days	
25	Excavation and Remove Existing Tree	7 days	Fri 9/6/17	Mon 19/6/17	24SS	
26	Excavation to exposed Existing 1st Sty. S	7 days	Fri 9/6/17	Mon 19/6/17	25SS	
27	Detection to Existing Tendon & Rebar / Slab Hacking	5 days	Tue 20/6/17	Mon 26/6/17	26	
28	Install New Micropile (24 Nos + PDA Tes	28 days	Tue 27/6/17	Thu 3/8/17	27	
29	Pilecap excavation / Lean Conc.	5 days	Wed 26/7/17	Tue 1/8/17	28FS-7 days	
30	Pile trim/ECC Check/Marking	5 days	Wed 2/8/17	Tue 8/8/17	29	
31	Pilecap Rebar / Fwk / Casting	5 days	Wed 9/8/17	Tue 15/8/17	30	
32	Lift Pit / 1st-2nd / 2nd to Roof	21 days	Wed 16/8/17	Wed 13/9/17	31	
33	Level 1 Slab Rebar / Casting	4 days	Wed 16/8/17	Mon 21/8/17	31	
34	Install Level 1 Column / Level 2 Bondek	15 days	Tue 22/8/17	Mon 11/9/17	33	
35	Install Level 2 Column / Level 3 Bondek	15 days	Tue 12/9/17	Mon 2/10/17	34	
36	Intall Level 3 Colum / Roof Bondek	10 days	Tue 3/10/17	Mon 16/10/17	35	
37	Construct Planter Boxes	10 days	Tue 17/10/17	Mon 30/10/17	36	
38	BBQ Counter & Shelter	**17 days**	Tue 31/10/17	Wed 22/11/17	37	BBQ Counter
39	Erect Steel Staircase (2 Nos)	30 days	Tue 22/8/17	Mon 2/10/17	36SF	
40	Handover Escalator Pit	1 day	Tue 10/10/17	Tue 10/10/17	39FS+5 days	
41	Escalator Delivery & Installation	91 days	Wed 11/10/17	Wed 14/2/18	40	ESCALATOR
42	M&E Services Above Ceiling	14 days	Tue 17/10/17	Fri 3/11/17	36	
43	Block Work / Wproofing / Screed / Door Frame	21 days	Tue 17/10/17	Tue 14/11/17	36	
44	M&E Concealed Services	21 days	Mon 23/10/17	Mon 20/11/17	43SS+4 days	
45	Wall Plaster / Wall Tile / Floor Tile	21 days	Fri 27/10/17	Fri 24/11/17	44SS+4 days	
46	Ceiling Grid / Board / Painting	21 days	Mon 6/11/17	Mon 4/12/17	45SS+5 days	
47	Door Frame / Toilet Vanity	7 days	Tue 28/11/17	Wed 6/12/17	45	
48	M&E Sanitary Ware & Fittings	10 days	Thu 7/12/17	Wed 20/12/17	47	
49	Door Panel and Loose Fitting/Fixture	7 days	Thu 7/12/17	Fri 15/12/17	48SS	
50	Handover Lift Shaft to Specialist (2 Shaft	4 days	Tue 21/11/17	Fri 24/11/17	44	
51	Install 2 nos Lifts	73 days	Mon 27/11/17	Wed 7/3/18	50	LIFT
52	External Bracket / Cladding / Glass Panel / Canopy	70 days	Tue 17/10/17	Mon 22/1/18	35	
53	M&E Combined Test (T&C)	4 days	Thu 8/3/18	Tue 13/3/18	51	T&C
54	Construct Drop Off Area Steel Column /	20 days	Tue 12/9/17	Mon 9/10/17	35SS	
55	External Works & Drain	90 days	Tue 17/10/17	Mon 19/2/18	36	
56	Planter Drainage Cell / Soil & Plantin	60 days	Mon 27/11/17	Fri 16/2/18	45	Soil & Planting
57	Fitness Center Equipment Installation & Outdoor Furniture	**14 days**	Mon 19/2/18	Thu 8/3/18	56	Fitness Equipment
58	**Canteen ready for Authority Inspection**					
59	PUB Sanitary Inspection	1 day	Wed 14/3/18	Wed 14/3/18	53	PUB SANITARY
60	PowerGas Inspection	1 day	Wed 14/3/18	Wed 14/3/18	53	GAS
61	Pre RI Inspection	5 days	Thu 8/3/18	Wed 14/3/18		Pre R I
62	RI Inspection (Archi/M&E)	10 days	**Thu 15/3/18**	Wed 28/3/18		RI/TFP OBTAINED
63	**BCA TOP Inspection**	29 days	**Mon 19/3/18**	**Thu 26/4/18**		TOP
