Alpha
Consulting Engineers Pte Ltd

PROJECT QUALITY PLAN

PROPOSED SPRINGSIDE PHASES 14 & 15 COMPRISING 2 BLOCKS OF 4 STOREY DEVELOPMENT (1 STOREY SHOPS & 3 STOREY APARTMENTS) WITH 2 BASEMENT CARPARKS ON LOTS 02260C & 02341A MK 19 AT JALAN ULU SELETAR / SEMBAWANG ROAD (YISHUN PLANNING AREA)

For

KALLANG DEVELOPMENT PTE LTD

Copy No.	1

Prepared By: Lim Chin Woo

Authorised By: Choong Choon Guan

Date: 1 October 2014

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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	6186 - PQP	1 October 2014

1.2 Revision Record

Revision	Date of Issue	Section Reference	Page(s)	Remarks
0	1 October 2014	1 to 11	29	+4 pgs (Sect 4.1 – Overall Programme)

SECTION 2

PROJECT INFORMATION

2.1 Project Description

Type of Development	Residential

Statistics of Development	
Site Area, m²	6,329.20
Nett Floor Area, m²	-
Gross Floor Area, m²	7835.52
Covered Carpark, m²	Phase 14 – 4560 (B1: 2314; B2 – 2246) Phase 15 – 3855 (B1: 1900; B2: 1955)
No. of Covered Carpark Lots	Phase 14 – 78 lots Phase 15 – 50 lots
No. of Apartments/Houses	Phase 14 -19
No. of Beds (for Hospitals)	N.A
No. of Guestroom (for Hotels)	N.A
No. of Blocks / No. of Storeys	2 Blocks / 2 Basement + 4 Storeys + Roof Terrace
Green Mark Category	N.A.
No. of Phases	1

2.2 Project Cost

M&E Services Cost Plan (S$ x 1M)										
Services		EI	ACVI	LEI	FFAI	PSI	SPFI			
Estimate	Ph14	1.65	1.95	0.45	0.50	1.30	0.12			
	Ph15	1.52	1.75	0.45	0.50	1.20	0.12			
Awarded								2.638		

Total Project Construction Cost (S$ x1M)			
	Site Clearance	Piling Works	Main Contract
Estimate	-	-	47.88
Awarded	-	-	60.60

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

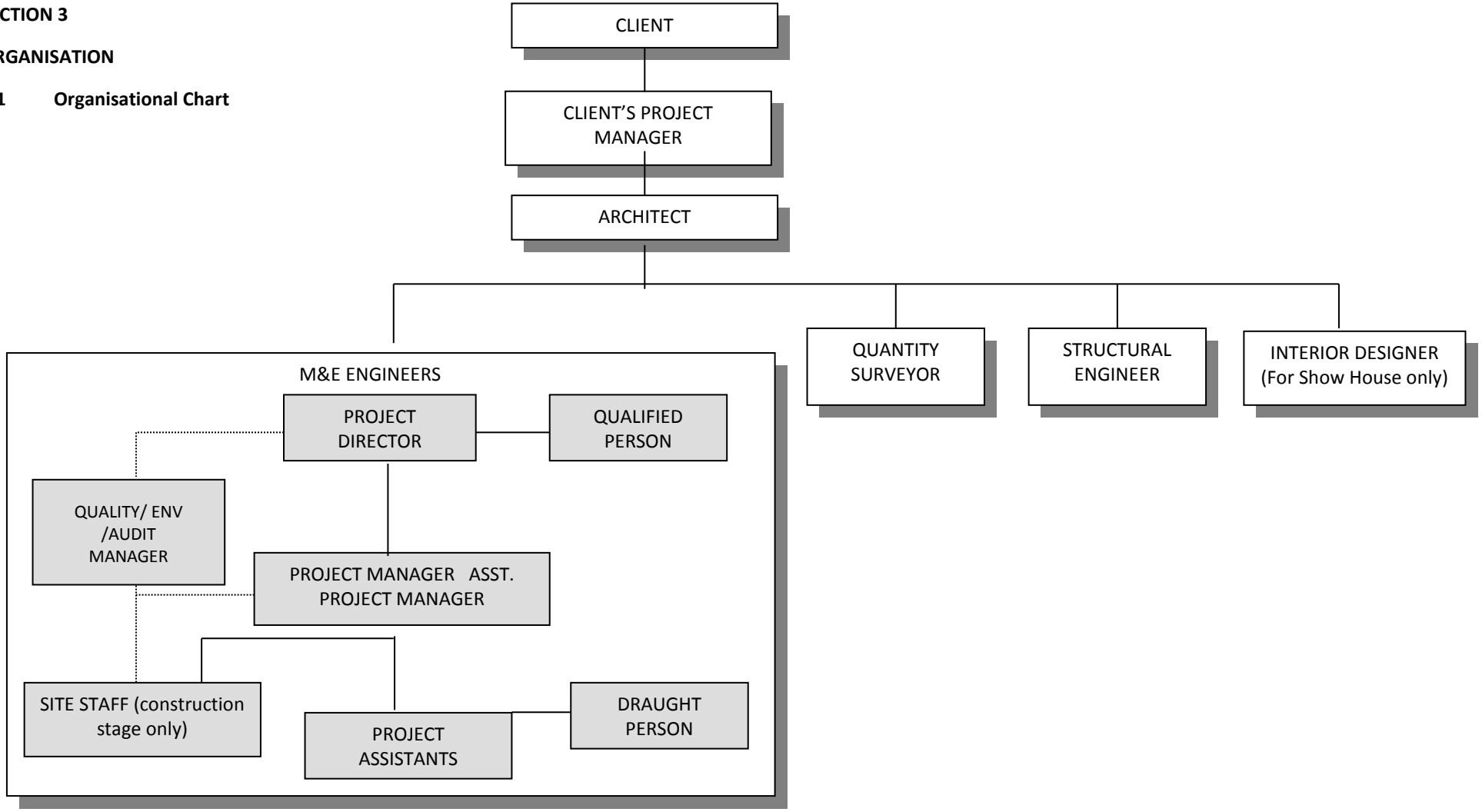
EJECTOR & DIVERTER	√	SUMP PUMP	√	FUEL OIL TANK		LIFT & ESCALATOR	√	PRESSURE VESSEL		HOISTS		FOAM	
Smoke Control Jet Fan	√												

(✓*where applicable*)

SECTION 3

ORGANISATION

3.1 Organisational Chart



SECTION 3

ORGANISATION

3.2 ACEPL's Project Team Member

TITLE		NAME
Project Director		Choong Choon Guan (CCG)
Qualified Person	Mechanical	Choong Choon Guan (CCG)
	Electrical	Loh Fook Yuen (LFY)
Project Manager		Khor Bee Khoon (KBK)
Assistant Project Manager		Lim Chai Hoon (LCY)
Project Assistant (Mech)		Lim Chin Woo (LCW)
Project Assistant (Elect)		Goh Xiang Fei (GXF)
Draughtsperson		Common Pool
Resident Engineer (M&E)		-
Assistant Resident Engineer (M&E)		-
Clerk-of-Work (M&E)		-

3.3 Client/Client's Representatives

Client: Kallang Development Pte Ltd

Address: 65 Chulia Street #45-01
OCBC Centre
Singapore 049513

Tel: 6538 2372

Fax: 6535 5217

Client's Representatives:-

Name of Company	Contact Person	Contact
Kallang Development Pte Ltd	Name: Ms Lim Ling Huey Position: Project Manager	Tel: 6236 0252 Fax: 65355217 Handphone: 9107 0743 Email: lhlim@singapore-e.com.sg
	Name: Position:	Tel: Fax: Handphone: Email:
	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 ADDP Architects LLP	Name: Mr Richard Lai Position: Senior Principal Architect / Architect	Tel: 6220 2153 Fax: 6325 4918 Handphone: 9692 2713 Email: springside14n15@addp-doprojects.com / richard@addp-do.com.sg
Architect ADDP Architects LLP	Name: Ms Lim Mei Ling Position: Senior Architectural Associate	Tel: 6220 2153 Fax: 6325 4918 Handphone: 9692 2713 Email: springside14n15@addp-doprojects.com /
Quantity Surveyor Northcroft Lim Consultants Pte Ltd	Name: Mr Tam Mun Chuan Position: Senior Quantity Surveyor	Tel: 6220 7188 Fax: 6222 0868 Handphone: - Email: 1218ss@northcroft.sg / mctam@northcroft.com.sg
Structural Engineer De Consultants (S) Pte Ltd	Name: Mr Toh Bin Tee Position: Senior Engineer	Tel: 6227 2943 / 6227 3900 Fax: 6227 2909 Handphone: 9772 8068 Email: toh.bt@de-consultants.com
Structural Engineer De Consultants (S) Pte Ltd	Name: Mr Nyan Position: Engineer	Tel: 6227 3900 Fax: 6227 2909 Handphone: 9773 1394 Email: nyan@de-consultants.com
Structural Engineer De Consultants (S) Pte Ltd	Name: Mr Kent Chan Position: Engineer	Tel: 6227 3900 Fax: 6227 2909 Handphone: 8322 8184 Email: kent.chan@de-consultants.com
Acoustic Consultant -	Name: Position:	Tel: Fax: Handphone: Email:
_____	Name: Position:	Tel: Fax: Handphone: Email:
_____	Name: Position:	Tel: Fax: Handphone: Email:

