Alpha
Consulting Engineers Pte Ltd

PROJECT QUALITY PLAN

NIM COLLECTION PHASE 3

For

SINGAPORE UNITED ESTATES (PTE) LTD

Copy No.	1

Prepared By : Khor Bee Khoon/ Thin Thin Tun

Authorised By : Choong Choon Guan

Date : 29 October 2024

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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	6282	29 October 2024

1.2 Revision Record

Revision	Date of Issue	Section Reference	Page(s)	Remarks
0	11 January 2021	1 to 11	29	+ 1 page (Section 4.1 – Overall Programme)
1	7 February 2022	1 to 11	29	+ 1 page (Section 4.1 – Overall Programme) + 1 page (Section 9.1 – Sustainable Design Features/Criteria)
2	6 January 2023	1 to 11	29	+ 15 pages (Section 4.1 – Overall Programme) + 1 page (Section 9.1 – Sustainable Design Features/Criteria)
3	9 November 2023	1 to 11	30	+ 1 page (Section 4.1 – Overall Programme) + 1 page (Section 9.1 – Sustainable Design Feature/Criteria)
4	29 October 2024	1 to 11	30	+ 1 page (Section 4.1 – Overall Programme) + 1 page (Section 9.1 – Sustainable Design Feature/Criteria)

SECTION 2

PROJECT INFORMATION

2.1 Project Description

Type of Development	Residential

Statistics of Development	
Site Area, m²	26,025.96
Nett Floor Area, m²	-
Gross Floor Area, m²	35,246.65
Covered Carpark, m²	-
No. of Covered Carpark Lots	-
No. of Apartments/Houses	132
No. of Beds (for Hospitals)	-
No. of Guestroom (for Hotels)	-
No. of Blocks / No. of Storeys	5
Green Mark Category	Green Mark Certified
No. of Phases	1

2.2 Project Cost

M&E Services Cost Plan (S$ x 1M)										
Services	EI	ACVI	LEI	FFAI	PSI	SPFI				
Estimate	7.4	3.3	8.58	-	6.91	0.27				
Awarded	10.9	1.99	8		12.34	0.199				

Total Project Construction Cost (S$ x1M)			
	Site Clearance	Piling Works	Main Contract
Estimate			128.5
Awarded			162.77

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

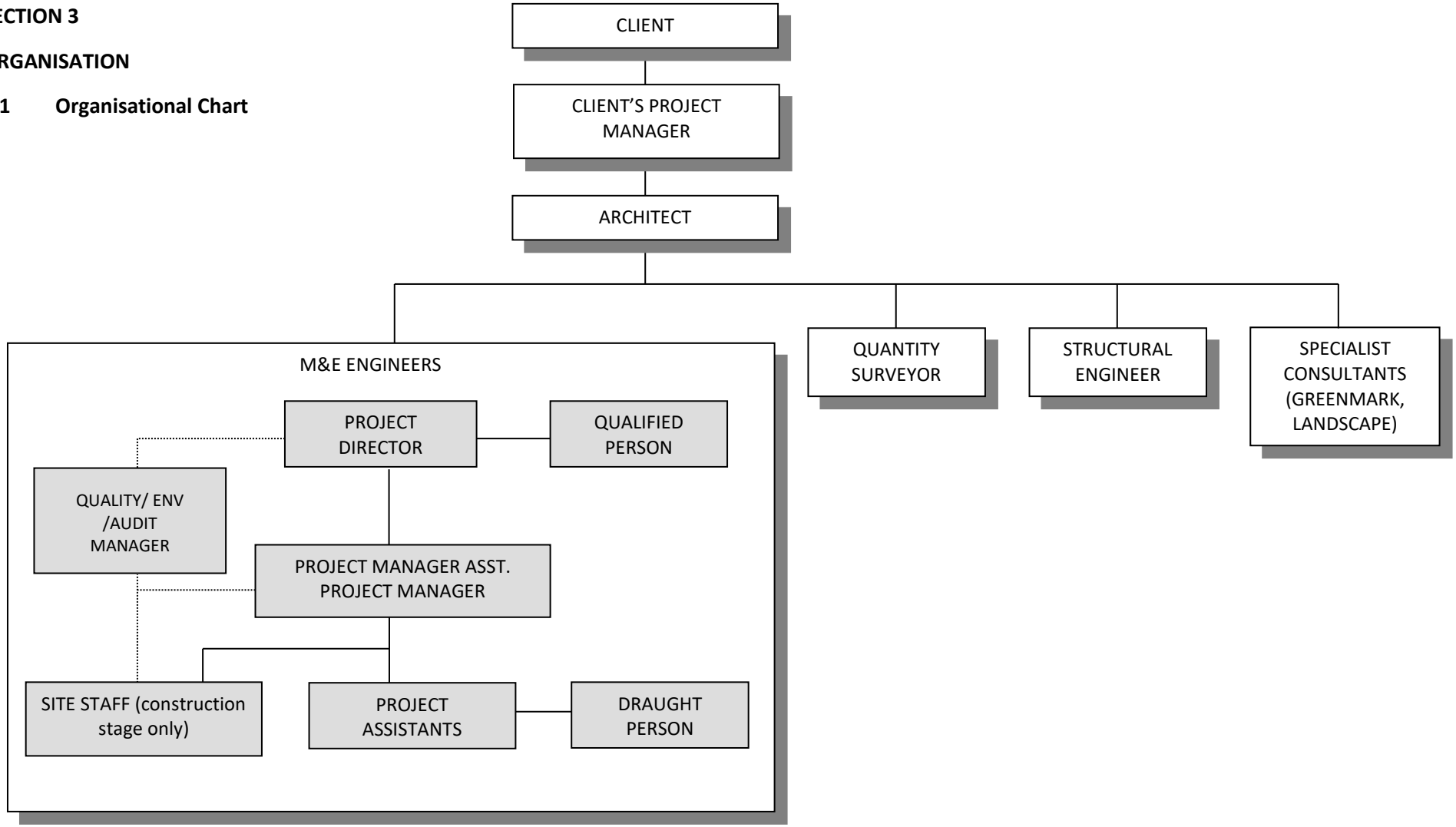
EJECTOR & DIVERTER		SUMP PUMP	✓	FUEL OIL TANK		LIFT & ESCALATOR	✓	PRESSURE VESSEL		HOISTS		FOAM	

(✓*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		Khor Bee Khoon (KBK)
Assistant Project Manager		-
Project Assistant (Mech)		-
Project Assistant (Elect)		Thin Thin Tun (TTT)
Draughtsperson		Common Pool
Resident Engineer (M&E)		-
Assistant Resident Engineer (M&E)		-
Clerk-of-Work (M&E)		-