64	Lift Lodgement	7 days	Fri 27/4/18	Mon 7/5/18	63,245	LIFT LODGEMENT
65						
66	**Phase 2B - MOCK-UP**					
67	**Block B Level 2 Lobby 2 & 3**	96 days	Mon 20/3/17	Mon 31/7/17		TOILET MOCK UP
68	**Male Toilet & Multi-Tenanted Corridor**	96 days	Mon 20/3/17	Mon 31/7/17		
69	Sample Submission - Selection	9 days	Fri 31/3/17	Wed 12/4/17		
70	Sample Submission - Approval	12 days	Thu 13/4/17	Fri 28/4/17	69	
71	Procurement / Delivery	16 days	Mon 1/5/17	Mon 22/5/17	70	
72	Demolist & Construct New Toilet / Lift Lobby / Tenant Corridor	20 days	Tue 23/5/17	Mon 19/6/17	71	
73	Mock Up Inspection / Approval	9 days	Tue 20/6/17	Fri 30/6/17	72	
74	Procurement / Delivery Material	20 days	Mon 3/7/17	Fri 28/7/17	73	
75	Passanger Lift Mock-Up (Modernization) FUJITEC	45 days	Thu 1/6/17	Wed 2/8/17		PL
76						
77	**Block B Toilet Upgrading (L1 - L8)**					
78	Core 1 & PL	23 days	Tue 1/8/17	Thu 31/8/17	68	BLK B TOILET
79	Core 2 & PL	22 days	Fri 1/9/17	Sat 30/9/17	78	
80	Core 3 & PL	23 days	Mon 2/10/17	Wed 1/11/17	79	
81	Core 4 & PL	22 days	Thu 2/11/17	Fri 1/12/17	80	
82	Core 5 & PL	22 days	Mon 4/12/17	Tue 2/1/18	81	
83	Core 6 & PL	22 days	Wed 3/1/18	Thu 1/2/18	82	
84						
85	**Block B Lift Lobbies (L1-L8)**					
86	Core 1 & PL	23 days	Tue 1/8/17	Thu 31/8/17	67,78SS	BLK B LIFT LOBBY
87	Core 2 & PL	22 days	Fri 1/9/17	Sat 30/9/17	86	
88	Core 3 & PL	23 days	Mon 2/10/17	Wed 1/11/17	87	
89	Core 4 & PL	22 days	Thu 2/11/17	Fri 1/12/17	88	
90	Core 5 & PL	22 days	Mon 4/12/17	Tue 2/1/18	89	
91	Core 6 & PL	22 days	Wed 3/1/18	Thu 1/2/18	90	
92						
93	**Lift Modenization (FUJITEC)**					
94	PL1 / PL4 / PL 7	55 days	Tue 10/10/17	Mon 25/12/17	75FS+48 da	BLock B
95	PL2 / PL5 / PL8	57 days	Wed 22/11/17	Thu 8/2/18		BLock B
96	PL3 / PL6 / PL9	54 days	Wed 10/1/18	Mon 26/3/18		BLock B
97	PL1 / PL4 / PL 7	56 days	Sun 25/2/18	Fri 11/5/18		BLock A
98	PL2 / PL5 / PL8	54 days	Thu 12/4/18	Tue 26/6/18		BLock A
99	PL3 / PL6 / PL9	56 days	Mon 28/5/18	Sun 12/8/18		BLock A
100						
101	**Lift Upgrading (FUJITEC)**					
102	GL10 / FL15 / GL16	22 days	Fri 11/8/17	Sun 10/9/17		BLock B
103	GL11 / GL13 / FL18	23 days	Mon 11/9/17	Wed 11/10/17		BLock B
104	FL12 / GL14 / GL17	23 days	Thu 12/10/17	Sat 11/11/17		BLock B
105	GL10 / FL15 / GL16	23 days	Sun 12/11/17	Tue 12/12/17		BLock A
106	GL11 / GL13 / FL18	23 days	Wed 13/12/17	Fri 12/1/18		BLock A
107	FL12 / GL14 / GL17	22 days	Sat 13/1/18	Mon 12/2/18		BLock A
108						
109	**Block B Common Corridor**					
110	Level 8 Core 1, 2 & 3	23 days	Mon 2/10/17	Wed 1/11/17	80SS	BLK B CORRIDOR
111	Level 6 Core 1, 2 & 3	22 days?	Thu 2/11/17	Fri 1/12/17	110	
112	Level 5 Core 3	22 days?	Mon 4/12/17	Tue 2/1/18	111	
113	Level 2 Core 2	22 days	Mon 4/12/17	Tue 2/1/18	111	
114						
115	**Block A Toilet Upgrading (L1 - L8)**					
116	Core 3 & PL	20 days	Fri 2/2/18	Thu 1/3/18	83	BLK A TOILET
117	Core 2 & PL	23 days	Fri 2/3/18	Tue 3/4/18	116	
118	Core 1 & PL and Basement Accessible Toile	22 days	Wed 4/4/18	Thu 3/5/18	117	
119	Core 4 & PL	23 days	Fri 4/5/18	Tue 5/6/18	118	