3.4 Other Consultants (Overseas) – NOT USED

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 Singapore Piling & Civil Engineering Pte Ltd	DC	Name: Choo Boon Liew Position: Senior Project Manager	Tel: 6235 6252 Fax: 6733 3664 Handphone: 8288 5898 Email: choobl@bbr.com.sg
Main Contractor Singapore Piling & Civil Engineering Pte Ltd	DC	Name: Sezar Maung Saw Position: M&E Engineer	Tel: 6235 6252 Fax: 6733 3664 Handphone: 9476 3379 Email: sm.saw@bbr.com.sg
Air Conditioning & Ventilation Installation Sub-Contractor Wah Loon Engineering Pte Ltd	NSC	Name: Mahamudul Hassan Position: Project Manager	Tel: 6747 3733 Fax: 6741 3773 Handphone: 8333 9677 Email: hassan@wahloon.com.sg
Plumbing & Sanitary Installation Sub-Contractor Accise Engineering Pte Ltd	DSC	Name: Lye Eng Seong Position: Project Director	Tel: 6743 3989 Fax: 6749 0844 Handphone: 8189 1136 Email: yong.ck@acciseengineering.com.sg
Electrical Installation Sub-Contractor Wah Loon Engineering Pte Ltd	NSC	Name: Rajendran Sekar Position: Assistant Project Manager	Tel: 6747 3773 Fax: 6741 3773 Handphone: 90294365 Email: sekar@wahloon.com.sg
Lift & Escalator Installation Sub-Contractor Mitsubishi Elevator (Singapore) Pte Ltd	NSC	Name: Pyae Phyo Aung (Pi Lou) Position: Project Engineer	Tel: 6842 5678 / 6436 2859 Fax: 6748 2292 Handphone: 8328 3703 Email: pilou.aung@mesp.meap.com
Fire Fighting & Alarm Installation Sub-Contractor Wah Loon Engineering Pte Ltd	NSC	Name: Mahamudul Hassan Position: Project Engineer	Tel: 6747 3773 Fax: 6741 3773 Handphone: 8333 9677 Email: hassan@wahloon.com.sg
Swimming Pool Filtration Plant Installation Sub-Contractor Aquatech Products & Services Pte Ltd	DSC	Name: Jufri Position: Project Engineer	Tel: - Fax: - Handphone: 9008 7193 Email: jufri@aquatech.com.sg
_____		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 Francis Chang See Tong	6378 8555
(b) Diversion		
SP Services:		
(a) Customer Supply	M/s Michelle / Mervyn	6671 7194
(b) Installation		
(c) Meter Section		
(d) Road Lighting		
TFCC:		
(a) SCV	Mr Bernard Lim	8321 8944 / roland.bkk.lim@starhub.com
(b) SingTel	Mr Lee Chong Beng	9649 7719 / cblee@singtel.com
(c) IDA	Mr Liang Shuang	6211 1129
BCA:	N.A	
(a) Building Plan		
(b) Green Mark		
FSSD:	N.A	
(a) Building Plan		
(b) M&E Plan		
PUB (Water Supply) Network Dept:		
(a) Water Conservation		
(b) Plumbing Plan	Ms Wang Qiong / Mr Kamarudin	9731 3975/63809823/24/25
(c) Diversion	Kubaren	9384 1260
(d) NEWater		
PUB Water Reclamation (Network) Dept:	N.A	
(a) Building Plan/CBPU		
(b) M&E Plan		
(c) Diversion		
City Gas Pte Ltd:	N.A	
(a) Planning/Submission		
(b) Installation/Inspection		
PowerGas Pte Ltd	N.A	
(a) Diversion		
NEA (Pollution Control)	N.A	
(a) Planning/Submission		
(b) Inspection		