3.3 Client/Client's Representatives

Client: Singapore United Estates (Pte) Ltd

Address: 2 Bukit Merah Central
#13-01
Singapore 159835

Tel: 6890 0333

Fax: 6536 1858

Client's Representatives:-

Name of Company	Contact Person	Contact
Singapore United Estates	Name: Ms Yvonne Yan Position: Head of Project	Tel: 6890 0320 Fax: 6536 1858 Handphone: – Email: bselnimp3@bukitsembawang.sg
Singapore United Estates	Name: Mr Tan Sze Khoon Position: Project Manager	Tel: 6890 0313 Fax: 6536 1858 Handphone: –9155 6342 Email: bselnimp3@bukitsembawang.sg
Singapore United Estates	Name: Ms Yunn Ru Position: Marketing Manager	Tel: 6890 6365 Fax: 6536 1858 Handphone: Email: bselnimp3@bukitsembawang.sg
	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 W Architects Pte Ltd	Name: Mr Chew Zi Yan Position: Project Architect	Tel: 66726214 Fax: 6733 3366 Handphone: 9225 6939 Email: amkp3@w-architects.com.sg
Quantity Surveyor WP Partnership (S) Pte Ltd	Name: Ms Ting Su Ning Position: Quantity Surveyor	Tel: 6533 0822 Fax: 6533 2833 Handphone: 9074 7628 Email: 10285nim@wtpartnership.com.sg
Structural Engineer KTP Consultants Pte Ltd	Name: Mr Jinn Hao Gan Position: Associate Director	Tel: 6273 5622 Fax: 6273 8454 Handphone: 9386 6980 Email: pj-19.054_NimCollection@ktpworld.com
Interior Designer 2nd Edition Pte Ltd	Name: Ms Hilary Loh Position: Design Director	Tel: 6298 8829 Fax: – Handphone: 9362 9363 Email: hilary@2ndedition.com.sg
Interior Designer Janet McGlennon Interiors Pte Ltd	Name: Ms Cheryl Boey Position: ID Designer	Tel: 6733 5580 Fax: 6733 5117 Handphone: – Email: cheryl@jmi.com.sg
Lighting Consultant Switch	Name: Mr Takeo Sugamata Position: Director	Tel: 8123 6716 Fax: – Handphone: – Email: takeo@switch.pro
Landscape Consultant Coen Design International	Name: Ms Norish binte Rosman Position: Project Manager	Tel: 6844 9888 Fax: 6844 9555 Handphone: – Email: 385-nim3@coen-design.com
Green mark Consultant Building System and Diagnostics Pte Ltd	Name: Tiffany Kwan Position: Executive Engineer	Tel: 6560 0702 Fax: – Handphone: 9388 9607 Email: nim3.g1121@bsd.sg

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 Seah Construction Pte Ltd		Name: Jaswinder Singh Position: Project Manager	Tel: 6288 6969 Fax: 6280 2298 Handphone: 9003 5286 Email: cng040669@gmail.com
Air Conditioning & Ventilation Installation Sub-Contractor Daikin Air-Conditioning (Singapore) Pte Ltd	NSC	Name: Kenneth Goh Position: Sales Manager	Tel: 6583 8888 Fax: – Handphone: 8100 6808 Email: kenneth.goh@daikin.com.sg
Plumbing & Sanitary Installation Sub-Contractor Nam Fang Co Pte Ltd	DSC	Name: Andrew Chew Position: Director	Tel: 6280 3123 Fax: 6281 2329 Handphone: 9746 8426 Email: namfang@singnet.com.sg
Electrical Installation Sub-Contractor Wah Syn Engineering Pte Ltd	DSC	Name: K.P Wong Position: Director	Tel: 6747 3785 Fax: 6747 9681 Handphone: 9756 8025 Email: wsepl@singnet.com.sg
Lift & Escalator Installation Sub-Contractor Otis Elevator Company (S) Pte Ltd	DSC	Name: Mr Stanley Fong Position: Business Development Manager	Tel: 6298 7733 Fax: 6297 2646 Handphone: 9383 1286 Email: stanley.fong@otis.com.sg
Fire Fighting & Alarm Installation Sub-Contractor	N.A	Name: Position:	Tel: Fax: Handphone: Email:
Swimming Pool Filtration Plant Installation Sub-Contractor Men's Pool Engineering Pte Ltd	NSC	Name: Mr Sankar Position: General Manager	Tel: 6266 0238 Fax: 6261 4414 Handphone: 9129 9203 Email: project@menspool.com.sg
Carpark System Installation Sub-Contractor	N.A	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	Mr Abbas	6916 8557
(b) Diversion		
SP Services: (a) Customer Supply		
(b) Installation		
(c) Meter Section		
(d) Road Lighting		
TFCC: (a) SCV		
(b) SingTel		
(c) IMDA	Mr Seah Koon Chye	6211 1751
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	Mr Chia Choon Kwang (Water Supply Network Dept) Ms Nazilah Sapuan (PUB Centralised Services Department)	6380 9825/ 9828 2203 CHIA_Choon_Kwang@pub.gov.sg 9247 5694 nazilah_sapuan@pub.gov.sg
(c) Diversion		
(d) NEWater		
PUB Water Reclamation (Network) Dept: (a) Building Plan/CBPU	Mr Rengaraj Prusotamen	6731 3090 Rengaraj_prusotamen@pub.gov.sg
(b) M&E Plan		
(c) Diversion		
City Gas Pte Ltd: (a) Planning/Submission	NA	
(b) Installation/Inspection		

3.6 Authorities (Cont'd)

Authorities/Department	Contact Person	Tel/Fax Nos./E-mail
PowerGas Pte Ltd (a) Diversion		
NEA (Pollution Control) (a) Planning/Submission		
(b) Inspection		