120	Core 5 & PL	22 days	Wed 6/6/18	Thu 5/7/18	119	
121	Core 6 & PL	23 days	Fri 6/7/18	Tue 7/8/18	120	
122						
123	**Block A Lift Lobbies (L1-L8)**					
124	Core 3 & PL	20 days	Fri 2/2/18	Thu 1/3/18	116SS	BLK A LIFT LOBBY
125	Core 2 & PL	23 days	Fri 2/3/18	Tue 3/4/18	124	
126	Core 1 & PL	22 days	Wed 4/4/18	Thu 3/5/18	125	
127	Core 4 & PL	23 days	Fri 4/5/18	Tue 5/6/18	126	
128	Core 5 & PL	22 days	Wed 6/6/18	Thu 5/7/18	127	
129	Core 6 & PL	23 days	Fri 6/7/18	Tue 7/8/18	128	
130						
131	**Block A Common Corridor**					
132	Level 8 Core 1, 2 & 3	20 days	Fri 2/2/18	Thu 1/3/18	124SS	BLK A CORRIDOR
133	Level 4 Core 1	23 days	Fri 2/3/18	Tue 3/4/18	132	
134	Level 2 Core 3	23 days	Fri 2/3/18	Tue 3/4/18	132	
135						
136	**Phase 5 (78 Weeks)**	**391 days**	**Mon 20/3/17**	**Mon 17/9/18**		
137	**Lift Modernization (FUJITEC)**					
138	PL1 / PL4 / PL 7	55 days	Tue 10/10/17	Mon 25/12/17	75FS+48 da	BLock B
139	PL2 / PL5 / PL8	57 days	Wed 22/11/17	Thu 8/2/18		BLock B
140	PL3 / PL6 / PL9	54 days	Wed 10/1/18	Mon 26/3/18		BLock B
141	PL1 / PL4 / PL 7	56 days	Sun 25/2/18	Fri 11/5/18		BLock A
142	PL2 / PL5 / PL8	54 days	Thu 12/4/18	Tue 26/6/18		BLock A
143	PL3 / PL6 / PL9	56 days	Mon 28/5/18	Sun 12/8/18		BLock A
144	**Lift Upgrading (FUJITEC)**					
145	GL10 / FL15 / GL16	22 days	Fri 11/8/17	Sun 10/9/17		BLock B
146	GL11 / GL13 / FL18	23 days	Mon 11/9/17	Wed 11/10/17	145	BLock B
147	FL12 / GL14 / GL17	23 days	Thu 12/10/17	Sat 11/11/17	146	BLock B
148	GL10 / FL15 / GL16	23 days	Mon 13/11/17	Wed 13/12/17	147	BLock A
149	GL11 / GL13 / FL18	23 days	Thu 14/12/17	Mon 15/1/18	148	BLock A
150	FL12 / GL14 / GL17	22 days	Tue 16/1/18	Wed 14/2/18	149	BLock A
151						
152	**Phase 3 Existing Canteen Works (12 Wks) - TOP2**	**61 days**	**Mon 30/7/18**	**Mon 22/10/18**		
153	Terminate Existing Power Supply/Water	1 day	Mon 30/7/18	Mon 30/7/18		
154	Dismantle Existing M&E Services	7 days	Mon 30/7/18	Tue 7/8/18	153SS	
155	Demolish Existing Wall (Kitchen, Bin Area, Stall, Office & Clinic) include floor	7 days	Thu 2/8/18	Fri 10/8/18	153SS+3 days	
156	Install M&E Services above Ceiling	7 days	Mon 13/8/18	Tue 21/8/18	155	
157	Hack Corridor Floor Tiles & Screed	5 days	Wed 8/8/18	Tue 14/8/18	154	
158	Construct Block Wall / Fence / Alum Scr	7 days	Wed 15/8/18	Thu 23/8/18	157	
159	Install M&E Concealed Services	7 days	Fri 24/8/18	Mon 3/9/18	158	
160	Install Wall & Floor Tiles for Accessible T	8 days	Fri 24/8/18	Tue 4/9/18	159SS	
161	Install Toilet Door / Fitting / Accessories	7 days	Wed 5/9/18	Thu 13/9/18	160	
162	Existing Kitchen Floor Top-Up / Apply Floor Hardener	11 days	Wed 15/8/18	Wed 29/8/18	157	
163	Carpark Lots Marking & Painting	4 days	Thu 30/8/18	Tue 4/9/18	162	
164	**Pre RI Inspection**	10 days	Wed 5/9/18	Tue 18/9/18	163	Pre RI
165	**RI Inspection (Archi/M&E)**	11 days	**Mon 17/9/18**	Mon 1/10/18		RI Inspection
166	**TOP Inspection**	21 days	**Mon 24/9/18**	Mon 22/10/18		TOP
167						
168	**Phase 2B AEI Works - Excluding Phase 1, 2A, 3, 4 & 5 - (57 Weeks) - TOP 1**	289 days	Mon 20/3/17	Thu 26/4/18		