SECTION 4

PROGRAMME

4.1 Overall Programme – (Refer to 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	**Spring Side Project**	**461 days**	**16/9/13**	**26/6/15**
2	**Nominated Sub-Contractor_ Supplier**	**184 days**	**4/2/14**	**25/9/14**
3	NSC-Electrical System	5 days	4/2/14	8/2/14
4	NSC-Mechanical System	5 days	11/2/14	15/2/14
5	NSC-ACMV	5 days	4/2/14	8/2/14
6	NSC-BCA	5 days	4/2/14	8/2/14
7	NSC-Aluminum and Cladding	5 days	25/2/14	28/2/14
8	NSC-Landscaping	5 days	25/2/14	28/2/14
9	NSC-Signage	5 days	25/2/14	28/2/14
10	S-Sanitary Ware, Fitting, Accessories	5 days	25/2/14	28/2/14
11	S-Mirror and Glass	5 days	25/2/14	28/2/14
12	S-Kitchen Appliances	5 days	25/2/14	28/2/14
13	S-Electrical Water Heater and Dryer	5 days	25/2/14	28/2/14
14	S-Outdoor Furniture	5 days	25/2/14	28/2/14
15	S-Gym Equipment	5 days	25/2/14	28/2/14
16	**Project Milestone**	**461 days**	**16/9/13**	**26/6/15**
17	**Project Planned Dates**	**461 days**	**16/9/13**	**26/6/15**
18	Contract Award Dates	5 days	16/9/13	20/9/13
19	Site Possession Commenced	5 days	16/9/13	20/9/13
20	EIDS Works Commenced	5 days	23/12/13	27/12/13
21	Foundation Works Commenced	5 days	23/12/13	27/12/13
22	Complete 1st Storey_RC Slab	5 days	28/8/14	1/9/14
23	Complete 2nd Storey_RC Slab	5 days	28/8/14	1/9/14
24	Architectural Works Commence	5 days	24/11/14	28/11/14
25	**Sprinkler Pump Room Handover**	**0 days**	**6/2/15**	**6/2/15**
26	**Sprinkler Pump Room Handover_Switch Room Handover & Power Switch On**	**0 days**	**6/2/15**	**6/2/15**
27	**Basement Handover**	**0 days**	**25/9/15**	**25/9/15**
28	**L1 Swimming Pool Pump Room Handover**	**0 days**	**25/9/15**	**25/9/15**
29	L1 Swimming Pool Handover	5 days	21/9/15	25/9/15
30	Main Structural Roof Topping	5 days	7/3/15	11/3/15
31	Services Change Lounge System	5 days	7/3/15	11/3/15
32	Lift Trunking Door	5 days	30/3/15	3/4/15
33	Lift Trunking Door	5 days	30/3/15	3/4/15
34	**Water Test Ok**	**0 days**	**6/3/15**	**6/3/15**
35	Water Test Completed	5 days	6/3/15	10/3/15
36	Mock Up Complete	5 days	6/4/15	10/4/15
37	Mock Up Complete	5 days	6/4/15	10/4/15
38	R / F Of Instantaneous Starts	5 days	16/4/15	20/4/15
39	Project Completion	5 days	19/9/13	23/9/13
40	**Permit to Commence Submissions**	**5 days**	**19/9/13**	**23/9/13**
41	Permit to Commence DT Works	5 days	19/9/13	23/9/13
42	Temporary Road Diversion Scheme	5 days	19/9/13	23/9/13
43	Topographic Survey	12 days	19/9/13	2/10/13
44	Pre-Condition Survey	12 days	19/9/13	2/10/13
45	Pre-Con Street CCTV	12 days	19/9/13	2/10/13
46	Pre-Conditional Survey	12 days	19/9/13	2/10/13
47	Site Hoarding	12 days	19/9/13	2/10/13
48	NOT Application	12 days	5/10/13	17/10/13
49	Site Office Mobilization	12 days	5/10/13	17/10/13
50	Site Clearance	12 days	19/10/13	31/10/13
51	Site Hoarding & Fence	12 days	19/10/13	31/10/13
52	Site Office	24 days	19/9/13	17/10/13
53	Site Office Mobilization	24 days	19/9/13	17/10/13
54	EIDS Design & Approval (Piling)	72 days	19/9/13	31/12/13
55	EIDS Piling Design	24 days	19/9/13	17/10/13
56	EIDS Piling Design	24 days	19/9/13	17/10/13
57	BCA Approval	24 days	16/12/13	13/1/14
58	BCA Approval	24 days	16/12/13	13/1/14
59	**Structural Plan Complex Submissions**	**204 days**	**26/12/13**	**30/7/14**
60	**M&E**	**204 days**	**26/12/13**	**30/7/14**
61	**Architectural Plans Submissions**	**204 days**	**26/12/13**	**30/7/14**
62	**Piling Works**	**110 days**	**19/9/13**	**25/2/14**
63	UTP Installation & Testing	30 days	19/9/13	31/10/13
64	Piling Mobilization (Trials)	30 days	19/9/13	31/10/13
65	Static Load Test #01	5 days	23/12/13	3/1/14
66	Static Load Test #02	5 days	4/2/14	10/2/14
67	**Sub-Structure Works**	**224 days**	**26/12/13**	**30/7/14**
68	**Basement 1**	**224 days**	**26/12/13**	**30/7/14**
69	Installation of Sheet Piles	42 days	31/12/13	7/1/14
70	Excavation for Basement Foundation	42 days	31/12/13	7/1/14
71	Excavation to 1st Layer Strut	30 days	8/1/14	14/1/14
72	Installation of 1st Layer Strut & Waler/Strut	30 days	8/1/14	14/1/14
73	Installation of Docking	24 days	1/2/14	24/2/14
74	Excavation of 2nd Layer Strut	24 days	1/2/14	24/2/14
75	Installation of 2nd Layer Strut/Waler/Strut	30 days	15/2/14	24/3/14
76	Excavate to the Cut off Level	30 days	15/2/14	24/3/14
77	**Pile Cap & Tower**	**30 days**	**19/9/13**	**29/10/13**
78	Sump Pit Pile Caps, Lift Pits Pile Cap, Tower Crane Pile Cap	30 days	19/9/13	29/10/13
79	**Basement 1**	**30 days**	**5/3/14**	**15/4/14**
80	Other Pile Caps Zone 1	30 days	5/3/14	15/4/14
81	Other Pile Caps Zone 2	30 days	5/3/14	15/4/14
82	**Zone 1** (ramp)	24 days	12/4/14	7/5/14
83	Zone 1	24 days	12/4/14	7/5/14
84	Zone 2 (ramp)	24 days	12/4/14	7/5/14
85	Zone 2	24 days	12/4/14	7/5/14
86	**2nd Layer Strut Removed**	**12 days**	**21/5/14**	**3/6/14**
87	Zone 1 (ramp)	3 days	21/5/14	23/5/14
88	Zone 2	3 days	28/5/14	30/5/14
89	Zone 1	3 days	28/5/14	30/5/14
90	**B2 Columns/Walls to B1**	**27 days**	**26/5/14**	**24/6/14**
91	Zone 1 (Ramp)	18 days	26/5/14	18/6/14
92	Zone 1	18 days	5/6/14	25/6/14
93	Zone 2	18 days	5/6/14	25/6/14
94	**B1 Slab**	**24 days**	**12/6/14**	**7/7/14**
95	Zone 1 (ramp)	24 days	12/6/14	7/7/14
96	Zone 1	24 days	12/6/14	7/7/14
97	Zone 2	24 days	12/6/14	7/7/14
98	**B1 Strutting to 1st Stry**	**18 days**	**26/6/14**	**18/7/14**
99	Zone 1 (Ramp)	18 days	26/6/14	18/7/14
100	Zone 1	12 days	5/7/14	17/7/14
101	Zone 2	12 days	5/7/14	17/7/14
102	**1st Stry Slab**	**12 days**	**12/7/14**	**24/7/14**
103	Zone 1 (Ramp)	12 days	12/7/14	24/7/14
104	Zone 1	12 days	19/7/14	31/7/14
105	Zone 2	12 days	19/7/14	31/7/14
106	**1st Stry Slab Columns**	**12 days**	**19/7/14**	**31/7/14**
107	Zone 1	12 days	19/7/14	31/7/14
108	Zone 2	12 days	26/7/14	7/8/14
109	**2nd Stry Slab**	**12 days**	**26/7/14**	**7/8/14**
110	Zone 1	12 days	26/7/14	7/8/14
111	Zone 2	12 days	2/8/14	14/8/14
112	**2nd Stry Slab Columns**	**12 days**	**2/8/14**	**14/8/14**
113	Zone 1	12 days	2/8/14	14/8/14
114	Zone 2	12 days	9/8/14	21/8/14
115	**3rd Stry Slab**	**12 days**	**9/8/14**	**21/8/14**
116	Zone 1	12 days	9/8/14	21/8/14
117	Zone 2	12 days	16/8/14	28/8/14
118	**3rd Stry Slab Columns**	**12 days**	**16/8/14**	**28/8/14**
119	Zone 1	12 days	16/8/14	28/8/14
120	Zone 2	12 days	23/8/14	4/9/14
121	**4th Stry Slab**	**12 days**	**23/8/14**	**4/9/14**
122	Zone 1	12 days	23/8/14	4/9/14
123	Zone 2	12 days	30/8/14	11/9/14
124	**4th Stry Slab Columns**	**12 days**	**30/8/14**	**11/9/14**
125	Zone 1	12 days	30/8/14	11/9/14
126	Zone 2	12 days	6/9/14	18/9/14
127	**Main Roof Slab**	**12 days**	**6/9/14**	**18/9/14**
128	Zone 1	12 days	6/9/14	18/9/14
129	Zone 2	12 days	13/9/14	25/9/14
130	**Skylight Tower Crane**	**5 days**	**13/9/14**	**17/9/14**
131	Zone 1	5 days	13/9/14	17/9/14
132	Zone 2	5 days	20/9/14	24/9/14
133	**Completion of Upper Roof Slab**	**5 days**	**20/9/14**	**24/9/14**
134	Zone 1	5 days	20/9/14	24/9/14
135	Zone 2	5 days	27/9/14	1/10/14
136	**Main Sup Struct (3 Stry)**	**84 days**	**4/2/14**	**28/5/14**
137	**Type A**	**12 days**	**4/2/14**	**18/2/14**
138	Architectural Works	12 days	4/2/14	18/2/14
139	M&E Works	12 days	4/2/14	18/2/14
140	Doors/Windows Frames	12 days	4/2/14	18/2/14
141	Internal Wall	12 days	4/2/14	18/2/14
142	Internal Water Proofing Works	12 days	4/2/14	18/2/14
143	Flooring & Tiling	12 days	4/2/14	18/2/14
144	Ceiling	12 days	4/2/14	18/2/14
145	Doors/Windows Panels	12 days	4/2/14	18/2/14
146	**Basement 1 Car Park & Non-Ceiling Area**	**12 days**	**11/2/14**	**25/2/14**
147	Skim Coat & Paint to Non-Ceiling Area	12 days	11/2/14	25/2/14
148	Architectural Works	12 days	11/2/14	25/2/14
149	External Wall	12 days	11/2/14	25/2/14
150	Doors/Windows Frames	12 days	11/2/14	25/2/14
151	Internal Water Proofing Works	12 days	11/2/14	25/2/14
152	Doors/Windows Panels	12 days	11/2/14	25/2/14
153	**2nd Stry Slab Works**	**12 days**	**18/2/14**	**4/3/14**
154	Skim Coat & Paint to Non-Ceiling Area	12 days	18/2/14	4/3/14
155	Internal Wall	12 days	18/2/14	4/3/14
156	Doors/Windows Frames	12 days	18/2/14	4/3/14
157	Doors/Windows Panels	12 days	18/2/14	4/3/14
158	**Main Sup Struct (Typical)**	**84 days**	**4/3/14**	**28/6/14**
159	**Type A**	**12 days**	**4/3/14**	**18/3/14**
160	Architectural Works	12 days	4/3/14	18/3/14
161	M&E Works	12 days	4/3/14	18/3/14
162	Doors/Windows Frames	12 days	4/3/14	18/3/14
163	Internal Wall	12 days	4/3/14	18/3/14
164	Internal Water Proofing Works	12 days	4/3/14	18/3/14
165	Flooring & Tiling	12 days	4/3/14	18/3/14
166	Ceiling	12 days	4/3/14	18/3/14
167	Doors/Windows Panels	12 days	4/3/14	18/3/14
168	**1st Stry Arch. Works**	**12 days**	**11/3/14**	**25/3/14**
169	**Basement 1 Car Park & Non-Ceiling Area**	**12 days**	**11/3/14**	**25/3/14**
170	Internal Wall	12 days	11/3/14	25/3/14
171	External Wall	12 days	11/3/14	25/3/14
172	Doors/Windows Frames	12 days	11/3/14	25/3/14
173	Internal Water Proofing Works	12 days	11/3/14	25/3/14
174	Doors/Windows Panels	12 days	11/3/14	25/3/14
175	**2nd Stry Arch. Works**	**12 days**	**18/3/14**	**28/3/14**
176	Skim Coat & Paint to Non-Ceiling Area	12 days	18/3/14	28/3/14
177	Internal Wall	12 days	18/3/14	28/3/14
178	External Wall	12 days	18/3/14	28/3/14
179	Doors/Windows Frames	12 days	18/3/14	28/3/14
180	Doors/Windows Panels	12 days	18/3/14	28/3/14
181	**Roof Works (Including Waterproof Swimming Pool)**	**24 days**	**25/3/14**	**27/4/14**
182	Ceiling	24 days	25/3/14	27/4/14

Project: Springside Project Pln 14 & Pln 15 Rev B
Date: Fri 06/12/13

Task | Split | Milestone | Summary | Project Summary | External Tasks | External Milestone | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only