SECTION 4

PROGRAMME

4.1 Overall Programme – To refer to the Master Programme attached.

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
1	**Nim Road 132 Units - Phase 3 - 32 months - (1st Nov 2022 to 30th June 2025)**	907 days?	Sat 26/11/22	Mon 17/11/25
2	**Taking over of Site**	**95 days**	**Mon 2/1/23**	**Wed 22/3/23**
3	Site Preparation	21 days	Mon 2/1/23	Wed 25/1/23
4	Existing Cable Detention Sumes	30 days	Mon 2/1/23	Sat 4/2/23
5	Existing Cable Diversion	30 days	Mon 2/1/23	Sat 4/2/23
6	70% Outstanding Piling Work (EST 01- Added)	14 days	Mon 2/1/23	Fri 27/1/23
7	Pre-construction Survey for C/I's with approval	22 days	Fri 27/1/23	Wed 22/2/23
8	**Construction Work Submission**	**136 days**	**Sat 26/11/22**	**Thu 1/6/23**
9	ERSS submission, Approval & installation	14 days	Mon 2/1/23	Tue 17/1/23
10	Instrumentation Monitoring set up at site	14 days	Tue 17/1/23	Thu 2/2/23
11	CAAS for crane erection & Crane erection	14 days	Mon 2/1/23	Tue 17/1/23
12	Tower crane submission, Approval & installation	21 days	Mon 2/1/23	Mon 27/2/23
13	ECW submission, Approval & installation	21 days	Mon 2/1/23	Wed 25/1/23
14	POWS Submission & Approval	22 days	Wed 22/2/23	Mon 20/3/23
15	PUB Drain Work Submission & Approval	14 days	Mon 2/1/23	Thu 19/1/23
16	Pre-inspection Plans	14 days	Mon 2/1/23	Tue 17/1/23
17	Pre-Condition Survey Commission	14 days	Mon 2/1/23	Tue 17/1/23
18	**ST Submissions**	**128 days**	**Tue 3/1/23**	**Thu 1/6/23**
19	Aluminium ST submission & Approval	90 days	Mon 17/4/23	Thu 1/6/23
20	Metal Staircase ST Submission & Approval	45 days	Tue 3/1/23	Fri 24/2/23
21	Metal Railing ST Submission & Approval	90 days	Mon 17/4/23	Thu 1/6/23
22	**NOCs Confirmation**	**638 days**	**Mon 8/1/23**	**Tue 7/1/25**
23	**Aluminium Contractor Confirmation**	**14 days**	**Tue 17/1/23**	**Thu 2/2/23**
24	Confirmation of supplier	90 days	Mon 2/1/23	Sat 8/4/23
25	Submission of shop drawings & materials for approv	45 days	Fri 10/2/23	Sat 25/3/23
26	To indent for mock up materials	90 days	Mon 17/4/23	Sat 29/7/23
27	To indent for actual units in batches / Powder Coat	450 days	Fri 5/5/23	Fri 12/7/24
28	Glasses			6/10/25
29	**Steel Erector Confirmation**	**14 days**	**Tue 17/1/23**	**Thu 2/2/23**
30	Confirmation of supplier	90 days	Mon 2/1/23	Sat 8/4/23
31	Submission of shop drawings & materials for approv	60 days	Mon 6/2/23	Sat 15/4/23
32	To indent for mock up MS system	150 days	Mon 17/4/23	Sat 7/10/23
33	To indent for actual units in batches	385 days	Mon 1/5/23	Mon 22/7/24
34	**Precast Concrete Supplier (Based on max indent period of 90 days)**	**54 days**	**Tue 24/1/23**	**Thu 9/3/23**
35	Stone Supplier confirmation	14 days	Tue 24/1/23	Thu 9/2/23
36	Stone - control sample selection	30 days	Fri 10/2/23	Fri 17/3/23
37	Cut off date for mock up units, Plot 11, 14 & 32	90 days	Fri 27/1/23	Fri 12/5/23
38	Cut off date for plot 1 - 10 units	120 days	Fri 10/2/23	Fri 30/6/23
39	Cut off date for plot 11 - 27	150 days	Fri 3/3/23	Fri 20/8/23
40	Cut off date for remaining luxury and premium plot plots	150 days	Fri 3/3/23	Fri 20/8/23
41	To indent the materials for the project by batches	90 days	Fri 17/3/23	Fri 30/6/23
42	Schedule To Start The Actual Unit Dry Up	14 days	Tue 11/7/23	Thu 27/7/23
43	**Sanitary Ware and Fittings confirmation**	**14 days**	**Tue 24/1/23**	**Thu 9/2/23**
44	Confirmation of supplier	90 days	Mon 2/1/23	Sat 8/4/23
45	Submission of shop drawings & materials for approv	60 days	Mon 6/2/23	Sat 15/4/23
46	To indent for mock up materials	90 days	Mon 17/4/23	Sat 29/7/23
47	To indent for actual units in batches	448 days	Fri 12/5/23	Wed 11/12/24
48	**ACMV & Smarthome Contractor Confirmation**	**14 days**	**Tue 17/1/23**	**Thu 2/2/23**
49	Confirmation of supplier	90 days	Mon 2/1/23	Sat 8/4/23
50	Submission of shop drawings & materials for approv	60 days	Mon 6/2/23	Sat 15/4/23
51	To indent for mock up materials	90 days	Mon 3/7/23	Sat 14/10/23
52	To indent for actual units in batches	448 days	Fri 12/5/23	Wed 11/12/24
53	**Electrical Supplier Confirmation**	**14 days**	**Tue 24/1/23**	**Thu 9/2/23**
54	Confirmation of supplier	90 days	Mon 2/1/23	Sat 8/4/23
55	Submission of shop drawings & materials for approv	60 days	Mon 6/2/23	Sat 15/4/23
56	To indent the materials for the project by batches	180 days	Tue 11/4/23	Tue 7/11/23
57	**Kitchen Appliances Supplier Confirmation**	**30 days**	**Fri 27/1/23**	**Fri 9/3/23**
58	Confirmation of supplier	90 days	Mon 2/1/23	Sat 8/4/23
59	Submission of appliances & ventilation requirements for approval	90 days	Mon 6/2/23	Sat 15/4/23
60	To indent for Mock Up	150 days	Mon 17/4/23	Sat 7/10/23
61	To indent the materials for the project by batches	450 days	Fri 12/5/23	Wed 11/12/24
62	**Landscaping Contractor Confirmation**	**14 days**	**Tue 17/1/23**	**Thu 2/2/23**
63	Confirmation of supplier	90 days	Tue 17/1/23	Sat 22/4/23
64	Submission of samples for approval	90 days	Tue 21/2/23	Tue 23/5/23
65	To indent for mock up units	90 days	Mon 10/7/23	Sat 14/10/23
66	To indent the materials for the project by batches	285 days	Fri 6/2/23	Tue 27/2/24
67	**Ironmongery and Digital Locks Contractor confirmation**	**14 days**	**Tue 17/1/23**	**Thu 2/2/23**
68	Confirmation of supplier	90 days	Mon 2/1/23	Sat 8/4/23
69	Submission of Samples & Drawings for approval	90 days	Mon 17/4/23	Sat 29/7/23
70	Fabrication for Mock Up	90 days	Wed 9/8/23	Wed 13/12/23
71	To indent the materials for the project by batches	400 days	Fri 22/3/23	Wed 1/1/25
72	**Landscaping Contractor Confirmation**	**210 days**	**Tue 9/3/23**	**Tue 5/12/23**
73	Confirmation of supplier	90 days	Tue 9/3/23	Tue 17/7/23
74	Submission of shop drawings and proposals for approval	150 days	Tue 11/10/23	Tue 9/4/24
75	**Timber Floor Contractor Confirmation**	**310 days**	**Fri 7/4/23**	**Mon 23/12/24**
76	Confirmation of supplier	90 days	Fri 7/4/23	Fri 11/8/23
77	Submission of Samples for approval	90 days	Tue 25/4/23	Tue 6/11/23
78	To indent for mock up units	90 days	Mon 14/8/23	Mon 18/12/23