169	**Block B Fusal Court**					
170	Erect Temporary Hoarding & Access	7 days	Mon 10/4/17	Tue 18/4/17		
171	Remove Existing Plants	10 days	Wed 19/4/17	Tue 2/5/17	170	
172	Blk B Basement Planter Demolition Works / Basement Slab	14 days	Thu 1/6/17	Tue 20/6/17	10,171	
173	Make Good Existing Planter / Cast Basement Beam/Slab	21 days	Wed 21/6/17	Wed 19/7/17	172	
174	Cast Lift Wall / Roof Slab	21 days	Thu 20/7/17	Thu 17/8/17	173	
175	Wproofing & Screeding	7 days	Fri 18/8/17	Mon 28/8/17	174	
176	Handover Lift Shaft	3 days	Tue 21/11/17	Thu 23/11/17		
177	Lift Delivery & Installation / T&C	77 days	Fri 24/11/17	Mon 12/3/18	176	
178	Fencing & Wall Panel	14 days	Fri 18/8/17	Wed 6/9/17	174	
179	Install Fixed / Loose Items	4 days	Thu 7/9/17	Tue 12/9/17	178	
180	FUTSAL FLOOR COATING	20 days	Wed 13/9/17	Tue 10/10/17	179	
181	**Installation of Goal Post**	5 days	Wed 11/10/17	Tue 17/10/17	180	
182	**Block A Fusal Court**					
183	Erect Temporary Hoarding & Access	7 days	Wed 3/5/17	Thu 11/5/17	171	
184	Remove Existing Plants	7 days	Fri 12/5/17	Mon 22/5/17	183	
185	Blk A Demolist Basement Planter Wall	14 days	Wed 21/6/17	Mon 10/7/17	172	
186	Make Good Existing Planter / Cast Back Wa	14 days	Tue 11/7/17	Fri 28/7/17	185	
187	Wproofing & Screeding	5 days	Mon 31/7/17	Fri 4/8/17	186	
188	Fencing & Wall Panel	14 days	Mon 7/8/17	Thu 24/8/17	187	
189	Install Fixed / Loose Items	4 days	Fri 25/8/17	Wed 30/8/17	188	
190	FUTSAL FLOOR COATING	20 days	Fri 22/9/17	Thu 19/10/17	180	
191	**Installation of Goal Post**	5 days	Fri 20/10/17	Thu 26/10/17	190	
192						
193	**END OF TRIP FACILITIES**					
194	Basement 1 Toilet / Shower Rm & Accessible Toilet	20 days	Fri 27/10/17	Thu 23/11/17	191	TOILET & Shower
195	Basement Slab Coating & Parking Lot M/	14 days	Fri 24/11/17	Wed 13/12/17	194	Coating & Marking
196	Bicycle Racks and Panel	14 days	Thu 14/12/17	Tue 2/1/18	195	BICYCLE RACk
197						
198	**Block A Level 1 Corridor - ZONE 1**					
199	Demolish Level 1 Corridor Ceiling / Wall Finishes / Floor Finishes - ZONE 1	3 days	Mon 22/5/17	Wed 24/5/17	178	
200	Wproofing & Screeding	3 days	Thu 25/5/17	Mon 29/5/17	199	
201	Install Wall Plaster, Tiling & Panel	5 days	Tue 30/5/17	Mon 5/6/17	200	
202	Install Ceiling Grid / M&E Services	3 days	Thu 1/6/17	Mon 5/6/17	201SS+2 day	
203	Install Ceiling	1 day	Tue 6/6/17	Tue 6/6/17	202	
204	Install Floor Tile / Pointing	2 days	Tue 6/6/17	Wed 7/6/17	202	
205	Block A Level 1 Corridor - ZONE 2	13 days	Wed 31/5/17	Fri 16/6/17	198FS-5 days	
206	Block A Level 1 Corridor - ZONE 3	13 days	Fri 9/6/17	Tue 27/6/17	205FS-5 days	
207	Block A Level 1 Corridor - ZONE 4	13 days	Tue 20/6/17	Thu 6/7/17	206FS-5 days	
208	Block A Level 1 Corridor - ZONE 5	13 days	Thu 29/6/17	Mon 17/7/17	207FS-5 days	
209						
210	Block A Loading Corridor - ZONE 1	12 days	Mon 10/7/17	Tue 25/7/17	208FS-5 days	
211	Block A Loading Corridor - ZONE 2	12 days	Mon 17/7/17	Tue 1/8/17	210FS-5 days	