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ID	Task Name	Duration	Start	Finish
382	Painting / External Finishing	10 dec	26/5/15	10/6/15
383	Roof Access Platforms	10 dec	26/5/15	10/6/15
384	**3rd Dry Arch. Works**	**44 dec**	**19/5/15**	**21/7/15**
385	Skim Coat & Paint to Non-Ceiling Area	5 dec	19/5/15	26/5/15
386	External Wall	10 dec	19/5/15	2/6/15
387	Doors/Windows Frames	10 dec	19/5/15	2/6/15
388	Internal Water Proofing Works	8 dec	19/5/15	29/5/15
389	Flooring & Tiling	10 dec	19/5/15	2/6/15
390	Ceiling	10 dec	19/5/15	9/6/15
391	Painting / External Finishing	10 dec	26/5/15	10/6/15
392	Roof Access Platforms	10 dec	26/5/15	10/6/15
393	**4th Dry Arch. Works**	**44 dec**	**19/6/15**	**20/8/15**
394	Plaster Work to Ceiling to Roof & Internal Water Proofing Works	8 dec	19/6/15	29/6/15
395	Skim Coat & Paint to Non-Ceiling Area	5 dec	19/6/15	26/6/15
396	Internal Wall	10 dec	19/6/15	2/7/15
397	Doors/Windows Frames	10 dec	19/6/15	2/7/15
398	Flooring & Tiling	10 dec	26/6/15	10/7/15
399	Ceiling	10 dec	26/6/15	10/7/15
400	Painting / External Finishing	10 dec	26/6/15	10/7/15
401	Roof Access Platforms	10 dec	26/6/15	10/7/15
402	**Roof Arch. Works**	**30 dec**	**29/6/15**	**6/8/15**
403	Plaster Work to Ceiling to Roof & Internal Water Proofing Works	8 dec	29/6/15	8/7/15
404	Skim Coat & Paint to Non-Ceiling Area	5 dec	7/7/15	14/7/15
405	External Wall	10 dec	14/7/15	28/7/15
406	Doors/Windows Frames	10 dec	14/7/15	28/7/15
407	Flooring & Tiling	10 dec	14/7/15	28/7/15
408	Ceiling	10 dec	14/7/15	28/7/15
409	Painting / External Finishing	10 dec	14/7/15	28/7/15
410	Roof Access Platforms	10 dec	14/7/15	28/7/15
411	**External Painting & Touching Up**	**15 dec**	**4/8/15**	**24/8/15**
412	Q1 1.5 to 3	3 dec	4/8/15	6/8/15
413	Q1 3.5 to 14	14 dec	10/8/15	28/8/15
414				
415	**M&E Works**	**137 dec**	**3/12/14**	**8/7/15**
416	**Basement 1 M&E Works**	**57 dec**	**3/12/14**	**24/2/15**
417	**1st Fix**	**12 dec**	**3/12/14**	**16/12/14**
418	Plumbing & Sanitary	5 dec	3/12/14	9/12/14
419	Electrical	5 dec	3/12/14	9/12/14
420	ACMV	5 dec	3/12/14	9/12/14
421	Fire Protection	5 dec	3/12/14	9/12/14
422	**2nd Fix**	**20 dec**	**10/12/14**	**7/1/15**
423	Plumbing & Sanitary	10 dec	10/12/14	23/12/14
424	Electrical	10 dec	10/12/14	23/12/14
425	ACMV	10 dec	10/12/14	23/12/14
426	Fire Protection	10 dec	10/12/14	23/12/14
427	**Final Fix / T&C**	**12 dec**	**24/12/14**	**8/1/15**
428	Plumbing & Sanitary	5 dec	24/12/14	30/12/14
429	Electrical	5 dec	24/12/14	30/12/14
430	ACMV	12 dec	24/12/14	8/1/15
431	Fire Protection	10 dec	24/12/14	6/1/15
432	**Basement 2 M&E Works**	**57 dec**	**24/12/14**	**13/3/15**
433	**1st Fix**	**12 dec**	**24/12/14**	**8/1/15**
434	Plumbing & Sanitary	5 dec	24/12/14	30/12/14
435	Electrical	5 dec	24/12/14	30/12/14
436	ACMV	12 dec	24/12/14	8/1/15
437	Fire Protection	10 dec	24/12/14	6/1/15
438	**2nd Fix**	**20 dec**	**14/1/15**	**10/2/15**
439	Plumbing & Sanitary	10 dec	14/1/15	27/1/15
440	Electrical	10 dec	14/1/15	27/1/15
441	ACMV	10 dec	14/1/15	27/1/15
442	Fire Protection	10 dec	14/1/15	27/1/15
443	**Final Fix / T&C**	**12 dec**	**28/1/15**	**13/2/15**
444	Plumbing & Sanitary	5 dec	28/1/15	3/2/15
445	Electrical	5 dec	28/1/15	3/2/15
446	ACMV	12 dec	28/1/15	13/2/15
447	Fire Protection	10 dec	28/1/15	10/2/15
448	**1st Fix Podium 1 M&E Works**	**12 dec**	**24/2/15**	**11/3/15**
449	Plumbing & Sanitary	5 dec	24/2/15	2/3/15
450	Electrical	5 dec	24/2/15	2/3/15
451	ACMV	10 dec	24/2/15	11/3/15
452	Fire Protection	10 dec	24/2/15	11/3/15
453	**2nd Fix Podium 1 M&E Works**	**20 dec**	**10/3/15**	**7/4/15**
454	Plumbing & Sanitary	10 dec	10/3/15	23/3/15
455	Electrical	10 dec	10/3/15	23/3/15
456	ACMV	10 dec	10/3/15	23/3/15
457	Fire Protection	10 dec	10/3/15	23/3/15
458	**Final Fix / T&C**	**12 dec**	**24/3/15**	**8/4/15**
459	Plumbing & Sanitary	5 dec	24/3/15	30/3/15
460	Electrical	5 dec	24/3/15	30/3/15
461	ACMV	12 dec	24/3/15	8/4/15
462	Fire Protection	10 dec	24/3/15	6/4/15
463	**1st Fix Podium 2 M&E Works**	**12 dec**	**24/3/15**	**8/4/15**
464	Plumbing & Sanitary	5 dec	24/3/15	30/3/15
465	Electrical	5 dec	24/3/15	30/3/15
466	ACMV	12 dec	24/3/15	8/4/15
467	Fire Protection	10 dec	24/3/15	6/4/15
468	**2nd Fix Podium 2 M&E Works**	**20 dec**	**14/4/15**	**11/5/15**
469	Plumbing & Sanitary/Swimming Pool	10 dec	14/4/15	27/4/15
470	ACMV	10 dec	14/4/15	27/4/15
471	Fire Protection	10 dec	14/4/15	27/4/15
472	**Final Fix / T&C**	**12 dec**	**28/4/15**	**13/5/15**
473	Plumbing & Sanitary	5 dec	28/4/15	4/5/15
474	Electrical	5 dec	28/4/15	4/5/15
475	ACMV	12 dec	28/4/15	13/5/15
476	Fire Protection	10 dec	28/4/15	11/5/15
477	**Final Fix / T&C**	**20 dec**	**28/5/15**	**25/6/15**
478	Plumbing & Sanitary	10 dec	28/5/15	10/6/15
479	Electrical	10 dec	28/5/15	10/6/15
480	ACMV	20 dec	28/5/15	25/6/15
481	Fire Protection	10 dec	28/5/15	10/6/15
482	**3rd Fix Podium 2 M&E Works**	**20 dec**	**28/5/15**	**25/6/15**
483	Plumbing & Sanitary	10 dec	28/5/15	10/6/15
484	Electrical	10 dec	28/5/15	10/6/15
485	ACMV	20 dec	28/5/15	25/6/15
486	Fire Protection	10 dec	28/5/15	10/6/15
487	**4th Dry M&E Works**	**20 dec**	**26/6/15**	**23/7/15**
488	Plumbing & Sanitary	10 dec	26/6/15	9/7/15
489	Electrical	10 dec	26/6/15	9/7/15
490	ACMV	20 dec	26/6/15	23/7/15
491	Fire Protection	10 dec	26/6/15	9/7/15
492	**2nd Fix**	**20 dec**	**26/6/15**	**23/7/15**
493	Plumbing & Sanitary	10 dec	26/6/15	9/7/15
494	Electrical	10 dec	26/6/15	9/7/15
495	ACMV	20 dec	26/6/15	23/7/15
496	Fire Protection	10 dec	26/6/15	9/7/15
497	**Final Fix / T&C**	**20 dec**	**26/6/15**	**23/7/15**
498	Plumbing & Sanitary	10 dec	26/6/15	9/7/15
499	Electrical	10 dec	26/6/15	9/7/15
500	ACMV	20 dec	26/6/15	23/7/15
501	Fire Protection	10 dec	26/6/15	9/7/15
502	**Lift Installation Works**	**110 dec**	**19/5/15**	**21/10/15**
503	Lift Core Inspection/Handing Over	5 dec	19/5/15	26/5/15
504	Lift Core Inspection/Handing Over	5 dec	19/6/15	26/6/15
505	Lift Testing & Commissioning	10 dec	16/7/15	30/7/15
506				
507	**Ancillary Structures (Substation, MCP Room, Bin Chamber, Guard House, Pump Room, Car Park & Access Roads**	**160 dec**	**9/9/14**	**14/4/15**
508	Substation Structure	30 dec	9/9/14	21/10/14
509	Oil Stg. Slab, Cable Trench	10 dec	9/9/14	17/10/14
510	Roof Slab	10 dec	6/10/14	17/10/14
511	Substation Walls and Drains	20 dec	6/10/14	31/10/14
512	**Architectural Works**	**40 dec**	**6/10/14**	**28/11/14**
513	Internal Walls	10 dec	6/10/14	17/10/14
514	Doors/Windows/Louvers/Frames	5 dec	6/10/14	10/10/14
515	Skim Coats to Soffit	10 dec	6/10/14	17/10/14
516	Internal Finishes/Partitions/Louvers	15 dec	6/10/14	24/10/14
517	Roof			
518	Painting & Misc. Finishing	10 dec	10/11/14	21/11/14
519	**M&E Works**	**40 dec**	**6/10/14**	**28/11/14**
520	**1st Fix**	**15 dec**	**6/10/14**	**24/10/14**
521	Sanitary & Plumbing	5 dec	6/10/14	10/10/14
522	Electrical	10 dec	6/10/14	17/10/14
523	ACMV	5 dec	6/10/14	10/10/14
524	Fire Protection	10 dec	6/10/14	17/10/14
525	**2nd Fix**	**15 dec**	**10/11/14**	**28/11/14**
526	Sanitary & Plumbing	10 dec	10/11/14	21/11/14
527	ACMV	5 dec	10/11/14	14/11/14
528	Fire Protection	10 dec	10/11/14	21/11/14
529	**Final Fix / T&C**	**10 dec**	**17/11/14**	**28/11/14**
530	Sanitary & Plumbing	5 dec	17/11/14	21/11/14
531	ACMV	5 dec	17/11/14	21/11/14
532	Fire Protection	10 dec	17/11/14	28/11/14
533	**External Road & Drains / Landscapes**	**100 dec**	**24/11/14**	**14/4/15**
534	Kerbstone / Paving & Drainage Works	15 dec	24/11/14	12/12/14
535	Tarmac Roads & Paths	15 dec	15/12/14	2/1/15
536	Landscaping Works	30 dec	15/1/15	26/2/15
537				
538	**R/ C'DP Inspections**	**137 dec**	**3/12/14**	**8/7/15**
539	**Mechanical Inspection, including T&C**	**137 dec**	**3/12/14**	**8/7/15**
540	M Inspections (M&E, Acmv)	10 dec	3/12/14	16/12/14
541	Mechanical Testing	10 dec	17/12/14	30/12/14
542	Forms TOP (Various Authorities)	5 dec	26/6/15	2/7/15
543				
544	**Phase 1.5**	**601 dec**	**19/5/15**	**16/9/16**
545	**Milestone Dates**	**601 dec**	**19/5/15**	**16/9/16**
546	Completion of Slabs	0 dec	19/5/15	19/5/15
547	Piling Works Complete	0 dec	15/2/14	15/2/14
548	Completion of Basement 2	0 dec	3/12/14	3/12/14
549	RC Retaining Cont Commence	0 dec	19/5/15	19/5/15
550	Complete 1st Elev. RC Slab	0 dec	19/5/15	19/5/15
551	Complete Roof Slab	0 dec	6/10/14	6/10/14
552	Architectural Works Commence	0 dec	7/11/14	7/11/14
553	Architectural Works Complete	0 dec	16/9/16	16/9/16
554	**B.S Domestic Pump Room&Consumer Switch Room**	**0 dec**	**7/2/15**	**7/2/15**
555				
556	**LI &C Chamber**	**0 dec**	**9/9/14**	**9/9/14**
557	**Substation Structure**	**0 dec**	**9/9/14**	**9/9/14**
558	M&E Works Commence	0 dec	14/11/14	14/11/14
559	Main Structural Roof Topping	0 dec	6/10/14	6/10/14
560	Substation Roof Topping Complete	0 dec	6/10/14	6/10/14
561	Substation Handover	0 dec	31/10/15	31/10/15
562	Main Roof Topping	0 dec	6/10/14	6/10/14
563	Power Turn On	0 dec	16/9/15	16/9/15
564	Mech Up Commence	0 dec	19/5/15	19/5/15
565	Mech Up Complete	0 dec	16/9/15	16/9/15
566	MCP Up Complete	0 dec	16/9/15	16/9/15
567	R/ C'DP Inspections Starts	0 dec	6/10/15	6/10/15
568	R/ C'DP Inspections Ends	0 dec	8/7/15	8/7/15
569				
570	**Platforms 5 & 6Modifications**	**72 dec**	**17/5/15**	**17/10/15**
571	Permit to Commence BT Works	0 dec	19/5/15	19/5/15
572	Topographical Survey & Levels Printed	10 dec	19/5/15	2/6/15
573	Temporary Works & Hoarding	10 dec	19/5/15	2/6/15