79	To indent the materials for the project by batches	380 days	Fri 8/9/23	Mon 26/1/26
80	**Ironmonery and Digital Lockset Supplier confirmation**	**344 days**	**Fri 7/4/23**	**Wed 5/6/24**
81	Confirmation of supplier	90 days	Fri 7/4/23	Fri 11/8/23
82	Submission of Samples for approval	90 days	Fri 25/8/23	Fri 5/1/24
83	To indent for mock up units	75 days	Wed 3/7/23	Tue 31/10/23
84	To indent the materials for the project by batches	300 days	Fri 29/9/23	Wed 5/1/25
85	**Precast Columns & Walls Submission, Approval & its Schedule**	**315 days**	**Mon 2/1/23**	**Mon 5/2/24**
86	Design & Materials Submission & Confirmation	50 days	Mon 2/1/23	Tue 28/3/23
87	Fabrication of Moulds / Tool & Fine Tunes	90 days	Tue 28/3/23	Thu 27/7/23
88	Delivery of Precast Concrete Components for mock	90 days	Fri 28/7/23	Fri 1/12/23
89	**Cliff Frame Design, Submission, Approval & Actual Mock Up**	**75 days**	**Mon 2/1/23**	**Fri 31/3/23**
90	Under-ram critical element planning	35 days	Mon 2/1/23	Fri 24/2/23
91	Design & Materials Submission & Confirmation	50 days	Mon 2/1/23	Sat 11/3/23
92	Fabrication of Moulds / Tool & Fine Tunes	45 days	Tue 28/2/23	Fri 31/3/23
93	Start of Off Form Productions for stage 1B	14 days	Tue 4/4/23	Thu 20/4/23
94	**Structural Steel Supplier**	**225.13 days**	**Mon 2/1/23**	**Mon 26/2/24**
95	**SD & D Services Shop Drawings & Materials - Approval**	**50 days**	**Mon 2/1/23**	
96	Type A / A2 / B / B1 / B2 / C	50 days	Mon 2/1/23	Tue 28/2/23
97	Type A1 / C1 / C2 / D / E / F / G / H / I / J	90 days	Fri 10/2/23	Thu 15/6/23
98	Combined Services Plans For Both Type of Units	80 days	Fri 3/6/23	Mon 4/9/23
99	**External Sewer Shop Drawing:**			Mon 2/1/23
100	External sewer Shop Drawing	30 days	Mon 2/1/23	Sat 4/2/23
101	**External Water Main Laid in Pipes To MDP & Unit Meter Compartments**			Mon 2/1/23
102	External Telecom Mnh and Lead In Pipes To MDP & Unit Meter Compartments	30 days	Mon 2/1/23	Sat 4/2/23
103	**External Water Main & Hydrants Shop Drawings:**			Mon 2/1/23
104	External Water Main & Hydrants Shop Drawings	30 days	Mon 2/1/23	Sat 4/2/23
105	**External Electrical Drawings To ESS and Unit Meter Compartments**			Mon 2/1/23
106	External Electrical Drawings To ESS and Unit Meter Compartments	30 days	Mon 2/1/23	Sat 4/2/23
107	**Development Lighting:**			Mon 2/1/23
108	External street Lighting shop drawings	45 days	Mon 2/1/23	Wed 22/2/23
109	**Architectural Shop Drawings & Materials - Approval**	**239.13 days**	**Mon 2/1/23**	**Mon 26/2/24**
110	**Concrete Body Plan**	**120 days**	**Mon 2/1/23**	**Tue 4/4/23**
111	Type A / A2 / B / B1 / B2 / C	50 days	Mon 2/1/23	Tue 28/2/23
112	Type A1 / C1 / C2 / D / E / F / G / H / I / J	90 days	Fri 10/2/23	Thu 15/6/23
113	**Antimonia Key Plans**	**90 days**	**Mon 2/1/23**	**Sat 1/4/23**
114	Type A / A2 / B / B1 / B2 / C	30 days	Mon 2/1/23	Sat 4/2/23
115	Type A1 / C1 / C2 / D / E / F / G / H / I / J	60 days	Mon 2/1/23	Sat 1/4/23
116	**Setting Out Plan**	**130 days**	**Mon 2/1/23**	**Thu 1/6/23**
117	Setting Out Plans For Type A / A2 / B / B1 / B2 / C	90 days	Mon 2/1/23	Thu 1/6/23
118	Setting Out Plans For Type A1 / C1 / C2 / D / E / F / G / H / I / J	90 days	Tue 28/3/23	Thu 1/6/23
119	**Wall Type Key Plans**	**90 days**	**Mon 2/1/23**	**Sat 1/4/23**
120	Type A / A2 / B / B1 / B2 / C	30 days	Mon 2/1/23	Sat 4/2/23
121	Type A1 / C1 / C2 / D / E / F / G / H / I / J	60 days	Mon 2/1/23	Sat 1/4/23
122	**Lift Interior Finishing**	**90 days**	**Mon 5/2/23**	**Tue 11/4/23**
123	Lift Interior Finishings	50 days	Mon 13/2/23	Tue 11/4/23
124	**Metal Staircases**	**90 days**	**Mon 3/2/23**	**Sat 4/2/23**
125	All types	90 days	Mon 3/2/23	Sat 4/2/23
126	**Railings**	**120 days**	**Mon 3/2/23**	**Sat 1/4/23**
127	Type A / A2 / B / B1 / B2 / C	120 days	Mon 3/2/23	Thu 1/6/23
128	Type A1 / C1 / C2 / D / E / F / G / H / I / J	60 days	Fri 28/4/23	Fri 7/7/23
129	**Timber Doors Shop Drawings & Materials - Apv**	**120 days**	**Sat 29/7/23**	**Sat 30/12/23**
130	For all types & its Materials Selections	120 days	Mon 2/1/23	Sat 29/5/23
131	**Metal Staircases**	**120 days**	**Sat 29/7/23**	**Sat 30/12/23**
132	For all types & its Materials Selections	120 days	Mon 2/1/23	Sat 29/5/23
133	**Railings**	**120 days**	**Sat 29/7/23**	**Sat 30/12/23**
134	For all types & its Materials Selections	120 days	Mon 2/1/23	Sat 29/5/23
135	**Ceiling frame and board**	**120 days**	**Sat 29/7/23**	**Sat 30/12/23**
136	For all types & its Materials Selections	120 days	Mon 2/1/23	Sat 29/5/23
137	**Cabinets and Wardrobe**	**120 days**	**Sat 29/7/23**	**Sat 30/12/23**
138	For all types & its Materials Selections	120 days	Mon 2/1/23	Sat 29/5/23
139	**Tiles & Marble Setting Out Plan**	**149 days**	**Mon 2/1/23**	**Mon 28/8/23**
140	For all types & its Materials Selections	145 days	Mon 2/1/23	Mon 28/8/23
141	**Timber Floor Setting out**	**120 days**	**Sat 29/7/23**	**Sat 30/12/23**
142	For all types & its Materials Selections	120 days	Mon 2/1/23	Sat 29/5/23
143	**Aircon Timber Grille**	**120 days**	**Mon 2/1/23**	**Fri 30/6/23**
144	For all types & its Materials Selections	120 days	Mon 2/1/23	Fri 30/6/23
145	**RWDP and Its Drainage System to External Dr**	**149 days**	**Mon 2/1/23**	**Thu 1/6/23**
146	Type A / A2 / B / B1 / B2	50 days	Mon 2/1/23	Tue 28/3/23
147	Type A1 / C1 / C2 / D / E / F / G / H / I / J	90 days	Fri 10/2/23	Thu 15/6/23
148	**Boundary Wall & Fence**	**221 days**	**Mon 2/1/23**	**Fri 15/9/23**
149	Type A / A2 / B / B1 / B2 / C	120 days	Mon 2/1/23	Fri 30/6/23
150	Type A1 / C1 / C2 / D / E / F / G / H / I / J	90 days	Fri 28/4/23	Fri 15/9/23
151	**Autogate**	**90 days**	**Tue 4/4/23**	**Mon 7/7/23**
152	For all types & its Materials Selections	90 days	Tue 4/4/23	Mon 7/7/23
153	**House Signage**	**150 days**	**Tue 4/4/23**	**Mon 25/9/23**
154	For all types & its Materials Selections	150 days	Tue 4/4/23	Mon 25/9/23
155	**Stage 1A - Construction of 4.5m Wide Opened Box Drain At Zone 1**	**275 days**	**Fri 17/3/23**	**Thu 1/2/24**