212	Block A Loading Corridor - ZONE 3	12 days	Wed 26/7/17	Thu 10/8/17	211FS-5 days	
213						
214	Block B Level 1 Corridor - ZONE 1	13 days	Fri 4/8/17	Tue 22/8/17	212FS-5 days	
215	Block B Level 1 Corridor - ZONE 2	13 days	Tue 15/8/17	Thu 31/8/17	214FS-5 days	
216	Block B Level 1 Corridor - ZONE 3	13 days	Thu 24/8/17	Mon 11/9/17	215FS-5 days	
217	Block B Level 1 Corridor - ZONE 4	13 days	Mon 4/9/17	Wed 20/9/17	216FS-5 days	
218	Block B Level 1 Corridor - ZONE 5	13 days	Wed 13/9/17	Fri 29/9/17	217FS-5 days	
219						
220	Block B Loading Corridor - ZONE 1	12 days	Fri 22/9/17	Mon 9/10/17	218FS-5 days	
221	Block B Loading Corridor - ZONE 2	12 days	Tue 3/10/17	Wed 18/10/17	220FS-5 days	
222	Block B Loading Corridor - ZONE 3	12 days	Thu 12/10/17	Fri 27/10/17	221FS-5 days	
223						
224	Hot Park Linkway/Foot Path	30 days	Tue 30/5/17	Mon 10/7/17	178	
225						
226	CBP Wall Plaster & Texture Paint	30 days	Tue 11/7/17	Mon 21/8/17	224	
227						
228	Block B Entrance Wall Hacking & Construct New Slab	14 days	Tue 22/8/17	Fri 8/9/17	226	
229	Linkway / Footpath / Cycling Path	45 days	Mon 11/9/17	Fri 10/11/17	228	
230	Main Entrance Guard Post Demolish (fr Alexandra Rd.)	2 days	Mon 13/11/17	Tue 14/11/17	229	
231	Erect New Portal & Cladding	14 days	Wed 15/11/17	Mon 4/12/17	230	
232	Construct New Water Feature	7 days	Tue 5/12/17	Wed 13/12/17	231	
233	M&E Services & Barrier	20 days	Wed 15/11/17	Tue 12/12/17	231SS	
234	Construct Drain/Kerb/Premix	14 days	Thu 14/12/17	Tue 2/1/18	232	
235	Demolish Existing Ramp at New Car Fre	7 days	Wed 3/1/18	Thu 11/1/18	234	
236	Construct New Ramp Slab & Wall	14 days	Fri 12/1/18	Wed 31/1/18	235	
237	Demolish Existing Guard Post 3 (Alexandra Terr Rd)	2 days	Thu 1/2/18	Fri 2/2/18	236	
238	Construct New Island/Kerb/Premix	14 days	Mon 5/2/18	Thu 22/2/18	237	
239	M&E Services & Barrier	7 days	Fri 23/2/18	Mon 5/3/18	238	
240	Demolish Existing Guard Post 2 (Alexandra Terr Rd)	2 days	Tue 6/3/18	Wed 7/3/18	239	
241	Construct New Island/Kerb/Premix	3 days	Thu 8/3/18	Mon 12/3/18		
242	M&E Services & Barrier	1 day	Mon 12/3/18	Mon 12/3/18	241SS+2 da	
243	Pre RI Inspection	3 days	Mon 12/3/18	Wed 14/3/18		Pre RI
244	RI Inspection (Archi/M&E)	10 days	**Thu 15/3/18**	Wed 28/3/18		RI Inspection
245	**BCA TOP Inspection**	29 days	**Mon 19/3/18**	**Thu 26/4/18**		TOP
246						
247	**Phase 4 Façade Works (57 Weeks) TO**					
248	Mock Up Sample Approval	40 days	Thu 1/6/17	Wed 26/7/17		Mock Up Approval
249	Block A Façade - Mobilization of Equipr	3 days	Thu 27/7/17	Mon 31/7/17	248	Mobolisation
250	Installation of new cladding panel Blk A	80 days	Tue 1/8/17	Mon 20/11/17	249	Install Blk A & B
251	Existing Façade Cleaning Works Blk A &	65 days	Tue 21/11/17	Mon 19/2/18	250	Clean Blk A & B
252	**Pre RI Inspection**	6 days	Tue 20/2/18	Tue 27/2/18	251	Pre R I
253	**RI Inspection (Archi/M&E)**	11 days	Wed 28/2/18	Wed 14/3/18	252	R I Inspection
254	**TOP Inspection**	31 days	Thu 15/3/18	Thu 26/4/18		T O P Inspection
255						
256						
257						