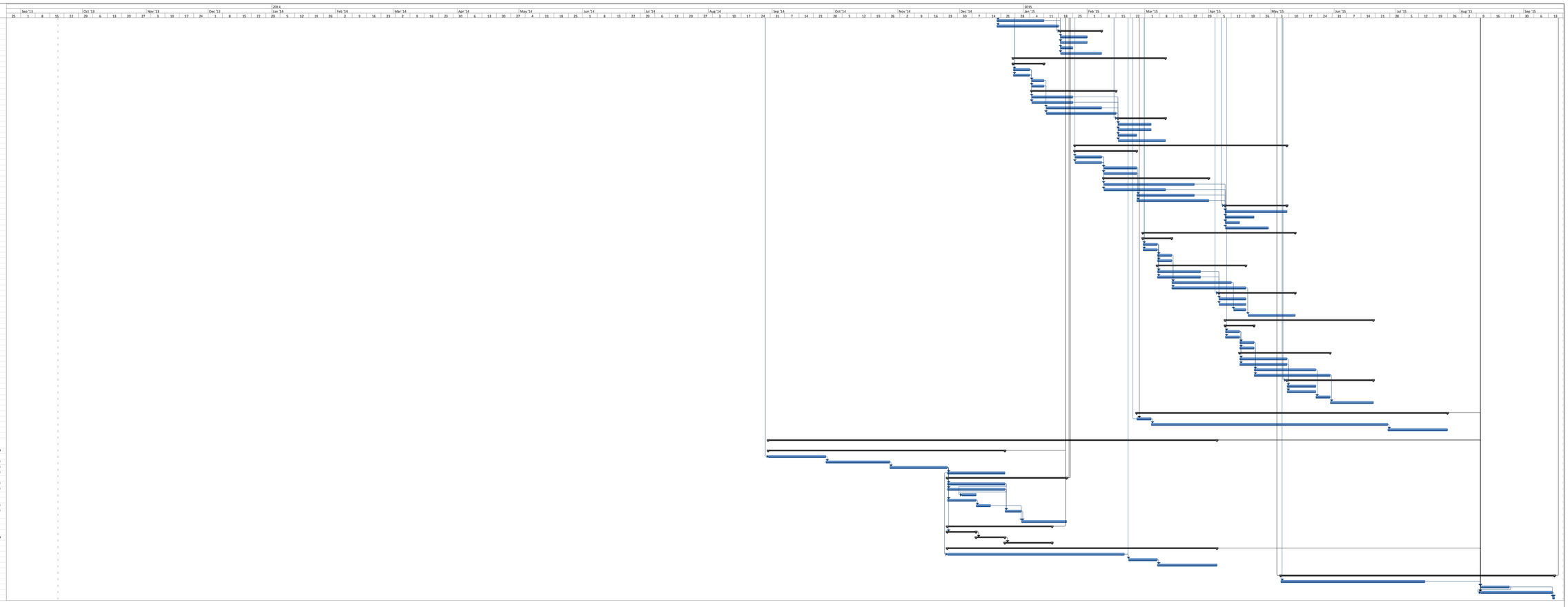
Project: Springdale Project Ph 1A & Ph 1.5 (Rev 3)
Date: Fri 09/01/15

Task | Split | Milestone | Summary | Project Summary | External Tasks | External Milestone | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task