156	**Zone 7 K-3 Wide Box Drain**	**275 days**	**Fri 17/3/23**	**Thu 1/2/24**
157	Excavation of Opened Box Drain	130 days	Fri 17/3/23	Wed 16/8/23
158	Excavation of Opened Box Drain Construction	120 days	Wed 29/3/23	Thu 7/9/23
159	Diversion of Existing Open Drain At Zone 2 To newly form K-3 wide drain profile 16 Months from	12 days	Thu 7/9/23	Thu 21/9/23
160	Installation of Mf/steel bailing piles by Piling Contractor Including Excavation & Pilecap	30 days	Thu 14/9/23	Fri 13/10/23
161	Reinforcement / Formwork / Casting of K-3 m wide	110 days	Tue 4/4/23	Thu 10/8/23
162	Architectural and Backfilling work to complete box	150 days	Thu 10/8/23	Thu 1/2/24
163	**Stage 2A - Construction of 4.5m Wide Opened Box Drain At Zone 3 to Main Road**	**320 days**	**Fri 4/5/23**	**Thu 21/3/24**
164	Installation of Shoring	180 days	Fri 4/5/23	Mon 29/7/23
165	Excavation of Opened Box Drain Construction	300 days	Tue 26/9/23	Sat 16/12/23
166	Reinforcement / Formwork / Casting of K-3m wide	300 days	Thu 12/10/23	Thu 24/4/24
167	Architectural and Backfilling work to complete the 4.5 wide opened drain	120 days	Thu 2/11/23	Thu 21/3/24
170	**Mock Up Units (Represent 78.8% of the Total Residential Units of the Whole**	**349 days**	**Fri 27/1/23**	**Sat 9/12/23**
171	Type A, Plot 1 - 10 units (Mock Up)	294 days	Tue 28/3/23	Sat 9/5/24
172	Type B, Plot 11, represents 16 units - 1.9%	311 days	Fri 27/1/23	Thu 25/1/24
173	Type C, Plot 32, represents 2 units - 1.5%	281 days	Fri 3/3/23	Thu 25/1/24
174	**Stage 1B - Construction of Zone 1 Main Building Work - Plot 1 to Plot 55**	**426 days**	**Mon 13/3/23**	**Mon 22/7/24**
175	**Pilecap (Inculsive of Excavation / Pile Head Cutting / ECC Corrections)**	**250 days**	**Mon 13/3/23**	**Fri 29/12/23**
176	Zone 1A (Plot 13 - 27) - 15 units	55 days	Mon 13/3/23	Fri 26/5/23
177	Zone 1C (Plot 28 - 41) - 14 units	75 days	Tue 16/5/23	Fri 25/8/23
178	Zone 1A (Plot 1 - 12) / ESS / MSP - 12 units	60 days	Fri 1/9/23	Fri 24/11/23
179	Zone 1D (Plot 42 - 55) - 14 units	60 days	Fri 20/10/23	Fri 29/12/23
180	**Underground Services (Inclusive of detention drain and all lead in pipes of Elec / Tel / Internet / Water To Meter Compartments.)**	**250 days**	**Wed 25/3/23**	**Mon 12/2/24**
181	Zone 1B (Plot 13 - 27) - 15 units	50 days	Wed 29/3/23	Fri 26/5/23
182	Zone 1C (Plot 28 - 41) - 14 units	60 days	Thu 1/6/23	Wed 16/8/23
183	Zone 1A (Plot 1 - 12) / ESS / MSP - 12 units	80 days	Mon 28/8/23	Mon 4/11/23
184	Zone 1D (Plot 42 - 55) - 14 units	50 days	Mon 6/11/23	Mon 15/1/24
185	**Ground Beam**	**250 days**	**Mon 17/4/23**	**Fri 22/3/24**
186	Zone 1B (Plot 13 - 27) - 15 units	50 days	Wed 26/4/23	Fri 23/6/23
187	Zone 1C (Plot 28 - 41) - 14 units	70 days	Tue 20/6/23	Sat 9/9/23
188	Zone 1A (Plot 1 - 12) / ESS / MSP - 12 units	65 days	Fri 15/9/23	Thu 30/11/23
189	Zone 1D (Plot 42 - 55) - 14 units	50 days	Fri 24/11/23	Fri 2/2/24
190	**1st Slp**	**255 days**	**Thu 11/5/23**	**Mon 4/3/24**
191	Zone 1B (Plot 13 - 27) - 15 units	50 days	Wed 31/5/23	Tue 1/8/23
192	Zone 1C (Plot 28 - 41) - 14 units	80 days	Tue 25/7/23	Thu 26/10/23
193	Zone 1A (Plot 1 - 12) / ESS / MSP - 12 units	65 days	Tue 10/10/23	Mon 29/1/24
194	Zone 1D (Plot 42 - 55) - 14 units	55 days	Mon 13/11/23	Mon 4/3/24
195	**Mezzanine Level**	**225 days**	**Thu 27/7/23**	**Mon 11/4/24**
196	Zone 1B (Plot 13 - 27) - 15 units	75 days	Wed 6/9/23	Tue 19/12/23
197	Zone 1C (Plot 28 - 41) - 14 units	90 days	Wed 22/11/23	Tue 26/3/24
198	Zone 1A (Plot 1 - 12) / ESS / MSP - 12 units	75 days	Fri 8/11/23	Tue 20/2/24
199	Zone 1D (Plot 42 - 55) - 14 units	90 days	Fri 12/1/24	Mon 15/4/24
200	**2nd Slp**	**225 days**	**Mon 21/8/23**	**Thu 9/5/24**
201	Zone 1B (Plot 13 - 27) - 15 units	75 days	Mon 11/9/23	Thu 14/12/23
202	Zone 1C (Plot 28 - 41) - 14 units	90 days	Mon 18/9/23	Sat 30/12/23
203	Zone 1A (Plot 1 - 12) / ESS / MSP - 12 units	75 days	Fri 8/11/23	Tue 20/2/24
204	Zone 1D (Plot 42 - 55) - 14 units	90 days	Tue 6/2/24	Thu 9/5/24
205	**3rd Slp**	**225 days**	**Thu 16/8/23**	**Mon 3/6/24**
206	Zone 1B (Plot 13 - 27) - 15 units	75 days	Mon 11/9/23	Thu 14/12/23
207	Zone 1C (Plot 28 - 41) - 14 units	90 days	Mon 18/9/23	Sat 30/12/23
208	Zone 1A (Plot 1 - 12) / ESS / MSP - 12 units	75 days	Fri 8/11/23	Tue 20/2/24
209	Zone 1D (Plot 42 - 55) - 14 units	90 days	Tue 6/2/24	Thu 9/5/24
210	**Attic**	**225 days**	**Mon 9/10/23**	**Thu 27/6/24**
211	Zone 1B (Plot 13 - 27) - 15 units	75 days	Mon 9/10/23	Thu 4/1/24
212	Zone 1C (Plot 28 - 41) - 14 units	90 days	Mon 6/11/23	Sat 17/2/24
213	Zone 1A (Plot 1 - 12) / ESS / MSP - 12 units	75 days	Fri 8/11/23	Tue 20/2/24
214	Zone 1D (Plot 42 - 55) - 14 units	90 days	Tue 26/3/24	Thu 27/6/24
215	**Roof**	**225 days**	**Thu 2/11/23**	**Mon 22/7/24**
216	Zone 1B (Plot 13 - 27) - 15 units	75 days	Thu 2/11/23	Mon 26/2/24
217	Zone 1C (Plot 28 - 41) - 14 units	90 days	Wed 29/11/23	Wed 13/3/24
218	Zone 1A (Plot 1 - 12) / ESS / MSP - 12 units	75 days	Fri 8/12/23	Tue 27/2/24
219	Zone 1D (Plot 42 - 55) - 14 units	90 days	Tue 2/4/24	Thu 4/7/24
220	**Stage 1C - Construction of Zone 1 Main Building Work (Plot 122-132, Plot 84-96 & Plot 80-87) - Total 28 Units**	**294 days**	**Wed 5/5/23**	**Fri 16/6/24**
221	**Pilecap (Inculsive of Excavation / Pile Head Cutting / ECC Corrections)**	**120 days**	**Wed 5/5/23**	**Wed 25/7/23**
222	Zone 1C (Plot 122 - 132) - 11 units	55 days	Wed 5/5/23	Thu 6/7/23
223	Zone 1F (Plot 80 - 96) - 9 units	55 days	Mon 22/5/23	Mon 24/7/23
224	Zone 1G (Plot 84 - 87) - 4 units	30 days	Mon 26/6/23	Sat 29/7/23
225	**Underground Services (Inclusive of detention drain and all lead in pipes of Elec / Tel / Internet / Water To Meter Compartments.)**	**120 days**	**Fri 25/5/23**	**Fri 6/10/23**
226	Zone 1C (Plot 122 - 132) - 11 units	50 days	Fri 26/5/23	Mon 7/7/23
227	Zone 1F (Plot 80 - 96) - 9 units	55 days	Wed 7/6/23	Wed 9/8/23
228	Zone 1G (Plot 84 - 87) - 4 units	30 days	Mon 26/6/23	Sat 29/7/23
229	**Ground Beam**	**120 days**	**Wed 1/6/23**	**Wed 25/10/23**
