

## TMCLKL Northern Connection Sub-sea Tunnel Section

### North Approach Ramp

#### Portion N12 Section

NAR - N12 - Open Cut Section - Structure Start	0	04-Jun-18		125
NAR - N12 - Open cut Section - Ramp Structure	84	04-Jun-18	11-Sep-18	125
NAR - N12 - Open Cut Excavation - Bay 2	12	20-Jun-18	04-Jul-18	54
NAR - N12 - Bay 2 Structure	36	06-Jul-18	16-Aug-18	53
NAR - Sheet Pile at bay 6 & 7	18	20-Jun-18	11-Jul-18	0
NAR - Dewatering well Installation (Bay 3 to 6)	36	12-Jul-18	22-Aug-18	0
NAR - Pumping Test (Bay 3 to 6)	12	23-Aug-18	05-Sep-18	0
NAR - Excavation & Strut Installtion (Bay 3 to 6)	36	06-Sep-18	20-Oct-18	0
NAR - Bay 3 - Base Slab + Retaining Wall	48	20-Sep-18	17-Nov-18	24
NAR - Bay 4 - Base Slab + Retaining Wall	72	06-Oct-18	02-Jan-19	0
NAR - Bay 5 - Base Slab + Retaining Wall	72	22-Oct-18	16-Jan-19	0

#### Access Ramp Section

NLS Temp Access Ramp - Closure	0		04-Jun-18	0
NLS Temp Access Ramp - Concrete Block & Backfill	18	04-Jun-18	25-Jun-18	0
Pre-drilling - 4 G.I.	12	26-Jun-18	10-Jul-18	0
Pre-bored H-piles - 12p	36	11-Jul-18	21-Aug-18	0
Pre-bored H-piles - Pile Load Test	36	22-Aug-18	04-Oct-18	0
Pipe Pile Wall - Access Ramp Section	36	11-Jul-18	21-Aug-18	0
Pipe Pile Wall - TAM Grouting	36	22-Aug-18	04-Oct-18	0
Pump wells	35	05-Oct-18	15-Nov-18	0
Pump Test	12	16-Nov-18	29-Nov-18	0
Pipe Pile Wall Section - Excavation Start	0	30-Nov-18		0
Excavation to S1 - 7,200 m3	12	30-Nov-18	13-Dec-18	0
Strut & Waling Installtaion - S1 - 7 struts	14	07-Dec-18	22-Dec-18	0
Excavation to S2 - 9,650 m3	16	14-Dec-18	04-Jan-19	0
Strut & Waling Installtaion - S2 - 7 struts	15	24-Dec-18	12-Jan-19	0

#### NLS Interface (OAP-NAR-DWG-10442-B)

NLS Cell 3 Dwall removal (down to +2.5mPD) - 90m3	15	14-Dec-18	03-Jan-19	0
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### North Ventilation Building

North Vent Bldg - Roof Steel Structure	48	04-Jun-18	31-Jul-18	817
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### North Launching Shaft

#### NLS Cell 1 False Tunnel

Cell 1 - Alimak Removal	15	06-Jun-18	23-Jun-18	24
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#### NLS Cell 1-3 Structure for Cell 3 Dwall opening

Cell 3 - Removal of existing NLS Ramp	18	04-Jun-18	25-Jun-18	0
Cell 3 - Dwall extension	35	26-Jun-18	06-Aug-18	0
Cell 3 - Remaining Base Slab	18	07-Aug-18	27-Aug-18	0
Cell 3 - Middle Wall	24	28-Aug-18	24-Sep-18	0
Cell 3 - Top Slab	18	26-Sep-18	18-Oct-18	0
Cell 3 - Base Slab - Connecting to NAR	18	28-Aug-18	17-Sep-18	0
Cell 3 - Wall 17 & 18	24	18-Sep-18	18-Oct-18	0