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ID	Task Name	Duration	Start	Finish
592	Precompaction Survey	12 days	28/8/13	3/9/13
593	Pre-Compaction CCTV	12 days	28/8/13	3/9/13
594	Pre-Compaction Survey	12 days	28/8/13	3/9/13
595	Cable Diversion	12 days	28/8/13	3/9/13
596	Compaction Works	12 days	28/8/13	3/9/13
597	Trial Hole to MAST Room	12 days	28/8/13	3/9/13
598	Compaction Works	12 days	28/8/13	3/9/13
599	CCVL & Washing Bay	12 days	28/8/13	3/9/13
600	Compaction Works	12 days	28/8/13	3/9/13
601	Instrumented Monitoring (Piling)	12 days	28/8/13	3/9/13
602	ESS Design & Approval	19 days	28/8/13	19/9/13
603	ESS Piling Layout	19 days	28/8/13	19/9/13
604	ESS Pod Design	19 days	28/8/13	19/9/13
605	ESS Installation	19 days	28/8/13	19/9/13
606				
607	**Shop Drawings & Samples Submissions**	**394 days**	**3/9/13**	**1/8/14**
608	**M&E**	**364 days**	**14/11/13**	**1/8/14**
609	**Main C/Wall**	**284 days**	**14/11/13**	**1/8/14**
610				
611	**Piling Works Ph. 1B**	**70 days**	**19/9/13**	**1/12/14**
612	LTP Installation & Testing	10 days	19/9/13	4/10/13
613	Static Load Test #1 (Piling)	10 days	5/10/13	18/10/13
614	Static Load Test #2	7 days	21/1/13	31/1/13
615	Static Load Test #3	7 days	4/12/13	10/12/13
616				
617	**Sub-Structure Works**	**454 days**	**21/10/13**	**17/10/14**
618	**Piling Works**	**70 days**	**21/10/13**	**1/12/14**
619	Installation of Steel Piles	10 days	21/10/13	26/10/14
620	Installation of Reinforcement	10 days	28/10/13	8/11/14
621	Excavation to 1st Layer Strut	10 days	28/10/13	5/11/14
622	Installation of 1st Layer Waler/Strut	10 days	28/10/13	5/11/14
623	Installation of Decking	10 days	28/10/13	5/11/14
624	Excavate to 2nd Layer Strut	10 days	5/11/14	12/11/14
625	Installation of 2nd Layer Waler/Strut	10 days	5/11/14	12/11/14
626	Excavate to Pile Cut off Level	10 days	12/11/14	19/11/14
627	**Pile Cap, Lift Pits & Tower**	**30 days**	**19/11/14**	**1/1/15**
628	Survey Pit Pile Caps, Lift Pits/ Pile Cap, Tower	3 days	19/11/14	21/11/14
629	Excavation to Pile Cut off Level	3 days	19/11/14	21/11/14
630	Other Pile Caps (Zone 1	10 days	27/11/14	10/12/14
631	Other Pile Caps (Zone 2	10 days	27/11/14	10/12/14
632	Other Pile Caps (Zone 3	10 days	4/12/14	17/12/14
633	**B3 Slab**	14 days	4/12/14	23/12/14
634	Zone 1 (Lamp)	14 days	4/12/14	23/12/14
635	Zone 2	14 days	11/12/14	30/12/14
636	Zone 3	14 days	18/12/14	6/1/15
637	**2nd Layer Strut Removal**	**3 days**	**19/9/14**	**24/9/14**
638	Zone 1 (Lamp)	1 day	19/9/14	19/9/14
639	Zone 2	1 day	20/9/14	21/9/14
640	Zone 3	1 day	22/9/14	22/9/14
641	**B2 Column/Wall to B1**	**27 days**	**15/9/14**	**14/10/14**
642	Zone 1 (Lamp)	9 days	15/9/14	24/9/14
643	Zone 2	9 days	25/9/14	3/10/14
644	Zone 3	9 days	4/10/14	14/10/14
645	**B1 Slab**	**14 days**	**25/9/14**	**14/10/14**
646	Zone 1 (Lamp)	14 days	25/9/14	14/10/14
647	Zone 2	14 days	25/9/14	14/10/14
648	Zone 3	14 days	25/9/14	14/10/14
649	**B1 Column/Wall to 1st Stry**	**27 days**	**15/9/14**	**14/10/14**
650	1st Stry	27 days	15/9/14	14/10/14
651	Zone 1	9 days	15/9/14	24/9/14
652	Zone 2	9 days	25/9/14	3/10/14
653	Zone 3	9 days	4/10/14	14/10/14
654	**1st Stry Slab**	**14 days**	**25/9/14**	**14/10/14**
655	Zone 1 (Lamp)	14 days	25/9/14	14/10/14
656	Zone 2	14 days	2/10/14	21/10/14
657	Zone 3	14 days	9/10/14	28/10/14
658	**Backfilling & Slab Curing**	**14 days**	**25/9/14**	**14/10/14**
659	Backfilling works to 1st Stry	14 days	25/9/14	14/10/14
660	Backfilling works to 1st Stry	14 days	2/10/14	21/10/14
661	Removal of Steel Plate	14 days	9/10/14	28/10/14
662	Removal of Steel Plate	14 days	16/10/14	4/11/14
663	Removal of H/Str	14 days	23/10/14	11/11/14
664				
665	**Super Structure Works**	**10 days**	**25/9/14**	**8/10/14**
666	**1st Stry Columns**	**14 days**	**25/9/14**	**14/10/14**
667	Zone 1	14 days	25/9/14	14/10/14
668	Zone 2	14 days	2/10/14	21/10/14
669	**2nd Stry Slab**	14 days	2/10/14	21/10/14
670	Zone 1	14 days	2/10/14	21/10/14
671	Zone 2	14 days	9/10/14	28/10/14
672	Zone 3	14 days	16/10/14	4/11/14
673	**2nd Stry / Slab Columns**	**14 days**	**9/10/14**	**28/10/14**
674	Zone 1	14 days	9/10/14	28/10/14
675	Zone 2	14 days	16/10/14	4/11/14
676	**3rd Stry Slab**	**14 days**	**16/10/14**	**4/11/14**
677	Zone 1	14 days	16/10/14	4/11/14
678	Zone 2	14 days	23/10/14	11/11/14
679	**3rd Stry / Slab Columns**	**14 days**	**23/10/14**	**11/11/14**
680	Zone 1	14 days	23/10/14	11/11/14
681	Zone 2	14 days	30/10/14	18/11/14
682	**4th Stry Slab**	**14 days**	**30/10/14**	**18/11/14**
683	Zone 1	14 days	30/10/14	18/11/14
684	Zone 2	14 days	6/11/14	25/11/14
685	**4th Stry / Slab Columns**	**14 days**	**6/11/14**	**25/11/14**
686	Zone 1	14 days	6/11/14	25/11/14
687	Zone 2	14 days	13/11/14	2/12/14
688	**Main Roof Slab**	**14 days**	**13/11/14**	**2/12/14**
689	Zone 1	14 days	13/11/14	2/12/14
690	Zone 2	14 days	20/11/14	9/12/14
691	**Elevated Tower Cranes**	**1 day**	**4/12/14**	**4/12/14**
692	Zone 1	1 day	4/12/14	4/12/14
693	Zone 2	1 day	3/12/14	3/12/14
694	**Completion of Upper Roof Slab**	1 day	3/12/14	3/12/14
695	Zone 1	1 day	3/12/14	3/12/14
696	Zone 2	1 day	4/12/14	4/12/14
697				
698	**Architectural Works**	**454 days**	**7/11/13**	**1/8/14**
699	**Basement 2 Archi. Works**	**40 days**	**7/11/14**	**2/1/15**
700	Skin Coat & Paint to Non-Ceiling Area	10 days	7/11/14	20/11/14
701	Internal Wall	10 days	7/11/14	20/11/14
702	External Wall	10 days	21/11/14	4/12/14
703	Doors/Windows Frames	10 days	21/11/14	4/12/14
704	Internal Water Proofing Works	5 days	5/12/14	11/12/14
705	Flooring & Tiling	5 days	5/12/14	11/12/14
706	Ceiling	5 days	5/12/14	11/12/14
707	Painting	5 days	5/12/14	11/12/14
708	Doors/Windows Panels	5 days	12/12/14	18/12/14
709	**Basement 1 Archi. Works**	**40 days**	**28/11/14**	**23/1/15**
710	Skin Coat & Paint to Non-Ceiling Area	10 days	28/11/14	11/12/14
711	Internal Wall	10 days	28/11/14	11/12/14
712	External Wall	10 days	12/12/14	25/12/14
713	Doors/Windows Frames	10 days	12/12/14	25/12/14
714	Internal Water Proofing Works	5 days	26/12/14	1/1/15
715	Flooring & Tiling	5 days	26/12/14	1/1/15
716	Ceiling	5 days	26/12/14	1/1/15
717	Painting	5 days	26/12/14	1/1/15
718	Doors/Windows Panels	5 days	2/1/15	8/1/15
719	**1st Flr Archi. Works**	**40 days**	**19/12/14**	**14/2/15**
720	Skin Coat & Paint to Non-Ceiling Area	10 days	19/12/14	2/1/15
721	Internal Wall	10 days	19/12/14	2/1/15
722	External Wall	10 days	2/1/15	15/1/15
723	Doors/Windows Frames	10 days	2/1/15	15/1/15
724	Internal Water Proofing Works	5 days	9/1/15	15/1/15
725	Flooring & Tiling	5 days	9/1/15	15/1/15
726	Ceiling	5 days	9/1/15	15/1/15
727	Painting	5 days	9/1/15	15/1/15
728	Doors/Windows Panels	5 days	16/1/15	22/1/15
729	**2nd Flr Archi. Works**	**40 days**	**26/1/15**	**21/3/15**
730	Skin Coat & Paint to Non-Ceiling Area	10 days	26/1/15	8/2/15
731	Internal Wall	10 days	26/1/15	8/2/15
732	External Wall	10 days	9/2/15	22/2/15
733	Doors/Windows Frames	10 days	9/2/15	22/2/15
734	Internal Water Proofing Works	5 days	23/2/15	1/3/15
735	Flooring & Tiling	5 days	23/2/15	1/3/15
736	Ceiling	5 days	23/2/15	1/3/15
737	Painting	5 days	23/2/15	1/3/15
738	Doors/Windows Panels	5 days	2/3/15	8/3/15
739	**3rd Flr Archi. Works**	**40 days**	**16/2/15**	**14/4/15**
740	Skin Coat & Paint to Non-Ceiling Area	10 days	16/2/15	1/3/15
741	Internal Wall	10 days	16/2/15	1/3/15
742	External Wall	10 days	2/3/15	15/3/15
743	Doors/Windows Frames	10 days	2/3/15	15/3/15
744	Internal Water Proofing Works	5 days	16/3/15	22/3/15
745	Flooring & Tiling	5 days	16/3/15	22/3/15
746	Ceiling	5 days	16/3/15	22/3/15
747	Painting	5 days	16/3/15	22/3/15
748	Doors/Windows Panels	5 days	23/3/15	29/3/15
749	**4th Stry. Archi. Works**	**40 days**	**9/3/15**	**7/5/15**
750	Skin Coat & Paint to Non-Ceiling Area	10 days	9/3/15	22/3/15
751	Internal Wall	10 days	9/3/15	22/3/15
752	External Wall	10 days	23/3/15	5/4/15
753	Doors/Windows Frames	10 days	23/3/15	5/4/15
754	Internal Water Proofing Works	5 days	6/4/15	12/4/15
755	Flooring & Tiling	5 days	6/4/15	12/4/15
756	Ceiling	5 days	6/4/15	12/4/15
757	Painting	5 days	6/4/15	12/4/15
758	Doors/Windows Panels	5 days	13/4/15	19/4/15
759	**Roof Archi. Works**	**40 days**	**30/3/15**	**28/5/15**
760	Skin Coat & Paint to Non-Ceiling Area	10 days	30/3/15	13/4/15
761	Internal Wall	10 days	30/3/15	13/4/15
762	External Wall	10 days	14/4/15	27/4/15
763	Doors/Windows Frames	10 days	14/4/15	27/4/15
764	Internal Water Proofing Works	5 days	28/4/15	4/5/15
765	Flooring & Tiling	5 days	28/4/15	4/5/15
766	Ceiling	5 days	28/4/15	4/5/15
767	Painting	5 days	28/4/15	4/5/15
768	Doors/Windows Panels	5 days	5/5/15	11/5/15
769	**Basement 2 Archi. Works**	**40 days**	**13/5/15**	**9/7/15**
770	Skin Coat & Paint to Non-Ceiling Area	10 days	13/5/15	26/5/15
771	Internal Wall	10 days	13/5/15	26/5/15
772	External Wall	10 days	27/5/15	9/6/15
773	Doors/Windows Frames	10 days	27/5/15	9/6/15
774	Internal Water Proofing Works	5 days	10/6/15	16/6/15
775	Flooring & Tiling	5 days	10/6/15	16/6/15
776	Ceiling	5 days	10/6/15	16/6/15
777	Painting	5 days	10/6/15	16/6/15
778	Doors/Windows Panels	5 days	17/6/15	23/6/15
779	**Basement 1 Archi. Works**	**40 days**	**24/6/15**	**20/8/15**
780	Skin Coat & Paint to Non-Ceiling Area	10 days	24/6/15	7/7/15
781	Internal Wall	10 days	24/6/15	7/7/15
782	External Wall	10 days	8/7/15	21/7/15
783	Doors/Windows Frames	10 days	8/7/15	21/7/15
784	Internal Water Proofing Works	5 days	22/7/15	28/7/15
785	Flooring & Tiling	5 days	22/7/15	28/7/15
786	Ceiling	5 days	22/7/15	28/7/15
787	Painting	5 days	22/7/15	28/7/15
788	Doors/Windows Panels	5 days	29/7/15	4/8/15
789	**Ground Archi. Works**	**40 days**	**5/8/15**	**1/10/15**
790	Skin Coat & Paint to Non-Ceiling Area	10 days	5/8/15	18/8/15
791	Internal Wall	10 days	5/8/15	18/8/15
792	External Wall	10 days	19/8/15	1/9/15
793	Doors/Windows Frames	10 days	19/8/15	1/9/15
794	Internal Water Proofing Works	5 days	2/9/15	8/9/15
795	Flooring & Tiling	5 days	2/9/15	8/9/15
796	Ceiling	5 days	2/9/15	8/9/15
797	Painting	5 days	2/9/15	8/9/15
798	Doors/Windows Panels	5 days	9/9/15	15/9/15
799	**1st Flr Archi. Works**	**40 days**	**16/9/15**	**12/11/15**
800	Skin Coat & Paint to Non-Ceiling Area	10 days	16/9/15	29/9/15
801	Internal Wall	10 days	16/9/15	29/9/15
802	External Wall	10 days	30/9/15	13/10/15
803	Doors/Windows Frames	10 days	30/9/15	13/10/15
804	Internal Water Proofing Works	5 days	14/10/15	20/10/15
805	Flooring & Tiling	5 days	14/10/15	20/10/15
806	Ceiling	5 days	14/10/15	20/10/15
807	Painting	5 days	14/10/15	20/10/15
808	Doors/Windows Panels	5 days	21/10/15	27/10/15
809	**2nd Flr Archi. Works**	**40 days**	**28/10/15**	**24/12/15**
810	Skin Coat & Paint to Non-Ceiling Area	10 days	28/10/15	10/11/15
811	Internal Wall	10 days	28/10/15	10/11/15
812	External Wall	10 days	11/11/15	24/11/15
813	Doors/Windows Frames	10 days	11/11/15	24/11/15
814	Internal Water Proofing Works	5 days	25/11/15	1/12/15
815	Flooring & Tiling	5 days	25/11/15	1/12/15
816	Ceiling	5 days	25/11/15	1/12/15
817	Painting	5 days	25/11/15	1/12/15
818	Doors/Windows Panels	5 days	2/12/15	8/12/15
819	**3rd Flr Archi. Works**	**40 days**	**9/12/15**	**4/2/16**
820	Skin Coat & Paint to Non-Ceiling Area	10 days	9/12/15	22/12/15
821	Internal Wall	10 days	9/12/15	22/12/15
822	External Wall	10 days	23/12/15	5/1/16
823	Doors/Windows Frames	10 days	23/12/15	5/1/16
824	Internal Water Proofing Works	5 days	6/1/16	12/1/16
825	Flooring & Tiling	5 days	6/1/16	12/1/16
826	Ceiling	5 days	6/1/16	12/1/16
827	Painting	5 days	6/1/16	12/1/16
828	Doors/Windows Panels	5 days	13/1/16	19/1/16
829	**4th Stry. Archi. Works**	**40 days**	**20/1/16**	**17/3/16**
830	Skin Coat & Paint to Non-Ceiling Area	10 days	20/1/16	2/2/16
831	Internal Wall	10 days	20/1/16	2/2/16
832	External Wall	10 days	3/2/16	16/2/16
833	Doors/Windows Frames	10 days	3/2/16	16/2/16
834	Internal Water Proofing Works	5 days	17/2/16	23/2/16
835	Flooring & Tiling	5 days	17/2/16	23/2/16
836	Ceiling	5 days	17/2/16	23/2/16
837	Painting	5 days	17/2/16	23/2/16
838	Doors/Windows Panels	5 days	24/2/16	1/3/16
839	**Roof Archi. Works**	**40 days**	**9/2/16**	**7/4/16**
840	Skin Coat & Paint to Non-Ceiling Area	10 days	9/2/16	22/2/16
841	Internal Wall	10 days	9/2/16	22/2/16
842	External Wall	10 days	23/2/16	7/3/16
843	Doors/Windows Frames	10 days	23/2/16	7/3/16
844	Internal Water Proofing Works	5 days	8/3/16	14/3/16
845	Flooring & Tiling	5 days	8/3/16	14/3/16
846	Ceiling	5 days	8/3/16	14/3/16
847	Painting	5 days	8/3/16	14/3/16
848	Doors/Windows Panels	5 days	15/3/16	21/3/16
849				
850	**M&E Works**	**364 days**	**14/11/13**	**1/8/14**
851	**Basement 2 M&E Works**	**40 days**	**14/11/13**	**9/1/14**
852	**1st Fix**	**10 days**	**14/11/13**	**27/11/14**
853	Plumbing & Sanitary	10 days	14/11/13	27/11/14
854	Electrical	10 days	14/11/13	27/11/14
855	FS/FP	10 days	14/11/13	27/11/14
856	Fire Protection	10 days	14/11/13	27/11/14
857	**2nd Fix**	**20 days**	**28/11/13**	**24/12/14**
858	Plumbing & Sanitary	20 days	28/11/13	24/12/14
859	Electrical	20 days	28/11/13	24/12/14
860	FS/FP	20 days	28/11/13	24/12/14
861	Fire Protection	20 days	28/11/13	24/12/14
862	**Roof Fix / T&C**	**10 days**	**27/12/13**	**9/1/14**
863	Plumbing & Sanitary	10 days	27/12/13	9/1/14
864	Electrical	10 days	27/12/13	9/1/14
865	Fire Protection	10 days	27/12/13	9/1/14
866	**Basement 1 M&E Works**	**10 days**	**10/1/14**	**23/1/14**
867	**1st Fix**	**5 days**	**10/1/14**	**16/1/14**
868	Plumbing & Sanitary	5 days	10/1/14	16/1/14
869	Electrical	5 days	10/1/14	16/1/14
870	FS/FP	5 days	10/1/14	16/1/14
871	Fire Protection	5 days	10/1/14	16/1/14
872	**2nd Fix**	**10 days**	**17/1/14**	**30/1/14**
873	Plumbing & Sanitary	10 days	17/1/14	30/1/14
874	Electrical	10 days	17/1/14	30/1/14
875	FS/FP	10 days	17/1/14	30/1/14
876	Fire Protection	10 days	17/1/14	30/1/14
877	**Roof Fix / T&C**	**10 days**	**24/1/14**	**6/2/14**
878	Plumbing & Sanitary	10 days	24/1/14	6/2/14
879	Electrical	10 days	24/1/14	6/2/14
880	FS/FP	10 days	24/1/14	6/2/14
881	Fire Protection	10 days	24/1/14	6/2/14