Project: msproj11
Date: Sat 8/7/17

Task | Split | Milestone | Summary | Project Summary | External Tasks | External Milestone | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | Deadline | Progress | Manual Progress

SECTION 4

PROGRAMME

4.2 Authority Submission Status for M&E Services - 1st Submission

Service	Authority	Original Submission		Comments/Resubmission						Approval/
		Scheduled	Actual	Comment	Resubmit	Comment	Resubmit	Comment	Resubmit	Clearance
Application for Electricity Supply	SP Services Ltd									
Power Supply Substation	SP PowerGrid Ltd									
Metering Layout	SP Services Ltd									
Sanitary Installation	PUB Water Reclamation (Network) Dept	15-May-17	8-May-17							
Domestic Water Supply	PUB (Water Supply) Network Dept	To be submitted by plumber								
Gas Supply Installation	City Gas Pte Ltd	3-Mar-17	21-Feb-17	30-Mar-17	1-Jun-17	19-Jun-17	1-Aug-17	11-Aug-17	4-Sep-17	13-Sep-17
Air Conditioning & Ventilation Inst.	FSSD	2-Jan-18								
Fire Fighting & Alarm Installation	FSSD	2 Jan-18								
Telephone Installation	TFCC									
Broadband Co-axial Cable System (BCS)	Starhub Cable Vision									
Emergency Voice Communication	FSSD	2 Jan 18								
Lightning Protection System	BCA	19 Feb 18								
Fuel Storage	FSSD									
	NEA (Pollution Control)									

SECTION 4

PROGRAMME

4.3 Authority Submission Status for M&E Services (Amendments) - 2nd Submission – NOT APPLICABLE

Service	Authority	Original Submission		Comments/Resubmission						Approval/
		Scheduled	Actual	Comment	Resubmit	Comment	Resubmit	Comment	Resubmit	Clearance
Application for Electricity Supply	SP Services Ltd									
Power Supply Substation	SP PowerGrid Ltd									
Metering Layout	SP Services Ltd									
Sanitary Installation	PUB Water Reclamation (Network) Dept									
Domestic Water Supply	PUB (Water Supply) Network Dept									
Gas Supply Installation	City Gas Pte Ltd									
Air Conditioning & Ventilation Inst.	FSSD									
Fire Fighting & Alarm Installation	FSSD									
Telephone Installation	TFCC									
Broadband Co-axial Cable System (BCS)	Starhub Cable Vision									
Fuel Storage	FSSD									
	NEA (Pollution Control)									

SECTION 5

PROJECT RECORDS

5.1 List of Internal Files

Standard Files

File Ref:		File Ref:	
- Owner	✓	- Architect	✓
- Authorities	✓	- Other Consultants	✓
- Contractors	✓	- CC	✓
- CF	✓	- PQP/QSP	✓

Project Files to be initiated by PM as and when required

File Ref:		File Ref:		File Ref:	

(✓*where applicable*)

SECTION 5

PROJECT RECORDS

5.2 Filing of Drawings

The following team members shall take charge of filing of drawings, stamping "SUPERSEDED" drawings, etc.

Description	Team Member
Incoming Architectural Floor Plans	Soft copy saved in server
Incoming Architectural Sketches/Details	
Incoming Structural Drawings	
M&E Drawings - Electrical Installation - Lift & Escalator Installation - Air Conditioning & Ventilation Installation - Fire Fighting & Alarm Installation - Plumbing & Sanitary Installation	
Other Drawings	

SECTION 6

INTERFACING

6.1 Method of Interface

Description	Method of Interface	
Client's Review & Approval	M&E Design Report	✓
	Pre-planned meeting at fixed intervals	✓
	Telefax, letter and telephone	✓
	Email	✓
Interface With External Design Teams	M&E Design Report	✓
	Pre-planned meeting at fixed intervals	✓
	Telefax, letter and telephone	✓
	Email	✓
Interface Between Internal Design Teams	Telephone	✓
	Email	✓
	Internal Project Team Meeting	✓
	Circulation of Information	✓