230	Zone 1C (Plot 122 - 132) - 11 units	55 days	Wed 1/6/23	Thu 10/8/23
231	Zone 1F (Plot 80 - 96) - 9 units	55 days	Mon 26/6/23	Mon 28/8/23
232	Zone 1G (Plot 84 - 87) - 4 units	30 days	Tue 25/7/23	Tue 29/8/23
233	**1st Slp**	**125 days**	**Mon 3/7/23**	**Fri 24/11/23**
234	Zone 1C (Plot 122 - 132) - 11 units	60 days	Mon 3/7/23	Sat 9/9/23
235	Zone 1F (Plot 80 - 96) - 9 units	50 days	Wed 16/7/23	Wed 13/9/23
236	Zone 1G (Plot 84 - 87) - 4 units	35 days	Thu 31/8/23	Fri 29/9/23
237	**Mezzanine Level**	**140 days**	**Wed 26/7/23**	**Fri 9/2/24**
238	Zone 1C (Plot 122 - 132) - 11 units	75 days	Wed 26/7/23	Sat 11/10/23
239	Zone 1F (Plot 80 - 96) - 9 units	60 days	Wed 20/9/23	Wed 13/12/23
240	Zone 1G (Plot 84 - 87) - 4 units	35 days	Thu 21/9/23	Fri 20/10/23
241	**2nd Slp**	**140 days**	**Mon 21/8/23**	**Tue 30/1/24**
242	Zone 1C (Plot 122 - 132) - 11 units	75 days	Mon 21/8/23	Wed 15/11/23
243	Zone 1F (Plot 80 - 96) - 9 units	70 days	Wed 15/11/23	Wed 14/2/24
244	Zone 1G (Plot 84 - 87) - 4 units	35 days	Thu 14/12/23	Fri 12/1/24
245	**3rd Slp**	**140 days**	**Wed 13/9/23**	**Tue 20/2/24**
246	Zone 1C (Plot 122 - 132) - 11 units	75 days	Wed 13/9/23	Sat 18/11/23
247	Zone 1F (Plot 80 - 96) - 9 units	70 days	Mon 20/11/23	Thu 21/2/24
248	Zone 1G (Plot 84 - 87) - 4 units	35 days	Wed 17/1/24	Tue 13/2/24
249	**Attic**	**260 days**	**Wed 1/5/24**	**Tue 6/5/25**
250	Zone 1A (Plot 56 - 69) - 14 units	70 days	Wed 1/5/24	Tue 6/8/24
251	Zone 1B (Plot 70 - 79) - 10 units	75 days	Fri 19/7/24	Tue 12/10/24
252	Zone 1C (Plot 97 - 108) - 12 units	75 days	Mon 14/10/24	Wed 8/1/25
253	Zone 1D (Plot 109 - 121) - 13 units	75 days	Mon 20/12/24	Wed 16/4/25
254	**Roof**	**260 days**	**Wed 1/5/24**	**Tue 6/5/25**
255	Zone 1A (Plot 56 - 69) - 14 units	70 days	Wed 1/5/24	Tue 6/8/24
256	Zone 1B (Plot 70 - 79) - 10 units	75 days	Fri 19/7/24	Tue 12/10/24
257	Zone 1C (Plot 97 - 108) - 12 units	75 days	Mon 14/10/24	Wed 8/1/25
258	Zone 1D (Plot 109 - 121) - 13 units	75 days	Mon 20/12/24	Wed 16/4/25
259	**Stage 1D - Construction of The Road At Zone 1**	**764 days**	**Thu 16/4/23**	**Sat 15/11/25**
260	Construction of the external box drains outside the unit	365 days	Thu 16/4/26	Sat 30/11/24
261	Installation of lead in pipe along the completed drain	458 days	Mon 3/7/23	Wed 30/10/24
262	Construction of Junction with Nim Road			1/12/24
263	Installation of lead in pipe of street lighting	450 days	Mon 3/7/23	Wed 30/7/25
264	Construction of road kerb	443 days	Thu 20/7/23	Wed 28/5/25
265	Construction of Approach kerb	500 days	Tue 5/7/23	Sat 7/6/25
266	Compaction of Subgrade	490 days	Wed 20/9/23	Wed 2/4/25
267	Laying of graded granite & compaction	490 days	Wed 20/9/23	Wed 2/4/25
268	Final Premix	30 days	Fri 30/5/25	Fri 4/7/25
269	Road Marking	30 days	Fri 4/7/25	Fri 8/8/25
270	Tactile / Bollards / HIU / Road Signs / Convex Mirrors / Parapet / Railing	295 days	Thu 28/8/24	Fri 8/8/25
271	Turfing	295 days	Fri 14/7/25	Sat 15/11/25
272	**Stage 2C - Construction of The Road At Zone 3**	**643 days**	**Wed 21/2/24**	**Sat 15/11/25**
273	**Stage 2C1**	**545 days**	**Wed 21/2/24**	**Sat 29/11/25**
274	Construction of the external box drains	180 days	Tue 2/4/24	Tue 29/10/24
275	Construction of road kerb	392 days	Tue 7/5/24	Tue 17/12/25
276	Compaction of Subgrade	484 days	Wed 21/2/24	Wed 31/12/25
277	Laying of graded granite & compaction	310 days	Wed 22/1/25	Wed 15/4/26
278	Final Premix	30 days	Fri 30/5/25	Fri 4/7/25
279	Road Marking	30 days	Fri 4/7/25	Fri 8/8/25
280	Tactile / Bollards / HIU / Road Signs / Convex Mirrors / Parapet / Railing	180 days	Fri 30/1/25	Fri 8/8/25
281	Turfing	135 days	Fri 14/7/25	Sat 15/11/25
282	**Stage 2C2**	**270 days**	**Fri 27/3/26**	**Fri 8/8/25**
283	Construction of the external box drains	240 days	Tue 30/12/25	Thu 19/8/26
284	Construction of road kerb	300 days	Tue 5/12/25	Thu 16/7/26
285	Compaction of Subgrade	175 days	Fri 27/3/26	Tue 17/8/26
286	Laying of graded granite & compaction	90 days	Wed 23/7/26	Wed 25/11/26
287	Final Premix	7 days	Thu 31/12/26	Fri 8/1/26
288	Road Marking	7 days	Thu 31/12/26	Fri 8/8/26
289	Tactile / Bollards / HIU / Road Signs / Convex Mirrors / Parapet / Railing	180 days	Fri 30/1/25	Fri 8/8/25
290	Turfing	135 days	Fri 14/7/25	Sat 15/11/25
291	**Stage 1B & 1C - Architectural / M & E Work**	**407 days**	**Tue 16/7/23**	**Wed 5/2/25**
292	Erection of Internal Walls	150 days	Thu 14/12/23	Tue 1/7/24
293	Installation of subframes - Alum Windows / Doors / Timber Doors c/	220 days	Thu 23/11/23	Tue 6/8/24
294	Installation of M & E concealed Services	150 days	Tue 18/7/23	Sat 30/12/23
295	Installation of Metal Work	220 days	Wed 26/7/23	Mon 1/4/24
296	Application of Waterproofing To Wet Areas	240 days	Mon 4/9/23	Tue 7/5/24
297	Floor Screeding	240 days	Wed 2/8/23	Fri 19/4/24
298	Plastering of internal walls	200 days	Wed 2/8/23	Tue 7/5/24
299	Installation of M & E concealed services in partitions a	200 days	Wed 30/8/23	Mon 4/6/24
300	Ceiling frame and board	200 days	Tue 19/12/23	Thu 19/7/24
301	Installation of M & E concealed services in Ceiling	200 days	Tue 26/12/23	Thu 17/7/25
302	Installation of Sewer Frames / Glass Panels	150 days	Fri 15/12/23	Fri 6/6/25
303	Installation of Cabinetry works & timber doors	140 days	Tue 26/12/23	Mon 30/6/25
304	Pointing work For Walls and Ceiling for base coat	130 days	Fri 15/12/25	Wed 2/7/25
305	Installation of cabinetry work & timber doors	140 days	Tue 25/2/25	Thu 7/8/25
306	Installation of M & E Final Fix	130 days	Tue 25/2/25	Sat 26/7/25
307	Installation of Sanitary wares and Fitting	100 days	Fri 25/2/25	Wed 16/7/25
308	Installation of Kitchen & shower screens	100 days	Fri 25/2/25	Wed 16/7/25
309	Progressively Handing Over of Lift Shafts	165 days	Fri 20/5/24	Tue 21/1/25
310	Installation of Lift	190 days	Tue 11/2/25	Sat 20/9/25
311	Touching up for OM	200 days	Thu 13/3/25	Sat 11/10/25
312	OM Inspection	199 days	Mon 31/3/25	Mon 27/10/25
313	**Stage 2B - Architectural / M & E Work**	**414 days**	**Mon 27/5/24**	**Mon 17/3/25**
314	**Electrical