ID	Task Name	Duration	Start	Finish
973	ACMV	18 days	10/12/14	10/1/15
974	Fire Protection	24 days	15/12/14	17/1/15
975	**Final Fix / T&C**	**18 days**	**19/1/15**	**7/2/15**
976	Plumbing & Sanitary	12 days	19/1/15	31/1/15
977	Electrical	12 days	19/1/15	31/1/15
978	ACMV	6 days	19/1/15	24/1/15
979	Fire Protection	18 days	19/1/15	7/2/15
980	**1st Stry. M&E Works**	**60 days**	**27/12/14**	**19/3/15**
981	**1st Fix**	**12 days**	**27/12/14**	**10/1/15**
982	Plumbing & Sanitary	6 days	27/12/14	3/1/15
983	Electrical	6 days	27/12/14	3/1/15
984	ACMV	6 days	5/1/15	10/1/15
985	Fire Protection	6 days	5/1/15	10/1/15
986	**2nd Fix**	**36 days**	**5/1/15**	**14/2/15**
987	Plumbing & Sanitary	18 days	5/1/15	24/1/15
988	Electrical	18 days	5/1/15	24/1/15
989	ACMV	24 days	12/1/15	7/2/15
990	Fire Protection	30 days	12/1/15	14/2/15
991	**Final Fix / T&C**	**18 days**	**16/2/15**	**10/3/15**
992	Plumbing & Sanitary	12 days	16/2/15	3/3/15
993	Electrical	12 days	16/2/15	3/3/15
994	ACMV	6 days	16/2/15	24/2/15
995	Fire Protection	18 days	16/2/15	10/3/15
996	**2nd Stry. (incl. T-Plate) M&E Works**	**84 days**	**24/1/15**	**8/5/15**
997	**1st Fix**	**24 days**	**24/1/15**	**24/2/15**
998	**Plumbing & Sanitary&Swimming Pool**	**12 days**	**24/1/15**	**7/2/15**
999	Electrical	12 days	26/1/15	7/2/15
1000	ACMV	12 days	9/2/15	24/2/15
1001	Fire Protection	12 days	9/2/15	24/2/15
1002	**2nd Fix**	**42 days**	**9/2/15**	**31/3/15**
1003	Plumbing & Sanitary	36 days	9/2/15	24/3/15
1004	Electrical	24 days	9/2/15	10/3/15
1005	ACMV	24 days	25/2/15	24/3/15
1006	Fire Protection	30 days	25/2/15	31/3/15
1007	**Final Fix / T&C**	**24 days**	**9/4/15**	**8/5/15**
1008	Plumbing & Sanitary	24 days	9/4/15	8/5/15
1009	Electrical	12 days	9/4/15	22/4/15
1010	ACMV	6 days	9/4/15	15/4/15
1011	Fire Protection	18 days	9/4/15	29/4/15
1012	**3rd Stry. M&E Works**	**60 days**	**28/3/15**	**13/5/15**
1013	**1st Fix**	**12 days**	**28/3/15**	**13/5/15**
1014	Plumbing & Sanitary	6 days	28/3/15	6/3/15
1015	Electrical	6 days	28/3/15	6/3/15
1016	ACMV	6 days	7/3/15	13/3/15
1017	Fire Protection	6 days	7/3/15	13/3/15
1018	**2nd Fix**	**36 days**	**7/3/15**	**18/4/15**
1019	Plumbing & Sanitary	18 days	7/3/15	27/3/15
1020	Electrical	18 days	7/3/15	27/3/15
1021	ACMV	24 days	14/3/15	11/4/15
1022	Fire Protection	30 days	14/3/15	18/4/15
1023	**Final Fix / T&C**	**30 days**	**6/4/15**	**15/5/15**
1024	Plumbing & Sanitary	12 days	6/4/15	18/4/15
1025	Electrical	12 days	6/4/15	18/4/15
1026	ACMV	6 days	13/4/15	18/4/15
1027	Fire Protection	18 days	20/4/15	13/5/15
1028	**4th Stry. M&E Works**	**60 days**	**9/4/15**	**19/5/15**
1029	**1st Fix**	**12 days**	**9/4/15**	**23/4/15**
1030	Plumbing & Sanitary	6 days	9/4/15	15/4/15
1031	Electrical	6 days	9/4/15	15/4/15
1032	ACMV	6 days	16/4/15	22/4/15
1033	Fire Protection	6 days	16/4/15	22/4/15
1034	**2nd Fix**	**36 days**	**14/4/15**	**29/5/15**
1035	Plumbing & Sanitary	18 days	16/4/15	8/5/15
1036	Electrical	18 days	16/4/15	8/5/15
1037	ACMV	24 days	23/4/15	22/5/15
1038	Fire Protection	30 days	23/4/15	29/5/15
1039	**Final Fix / T&C**	**36 days**	**5/5/15**	**19/6/15**
1040	Plumbing & Sanitary	12 days	5/5/15	22/5/15
1041	Electrical	12 days	5/5/15	22/5/15
1042	ACMV	6 days	23/5/15	29/5/15
1043	Fire Protection	18 days	30/5/15	19/6/15
1044				
1045	**Lifts Installation Works**	**135 days**	**21/1/15**	**23/7/15**
1046	Lift Core Inspection/Handing Over	6 days	25/2/15	3/3/15
1047	Lift Installation (4 mths)	96 days	4/3/15	26/6/15
1048	Lift Testing & Comissioning	24 days	27/6/15	25/7/15
1049				
1050	**Ancillary Structures (Substation, MDF Room, Bin Centre, Hoist) & External Works**	**192 days**	**30/9/14**	**4/4/15**
1051	**Civil & Structure Works**	**96 days**	**30/9/14**	**22/12/14**
1052	1st Stry. Slab, Cable Trench	24 days	30/9/14	26/9/14
1053	Columns/Walls	24 days	27/9/14	27/10/14
1054	Roof Slabs	24 days	28/10/14	24/11/14
1055	Access, Apron Slabs and Drains	24 days	25/11/14	22/12/14
1056	**Architectural Works**	**48 days**	**25/11/14**	**21/1/15**
1057	External Walls	24 days	25/11/14	22/12/14
1058	Internal Walls	24 days	25/11/14	22/12/14
1059	Doors/Windows/Louvers Frames	6 days	2/12/14	8/12/14
1060	W/Proofing Works to Roof	12 days	25/11/14	8/12/14
1061	Skim Coats to Soffit	6 days	9/12/14	15/12/14
1062	Installation of Doors/Windows/Louvers Panel	6 days	23/12/14	30/12/14
1063	Painting & Archi. Finishing	18 days	31/12/14	21/1/15
1064	**M&E Works**	**42 days**	**25/11/14**	**14/1/15**
1065	**1st Fix**	**12 days**	**25/11/14**	**8/12/14**
1070	**2nd Fix**	**12 days**	**9/12/14**	**22/12/14**
1075	**Final Fix / T&C**	**18 days**	**23/12/14**	**14/1/15**
1080	**External Road & Drains / Landscapes**	**100 days**	**25/11/14**	**4/4/15**
1081	U/Ground Piping & Drainage Works	72 days	25/11/14	10/3/15
1082	Walkway / Road Works	12 days	25/2/15	4/3/15
1083	Landscaping Works	24 days	7/3/15	4/4/15
1084				
1085	**NJ/ TOP Inspections**	**112 days**	**4/3/15**	**15/5/15**
1086	**Staircase Shelter Inspection, T&C**	**60 days**	**4/3/15**	**14/7/15**
1087	RI Inspections (M&E, Archi)	12 days	11/8/15	24/8/15
1088	TOP Inspections (Various Authorities)	30 days	11/8/15	14/9/15
1089	Express TOP	1 day	15/5/15	15/5/15