(✓*where applicable*)

SECTION 6

INTERFACING

6.2 Internal Design Interface – NOT APPLICABLE

Item No.	Description*	Required From	Required By	Date Required	Remarks

** Information required by INTERNAL DESIGN TEAM MEMBERS*

SECTION 6

INTERFACING

6.3 Circulation of Documents to External Parties

	Code: A - Approval Required C - For Comments I - For Information Only	Client/ Client Rep.	Client's Project Manager	Architect	Structural Engineer	Quantity Surveyor	
1.	**Letters/Fax:**						
a.	Project Design	A	A	A	C	I	
b.	Project Administration	A	A	C	C	I	
c.	Project Cost Estimate/Contract Cost	A	A	C	C	I	
2.	**Drawings**						
a.	Outline Design Drgs.	A	A	A	C	-	
b.	Sketch Design Drgs.	A	A	A	C	-	
c.	Final Design Drgs.	A	A	A	C	-	
d.	Shop Drawings	I	I	A/C	C	-	
e.	As Built Drgs.	I	I	I	I	-	
3.	**Other Document**						
a.	Specification	A	A	A	I	I	
b.	Tender Document	A	A	A	I	I	
c.	Tender Evaluation Report	A	A	A	I	I	
d.	Design Report	C	C	I	-	-	
e.	Progress Report	-	-	-	-	-	
f.	Financial Report	-	-	-	-	-	
g.	Minutes of Meeting	I	I	I	I	-	
h.	Inspection Report	I	I	I	-	-	
i.	Testing & Comm. Report	I	I	I	-	-	
j.	O & M Manual	I	I	I	-	-	

SECTION 7

WORK AUTHORISATION

Activity \ Authorised Signatories	PD	QP	PM	AE	SS
General Correspondences with Client	✓	✓	✓		
General Correspondences with Other Consultants			✓	✓	
M&E Cost Estimate Report	✓	✓			
M&E Design Report	✓	✓			
Check Prints	✓	✓			
Tender Drawing Approval	✓	✓			
Tender Specification Approval	✓	✓			
List of Tenderers	✓	✓			
Tender Questionnaires	✓	✓			
Tender Reports	✓	✓			
Draft Letter of Award			✓		
Review of Contractor's Shop Drawing			✓	✓	
Review of Contractor's Technical Submittal			✓	✓	
Review of Contractor's Sample Submittal			✓	✓	
Contractor's Request for Deviation	✓	✓	✓		
Progress Payment Valuation Form	✓	✓			
Final Account Valuation	✓	✓			
Draft Variation Order	✓	✓			
Engineer/Architect's Instruction/Direction	✓	✓			
Site Instruction/Direction	✓		✓		
Correspondence/Submission to Authorities	✓	✓	✓		

(✓*where authorised*)

Key to abbreviations:-

PD : Project Director
QP : Qualified Person
PM : Project Manager/Assistant Project Manager
AE : Assistant Engineer
SS : ACEPL Site Staff

SECTION 8

DESIGN INPUT & METHODOLOGY

8.1 List of Client's Standards, Reference Documents or Brief – NOT APPLICABLE

ITEM	KEPT BY

8.2 List of Applicable Code of Practice and Regulations

Services	Title of Code of Practice/Standard
Electrical Wiring	SS CP5 : 1998
Lightning Protection System	SS 555 : 2010
Emergency Voice Communication System	SS 546 : 2009
Air Conditioning & Ventilation Installation	Code of Info-Communication Facilities for Buildings
Lift & Escalator Installation	SS 553 : 2016
Sprinkler System	SS 550 : 2009
Wet Riser System	SS CP 52 : 2004
Automatic Fire Alarm System	NA
Sanitary System	SS CP 10 : 2005
Plumbing System	Code of Practice on Sewerage & Sanitary Works
Town Gas/LPG Supply System	SS CP 48 : 2005
Boiler and Steam Supply System	SS 608 : 2015
Mechanical Smoke Control System	NA

SECTION 8

DESIGN INPUT & METHODOLOGY

8.3 List of Design Guide or Handbook Used

Carrier's Handbook of Air Conditioning System Design

ASHRAE Handbooks

Institute of Plumbing's Plumbing Services Design Guide

8.4 List of Pre-Consultation and Waiver

S/N	Description	Date of Application	Date of Approval	Remarks
1	*Clause 3.2.2i code of practice for Sanitary and Sewerage which require clarification or wavier. Consultation Ref No. ES20161010-07363 Wavier Ref. No. CA20161101-2611	10-Oct-2016	1-Nov-2016	To waive off discharging sanitary and kitchen waste to 1st storey, to use back existing grease separator and ejector at basement floor to pump to 1st storey IC.
2	*Clause number in Code of Practice for (Services) which require clarification or waiver. Consultation Ref No. Waiver Ref. No.			
3	*Clause number in Code of Practice for (Services) which require clarification or waiver. Consultation Ref No. Waiver Ref. No.			