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	4 Jul 2019	4 Jul 2019	12 Jul 2019	12 Jul 2019					05 Aug 2019
Power Supply Substation	SP PowerGrid Ltd	15 Oct 2019	7 Feb 2020	17 Feb 2020	25 Jun 2020	6 Nov 2020	18 Nov 2020	08 Sep 2021	11 Nov 2021	23 Nov 2021
LT Reticulation	SP Services Ltd	3 Mar 2022	3 Aug 2022	4 Aug 2022	10 Aug 2022					11 Aug 2022
Sanitary Installation	PUB Water Reclamation (Network) Dept	1 Jun 2022	28 Jul 2022							5 Aug 2022
Domestic Water Supply	PUB (Water Supply) Network Dept	1 Apr 2022	5 Jul 2022							21 Sep 2022
External Water Reticulation System	PUB (Water Supply) Network Dept	16 Sep 2020	2 Dec 2020							8 Dec 2020
Telephone Installation	TFCC	15 Nov 2019	27 Feb 2020		31 May 2024					14 Aug 2024
Street Lighting Submission	LTA	15 Jun 2022	20 Jun 2022	4 Jul 2022	3 Aug 2022	29 Aug 2022	21 Sep 2022	14 Jun 2024	11 July 2024	11 Jul 2024