Project: Springside Project Ph.14 & Ph.15 (Rev-3)
Date Printed: 13/2/14

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 · Critical · Critical Split · 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	By Electrical Contractor								-
Power Supply Substation (LT reticulation)	SP PowerGrid Ltd	Ph 14 – 28 April 14 Ph 15 – 9 June 14								Ph 14 – 16 May 2014 Ph15 – 24 June 2014
Metering Layout	SP Services Ltd	By Electrical Contractor								-
Sanitary Installation	PUB Water Reclamation (Network) Dept									-
Domestic Water Supply	PUB (Water Supply) Network Dept	20 Dec 2013	Aug 2013	Aug 2013	12 Feb 2014					6 May 2014
Gas Supply Installation	City Gas Pte Ltd	N.A.								N.A
Air Conditioning & Ventilation Inst.	FSSD	Mid Dec 2014								-
Fire Fighting & Alarm Installation	FSSD	Mid Dec 2014								-
Telephone Installation	TFCC	Phase 14 Phase 15 } 22 May 2014								Phase 14 – 12 June 2014 Phase 15 – 24 July 2014
Broadband Co-axial Cable System (BCS)	Starhub Cable Vision									
Fuel Storage	FSSD	N.A.								-
	NEA (Pollution Control)	N.A.								-

SECTION 4

PROGRAMME

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

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:	
- 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	Incoming soft copy in server
Incoming Architectural Sketches/Details	Incoming soft copy in server
Incoming Structural Drawings	Incoming soft copy in server
M&E Drawings	
- Electrical Installation	Goh Xiang Fei
- Lift & Escalator Installation	Goh Xiang Fei
- Air Conditioning & Ventilation Installation	Lim Chin Woo
- Fire Fighting & Alarm Installation	Lim Chin Woo
- Plumbing & Sanitary Installation	Lim Chin Woo
- Swimming Pool & Filtration Installation	Lim Chin Woo
Other Drawings	

SECTION 6

INTERFACING

6.1 Method of Interface

Description	Method of Interface	
Client's Review & Approval	M&E Design Report	N.A
	Pre-planned meeting at fixed intervals	✓
	Telefax, letter and telephone	✓
	Email	✓
Interface With External Design Teams	M&E Design Report	N.A
	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*)

Note: M&E design report not required by Client

SECTION 6

INTERFACING

6.2 Internal Design Interface

Item No.	Description*	Required From	Required By	Date Required	Remarks
1.	Power requirement on Mechanical Item	LCW	GXF	23 Sep 13	Completed

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

ITEM	KEPT BY

8.2 List of Applicable Code of Practice and Regulations

Services	Title of Code of Practice/Standard
Electrical Wiring	CP 5
Lightning Protection System	SS 555
Emergency Voice Communication System	SS 546
Air Conditioning & Ventilation Installation	SS 535
Lift & Escalator Installation	SS 550
Sprinkler System	CP 52, Fire Code 2013
Wet Riser System	CP 29
Automatic Fire Alarm System	CP 10
Sanitary System	Code of Practice on Sanitary & Sewerage Works
Plumbing System	CP 48
Town Gas/LPG Supply System	N.A.
Boiler and Steam Supply System	N.A.
Mechanical Smoke Control System	Fire Code 2013

SECTION 8

DESIGN INPUT & METHODOLOGY

8.3 List of Design Guide or Handbook Used

Carrier's Handbook of Air Conditioning System Design **– NOT USED**

ASHRAE Handbooks

Institute of Plumbing's Plumbing Services Design Guide

8.4 List of Pre-Consultation and Waiver – NOT USED

S/N	Description	Date of Application	Date of Approval	Remarks
1	*Clause number in Code of Practice for (Services) which require clarification or waiver. Consultation Ref No. Waiver Ref. No.			
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	
QE1	Quality & Environmental System Audit	✓
QE2	Feedback Reporting	✓
QE3	Clients Feedback	✓
QE4	Management Review	✓

8.6 List of Software Used For Design/Analysis

DESCRIPTION/ PACKAGE NAME	VERSION	SUPPLIER/ SOURCE	PURPOSE	
Calculux	2.30	Philips	Lighting design	
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	
Lift Traffic	-	Alpha Consulting Engineers Pte Ltd	Lift traffic calculation	
Econdial	2.5	Merlin Gerlin	Design for low voltage network	
Hyena	4.00.1	ACADS-BSG	Fire Sprinkler & Hydrant Analysis	
Fault Level Calculation	-	Alpha Consulting Engineers Pte Ltd	Calculation of voltage drop and fault level	

(✓*where applicable*)

SECTION 9

ENVIRONMENTAL CONSIDERATIONS

9.1 Sustainable Design Features / Criteria

Item	Remarks
Green Mark criteria	N.A.
Green Design Features	N.A.

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	

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 – NOT USED

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	N.A.
M&E Cost Estimate Report	√- A
Pre-Qualification of Tenderers	√- A
Tender Documents	√- C
Tender Report	√- C
Payment Valuation for QS	√- I
Certificates of Supervision for TOP/CSC	√- Re

* *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 USED**

SECTION 11

LIST OF SUB-JOB

11.1 List of Sub-Job Numbers – NOT USED

Sub Job No	Description	Allocation Details