

Appendix A Master Programme

Activity ID	Activity Name	Remaining Duration	Start	Finish	Gantt Chart (2018-2025)																																																																																																																													
					2018							2019							2020							2021							2022							2023							2024							2025																																																																												
					N	D	J	F	M	A	M	J	J	A	S	O	N	D	N	D	J	F	M	A	M	J	J	A	S	O	N	D	N	D	J	F	M	A	M	J	J	A	S	O	N	D	N	D	J	F	M	A	M	J	J	A	S	O	N	D	N	D	J	F	M	A	M	J	J	A	S	O	N	D	N	D	J	F	M	A	M	J	J	A	S	O	N	D	N	D	J	F	M	A	M	J	J	A	S	O	N	D	N	D	J	F	M	A	M	J	J	A	S	O	N	D	N	D	J	F	M	A	M	J	J	A	S	O	N	D
EP_SP_66_12-WP-2-M0	Programme for Design and Construction Works	2835	22-Nov-17 A	26-Aug-25	[Gantt bar spanning from Nov 2017 to Aug 2025]																																																																																																																													
EP_SP_66_12-WP-2-M0.01	Key Dates	2496	22-Nov-17	21-Sep-24	[Gantt bar spanning from Nov 2017 to Sep 2024]																																																																																																																													
EP_SP_66_12-WP-2-M0.02	Contract Preliminaries	2807	19-Dec-17	26-Aug-25	[Gantt bar spanning from Dec 2017 to Aug 2025]																																																																																																																													
EP_SP_66_12-WP-2-M0.03	Licence/Permit Applications	2252	15-Dec-17	13-Feb-24	[Gantt bar spanning from Dec 2017 to Feb 2024]																																																																																																																													
EP_SP_66_12-WP-2-M0.04	General Submissions	1320	22-Nov-17	03-Jul-21	[Gantt bar spanning from Nov 2017 to Jul 2021]																																																																																																																													
EP_SP_66_12-WP-2-M0.05	Design Submissions	1724	22-Nov-17 A	11-Aug-22	[Gantt bar spanning from Nov 2017 to Aug 2022]																																																																																																																													
EP_SP_66_12-WP-2-M0.06	Procurement of Major Equipment	1903	13-Sep-18	28-Nov-23	[Gantt bar spanning from Sep 2018 to Nov 2023]																																																																																																																													
EP_SP_66_12-WP-2-M0.07	Environmental Works	1708	05-Jan-18	09-Sep-22	[Gantt bar spanning from Jan 2018 to Sep 2022]																																																																																																																													
EP_SP_66_12-WP-2-M0.08	Maritime Works	1277	29-Dec-17	27-Jun-21	[Gantt bar spanning from Dec 2017 to Jun 2021]																																																																																																																													
EP_SP_66_12-WP-2-M0.08.3	Submissions	196	29-Dec-17	12-Jul-18	[Gantt bar spanning from Dec 2017 to Jul 2018]																																																																																																																													
EP_SP_66_12-WP-2-M0.08.1	Marine Construction	1265	10-Jan-18	27-Jun-21	[Gantt bar spanning from Jan 2018 to Jun 2021]																																																																																																																													
EP_SP_66_12-WP-2-M0.08.1.1	Phase I - Construction of Perimeter Seawalls	740	10-Jan-18	19-Jan-20	[Gantt bar spanning from Jan 2018 to Jan 2020]																																																																																																																													
EP_SP_66_12-WP-2-M0.08.1.1.3	Marine Works Preparations	274	10-Jan-18	10-Oct-18	[Gantt bar spanning from Jan 2018 to Oct 2018]																																																																																																																													
08-0900	Carry out hydrographic survey	14	10-Jan-18	23-Jan-18	[Gantt bar spanning from Jan 2018 to Jan 2018]																																																																																																																													
08-1005	Ground Investigation for DCM Design	180	13-Feb-18	11-Aug-18	[Gantt bar spanning from Feb 2018 to Aug 2018]																																																																																																																													
08-1010	Mobilization of DCM Barge for Load Test	30	14-May-18	12-Jun-18	[Gantt bar spanning from May 2018 to Jun 2018]																																																																																																																													
08-1020	Mobilization of Remaining DCM Barge for Construction	30	11-Sep-18	10-Oct-18	[Gantt bar spanning from Sep 2018 to Oct 2018]																																																																																																																													
08-1340(2)	Sediment Sample collection and testing Dumping Permit Application	21	05-Sep-18*	25-Sep-18	[Gantt bar spanning from Sep 2018 to Sep 2018]																																																																																																																													
EP_SP_66_12-WP-2-M0.08.1.1.1	Seawall and Berth at DCM Area	676	15-Mar-18	19-Jan-20	[Gantt bar spanning from Mar 2018 to Jan 2020]																																																																																																																													
08-1030	DCM Mix Trial (incl. Bench-scale testing and Lab Tests)	106	15-Mar-18	28-Jun-18	[Gantt bar spanning from Mar 2018 to Jun 2018]																																																																																																																													
08-1040	DCM Pre-construction Site Trial and testing	43	29-Jun-18	10-Aug-18	[Gantt bar spanning from Jun 2018 to Aug 2018]																																																																																																																													