SECTION 4

PROGRAMME

4.3 Authority Submission Status for M&E Services (Amendments) – 2nd 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	27 Feb 2024	27 Feb 2024							1 Mar 2024
Metering Layout	SP Services Ltd									
Sanitary Installation	PUB Water Reclamation (Network) Dept		6 Nov 2023							10 Jan 2024
Domestic Water Supply (External Water Reticulation System)	PUB (Water Supply) Network Dept		19 Jul 2023							25 Jul 2023
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:	
MC/EC	✓				

(✓*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	Softcopy saved in the server
Incoming Architectural Sketches/Details	
Incoming Structural Drawings	
M&E Drawings - Electrical Installation - Lift Installation - Air Conditioning & Ventilation Installation - Plumbing & Sanitary Installation - Swimming Pool & Filtration Installation	

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	I	I	-	-	
b.	Project Administration						
c.	Project Cost Estimate/Contract Cost	A	I	I	-	I	
2.	**Drawings**						
a.	Outline Design Drgs.	A	I	C	I	I	
b.	Sketch Design Drgs.	A	I	C	I	I	
c.	Final Design Drgs.	A	I	C	I	I	
d.	Shop Drawings	I	I	A	-	-	
e.	As Built Drgs.	I	I	I	-	-	
3.	**Other Document**						
a.	Specification	A	I	I	I	I	
b.	Tender Document	A	I	I	I	I	
c.	Tender Evaluation Report	A	I	I	I	I	
d.	Design Report	A	I	I	-	-	
e.	Progress Report	-	-	-	-	-	
f.	Financial Report	-	-	-	-	-	
g.	Minutes of Meeting	A	I	I	-	-	
h.	Inspection Report	I	I	I	-	-	
i.	Testing & Comm. Report	I	I	I	-	-	
j.	O & M Manual	I	I	I	-	-	

*Note: Applicable only, if the client engaged a Project Manager.

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 638 (formerly CP 5)
Lightning Protection System	SS 555 : 2018
Telephone Installation	COPIF 2018
Emergency Voice Communication System	-
Air Conditioning & Ventilation Installation	SS 553 : 2016
Lift & Escalator Installation	SS 550 : 2009
Sanitary System	Code of Practice on Sewerage & Sanitary Works
Plumbing System	SS 636 : 2018
Boiler and Steam Supply System	-
Mechanical Smoke Control System	-

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	Request for a reduced size of MDF room.	2 July 2019	5 July 2019	
2	Direct feed to sink at attic exceeding 125m RL (PUB WSN)	21 January 2021	25 March 2021	
3	Last IC more than 2.5m from site boundary	3 February 2023	7 March 2023	
4	IC top level lower than manhole top level	15 September 2023	2 November 2023	
5	To use 260mm y junction connecting to 300/400mm sewer pipe	22 September 2023	10 October 2023	

*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	Changi Light	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

Item	Remarks
Green Mark criteria	Certified
Green Design Features	Refer to attached list

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	
Ear Protection	
Safety Harness / Belt	
Others:	

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	

GREEN DESIGN FEATURES

BCA GREEN MARK



WATER

LOW FLOW FIXTURES

Reduce the household potable water consumption

WATER EFFICIENT WASHING MACHINE

Provision of water efficient washing machine for each and every household unit

ENERGY

EFFICIENT SPLIT UNIT AIR CONDITIONING SYSTEM

Provision of NEA Energy Labelling Scheme rated 5 ticks Split Unit Air Conditioning units to meet Green Mark requirement

EFFICIENT LIGHTING

Energy Efficient LED lightings at car parch and household shelter to reduce energy usage

EFFICIENT VERTICAL TRANSPORT

Use of lift with ACVVVF Inverter and sleep mode function

RENEWABLE ENERGY

Provision of solar panels up to 1.11kWp per household to harness renewable solar energy

ENVIRONMENTAL

RECYCLING BINS

Minimizes household waste while encouraging recycling

LOW VOC PAINT

Reduces indoor air contaminants that are odorous or harmful to the comfort and well-being of installers and occupants

GREEN LABELED MATERIAL

Use of Eco-friendly Cement and Green Labeled Materials with recycled content and low embodied carbon

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	A
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