*To fill in actual information

8.5 List of Applicable Quality System Procedures

Alpha Consulting Engineers Pte Ltd's Quality Management System Procedures

Section	Title	✓ where applicable
M1	Preparation of Consultancy Offer	✓
M2	Project Commissioning and Service Agreement	✓
M3	Design Control	✓
M4	Design Change Control	✓
M5	Tender Process and Evaluation	✓
M6	Authority Submission	✓
M7	Construction Process Control	✓
M8	Testing and Commissioning	✓
S1	Document Control	✓
S2	Documentation of Quality & Environmental Management System Procedure	✓
S3	Documentation of Project Quality Plan	✓
S4	Specification Control	✓
S5	Library Control	
S6	Archive Control	✓
S7	Filing Control	✓
S8	Drawing Control	✓
S9	Administration Control	✓
S10	Purchasing Control	
S11	Training Control	
S12	Computer Control	
S13	Non-Conformity and Corrective Action Procedures	✓
S14	Quality & Environmental System Audit	✓
S15	Feedback Reporting	✓
S16	Clients Feedback	✓
S17	Management Review	✓
S18	Risk Identification, Assessment & Control	✓

8.6 List of Software Used For Design/Analysis

DESCRIPTION/ PACKAGE NAME	VERSION	SUPPLIER/ SOURCE	PURPOSE	
Cophos	3.31	Zumtobel	Lighting design	
Carrier E20-II	3.21	Carrier	Programme for determination of heat load, duct size and its losses, etc.	✓
Gensize 2	2.1	Onan	Generator sizing	
Hyena	4.00.1	ACADS-BSG	Fire Sprinkler & Hydrant Analysis	
Dialux	4.11	Freeware	Lighting design	✓
Lift Traffic	7.18	Elevate	Lift traffic calculation	✓
Fault Level Calculation	11.11	ETAP	Calculation of fault level and voltage drop	

(✓*where applicable*)

SECTION 9

ENVIRONMENTAL CONSIDERATIONS

9.1 Sustainable Design Features / Criteria – NOT APPLICABLE

Item	Remarks
Green Mark criteria	-
Green Design Features	-

9.2 Site PPE Requirement

The necessary Personal Protective Equipment (detailed below) shall be provided by the main contractor / Company in accordance to the site EHS requirements prior to the site monitoring.

PPE	✓ where applicable
Safety Helmet	✓
Safety Shoes	✓
Eye Protection	NA
Ear Protection	NA
Safety Harness / Belt	NA
Others:	NA

9.3 Site Emergency Preparedness

Site staff shall comply with the site emergency preparedness and response procedure, established by the main contractor / owner, which shall include the following details.

Items	✓ where applicable
Evacuation Route	✓
Emergency Exit	✓
Assembly Point	✓
Emergency Contact List / Person	✓
Alarm system / methods	✓

SECTION 9

ENVIRONMENTAL CONSIDERATIONS

9.4 Reporting of Environmental Non-conformances

When encountering environmental non-conformances, Site Staff shall be responsible to feedback to the main contractor.

9.5 List of Applicable Environmental Management System Procedures

Alpha Consulting Engineers Pte Ltd's Environmental Management System Procedures

Section	Title	✓ where applicable
E1	Aspect / Impact Identification, Risk Assessment & Risk Control	✓
E2	Identifying Legal & Other Requirements	✓
E3	Objectives, Targets & Programmes	✓
E4	Communication	✓
E5	Emergency Preparedness & Response	✓
E6	Monitoring & Measurement	✓
E7	Control of Air & Noise Pollution	✓
E8	Management of Wastes	✓

SECTION 10

CLIENT'S REQUIREMENTS

10.1 List of Output Required by Client:-

Item	* Remarks
M&E Design Report	A
M&E Cost Estimate Report	A
Pre-Qualification of Tenderers	NA
Tender Documents	A
Tender Report	A
Payment Valuation for QS	A
Certificates of Supervision for TOP/CSC	I

* *Remarks*

A: for approval *C: for comment* *I: for Information* *Re: for record*

Other purposes and for action: please specify.

10.2 Specific Procedures Required By Client *(If applicable)*

NOT APPLICABLE

SECTION 11

LIST OF SUB-JOB

11.1 List of Sub-Job Numbers – NOT APPLICABLE

Sub Job No	Description	Allocation Details