08-1050	Static Load Test Preparation	31	11-Aug-18	10-Sep-18	[Gantt bar spanning from Aug 2018 to Sep 2018]																																																																																																																													
08-1060	Carry out static loading test	22	11-Sep-18	02-Oct-18	[Gantt bar spanning from Sep 2018 to Oct 2018]																																																																																																																													
08-1065(2)	Static load test report submission	8	03-Oct-18	10-Oct-18	[Gantt bar spanning from Oct 2018 to Oct 2018]																																																																																																																													
08-1070	Geotextile Laying	60	11-Aug-18	09-Oct-18	[Gantt bar spanning from Aug 2018 to Oct 2018]																																																																																																																													
08-1075(2)	Sand Blanket Laying	60	11-Aug-18	09-Oct-18	[Gantt bar spanning from Aug 2018 to Oct 2018]																																																																																																																													
08-1080	DCM Injection Works (575,000m3, approx 6300 nr.)	120	11-Oct-18	07-Feb-19	[Gantt bar spanning from Oct 2018 to Feb 2019]																																																																																																																													
08-1090	DCM Final Completion Tests	180	10-Nov-18	08-May-19	[Gantt bar spanning from Nov 2018 to May 2019]																																																																																																																													
08-1100	Rubble Mound Laying (100,000m3 approx, @550m3/d)	180	09-Jan-19	07-Jul-19	[Gantt bar spanning from Jan 2019 to Jul 2019]																																																																																																																													
08-1105(1)	Prefabrication for Caisson	282	24-Nov-18	01-Sep-19	[Gantt bar spanning from Nov 2018 to Sep 2019]																																																																																																																													
08-1110	Caisson Laying (Total 50nrs, @2 nrs/week)	182	24-Mar-19	21-Sep-19	[Gantt bar spanning from Mar 2019 to Sep 2019]																																																																																																																													
08-1120	Wave Wall Construction	120	22-Sep-19	19-Jan-20	[Gantt bar spanning from Sep 2019 to Jan 2020]																																																																																																																													
EP_SP_66_12-WP-2-M0.08.1.1.2	Seawall at Dredging Area	295	25-Dec-18	15-Oct-19	[Gantt bar spanning from Dec 2018 to Oct 2019]																																																																																																																													
08-1130	Dredging Works (26,000m3 @ 285m3/d avg. to comply EP Conditions 2.18)	110	25-Dec-18	13-Apr-19	[Gantt bar spanning from Dec 2018 to Apr 2019]																																																																																																																													
08-1140	Lay Rock & Sand Fill	50	15-Mar-19	03-May-19	[Gantt bar spanning from Mar 2019 to May 2019]																																																																																																																													
08-1150	Place Rubble Mound (35,000m3 approx, @550m3/d)	88	30-Mar-19	25-Jun-19	[Gantt bar spanning from Mar 2019 to Jun 2019]																																																																																																																													
08-1155(2)	Fabrication and delivery of Precast Seawall Blocks (12,000nr. approx)	90	15-Mar-19	12-Jun-19	[Gantt bar spanning from Mar 2019 to Jun 2019]																																																																																																																													
08-1160	Lay Concrete Block Walls (300m length approx, @4m/d)	80	29-Apr-19	17-Jul-19	[Gantt bar spanning from Apr 2019 to Jul 2019]																																																																																																																													
08-1170	In situ Concrete Wall Construction	90	18-Jul-19	15-Oct-19	[Gantt bar spanning from Jul 2019 to Oct 2019]																																																																																																																													
EP_SP_66_12-WP-2-M0.08.1.2	Phase II - Reclamation, Breakwater and Berth Construction	999	03-Oct-18	27-Jun-21	[Gantt bar spanning from Oct 2018 to Jun 2021]																																																																																																																													
EP_SP_66_12-WP-2-M0.08.1.2.1	Reclamation	999	03-Oct-18	27-Jun-21	[Gantt bar spanning from Oct 2018 to Jun 2021]																																																																																																																													
08-1180	Geotextile Laying	100	03-Oct-18	10-Jan-19	[Gantt bar spanning from Oct 2018 to Jan 2019]																																																																																																																													
08-1185(2)	Sand Blanket Laying	100	03-Oct-18	10-Jan-19	[Gantt bar spanning from Oct 2018 to Jan 2019]																																																																																																																													
08-1190	Install Vertical Band Drain by Barge	160	10-Feb-19	19-Jul-19	[Gantt bar spanning from Feb 2019 to Jul 2019]																																																																																																																													
08-1200	Reclamation fill up to +2.5mPD	375	22-Sep-19	30-Sep-20	[Gantt bar spanning from Sep 2019 to Sep 2020]																																																																																																																													
08-1210	Reclamation fill from +2.5 to Formation Level	120	03-Jul-20	30-Oct-20	[Gantt bar spanning from Jul 2020 to Oct 2020]																																																																																																																													
08-1220	Lay Surcharge	80	11-Sep-20	29-Nov-20	[Gantt bar spanning from Sep 2020 to Nov 2020]																																																																																																																													
08-1230	Surcharge Period	180	30-Nov-20	28-May-21	[Gantt bar spanning from Nov 2020 to May 2021]																																																																																																																													
08-1240	Remove Surcharge	85	04-Apr-21	27-Jun-21	[Gantt bar spanning from Apr 2021 to Jun 2021]																																																																																																																													
EP_SP_66_12-WP-2-M0.08.1.2.2	Breakwater	583	02-Sep-19	06-Apr-21	[Gantt bar spanning from Sep 2019 to Apr 2021]																																																																																																																													
08-1250	Geotextile and Sand Blanket Laying	45	22-Sep-19	05-Nov-19	[Gantt bar spanning from Sep 2019 to Nov 2019]																																																																																																																													
08-1260	DCM Injection Works (290,000m3, approx 3200 nr.)	65	06-Nov-19	09-Jan-20	[Gantt bar spanning from Nov 2019 to Jan 2020]																																																																																																																													
08-1270	DCM Final Completion Test	71	05-Jan-20	15-Mar-20	[Gantt bar spanning from Jan 2020 to Mar 2020]																																																																																																																													
08-1280	Rubble Mound Laying (100,000m3 approx, @550m3/d)	188	05-Mar-20	08-Sep-20	[Gantt bar spanning from Mar 2020 to Sep 2020]																																																																																																																													
08-1285(1)	Prefabrication for Caisson	411	02-Sep-19	16-Oct-20	[Gantt bar spanning from Sep 2019 to Oct 2020]																																																																																																																													
08-1290	Caisson Laying (Total 43nrs, @2 nrs/week)	150	11-Jul-20	07-Dec-20	[Gantt bar spanning from Jul 2020 to Dec 2020]																																																																																																																													
08-1300	Wave Wall Construction	120	08-Dec-20	06-Apr-21	[Gantt bar spanning from Dec 2020 to Apr 2021]																																																																																																																													
EP_SP_66_12-WP-2-M0.08.1.2.3	Seawall and Berth at Marine Access	150	03-Jul-20	29-Nov-20	[Gantt bar spanning from Jul 2020 to Nov 2020]																																																																																																																													
08-1310(2)	Prefabrication for Caisson (4nrs)	90	03-Jul-20	30-Sep-20	[Gantt bar spanning from Jul 2020 to Sep 2020]																																																																																																																													
08-1320(2)	Caisson Laying (4nrs)	30	01-Oct-20	30-Oct-20	[Gantt bar spanning from Oct 2020 to Oct 2020]																																																																																																																													
08-1330(2)	Wave Wall Construction	30	31-Oct-20	29-Nov-20	[Gantt bar spanning from Oct 2020 to Nov 2020]																																																																																																																													
EP_SP_66_12-WP-2-M0.09	Foundation Works	397	12-Apr-21	13-May-22	[Gantt bar spanning from Apr 2021 to May 2022]																																																																																																																													
EP_SP_66_12-WP-2-M0.09.0	Site Investigation and Preliminary Pile	46	12-Apr-21	27-May-21	[Gantt bar spanning from Apr 2021 to May 2021]																																																																																																																													
EP_SP_66_12-WP-2-M0.09.1	Administration Bld Foundation	138	25-Nov-21	11-Apr-22	[Gantt bar spanning from Nov 2021 to Apr 2022]																																																																																																																													
EP_SP_66_12-WP-2-M0.09.2	Waste Bunker & Tipping Hall Bld Foundation	203	13-May-21	01-Dec-21	[Gantt bar spanning from May 2021 to Dec 2021]																																																																																																																													
EP_SP_66_12-WP-2-M0.09.3	Boiler & Flue Gas Bld Foundation	331	12-Apr-21	08-Mar-22	[Gantt bar spanning from Apr 2021 to Mar 2022]																																																																																																																													
EP_SP_66_12-WP-2-M0.09.4	ACC Area Foundation	129	20-Sep-21	26-Jan-22	[Gantt bar spanning from Sep 2021 to Jan 2022]																																																																																																																													
EP_SP_66_12-WP-2-M0.09.5	Turbine Hall Bld Foundation	142	28-Jun-21	16-Nov-21	[Gantt bar spanning from Jun 2021 to Nov 2021]																																																																																																																													
EP_SP_66_12-WP-2-M0.09.6	Air Compressor Bld Foundation	28	17-Nov-21	14-Dec-21	[Gantt bar spanning from Nov 2021 to Dec 2021]																																																																																																																													

Programme for Design and Construction Works
Summary Programme

Date	Revision	Checked	Approved
04-Dec-17	Rev.0 - 1st Issue		
16-Jul-18	Rev.1 - Revised to SO's comments		
03-Sep-18	Rev.2 - Revised to SO's comments		