#### Cell 2

Cell 2 - Removal of remaining NLS Ramp	12	04-Jun-18	16-Jun-18	0
Cell 2 - Expose Coupler for W6 & 7	12	19-Jun-18	03-Jul-18	0
Cell 2 - Wall 6 & 7	24	04-Jul-18	31-Jul-18	0
Cell 2 - ML03 - Prepare Scaffolding for Top Beams	18	01-Aug-18	21-Aug-18	0
Cell 2 - ML03 Top Beams	24	22-Aug-18	18-Sep-18	0
Cell 2 - ML02 - Prepare Scaffolding for Top beams	18	22-Aug-18	11-Sep-18	6
Cell 2 - ML02 - Top Beams	24	19-Sep-18	19-Oct-18	0
NIS Backfill to +3.0mPD for Cell 3 Dwall opening	24	19-Oct-18	15-Nov-18	0

#### NLS Cell 1-3 Remaining Structure

ML02 Cell 1 & 2 Preparation for BRL structure	24	20-Oct-18	16-Nov-18	0
ML02 Cell 1 & 2 BRL Structure	48	17-Nov-18	15-Jan-19	0

### North - Phase 2 Reclamation

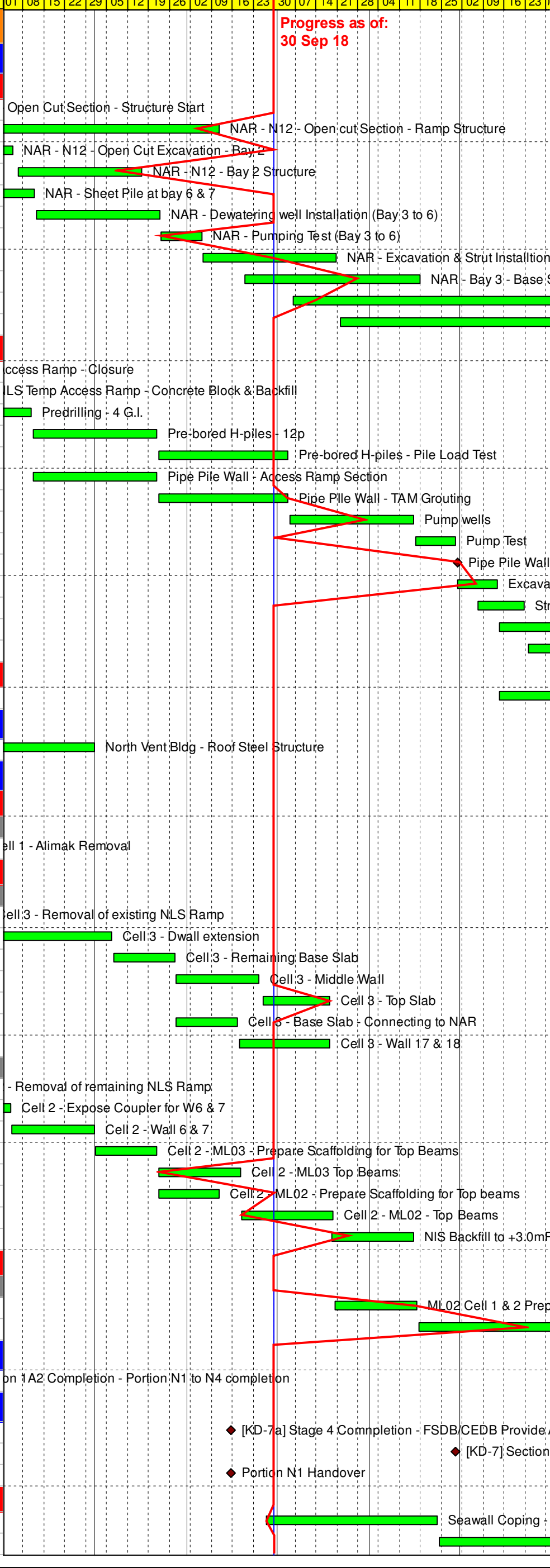
[KD-5] Section 1A2 Completion - Portion N1 to N4 completion	0		04-Jun-18*	-155
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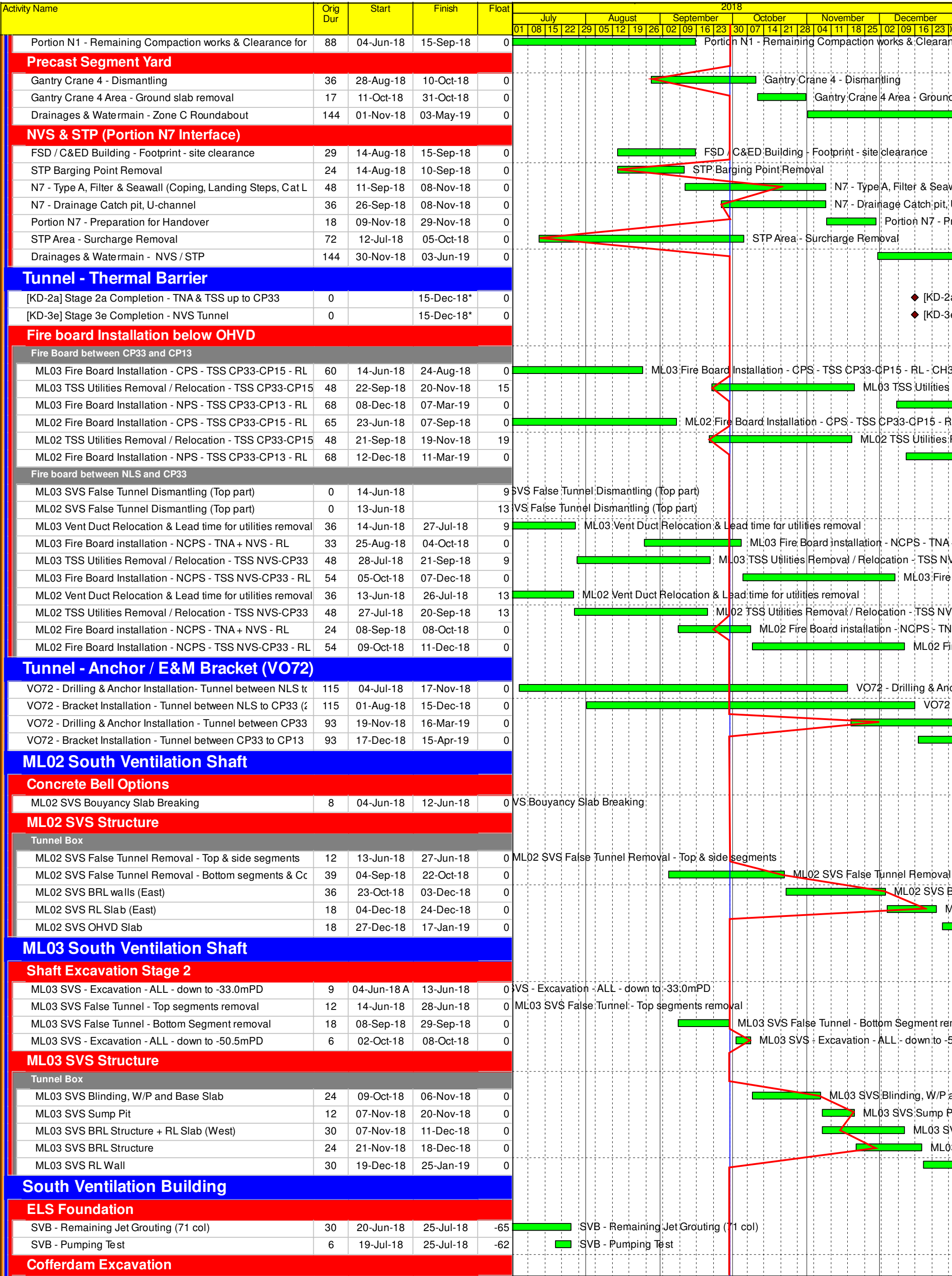
### NLF Demobilization & At-grade works

[KD-7a] Stage 4 Completion - FSDB/CEDB Provide Access	0		15-Sep-18*	0
[KD-7] Section 1C Completion - Portion N7 Handover	0		29-Nov-18*	0
Portion N1 Handover	0		15-Sep-18*	0

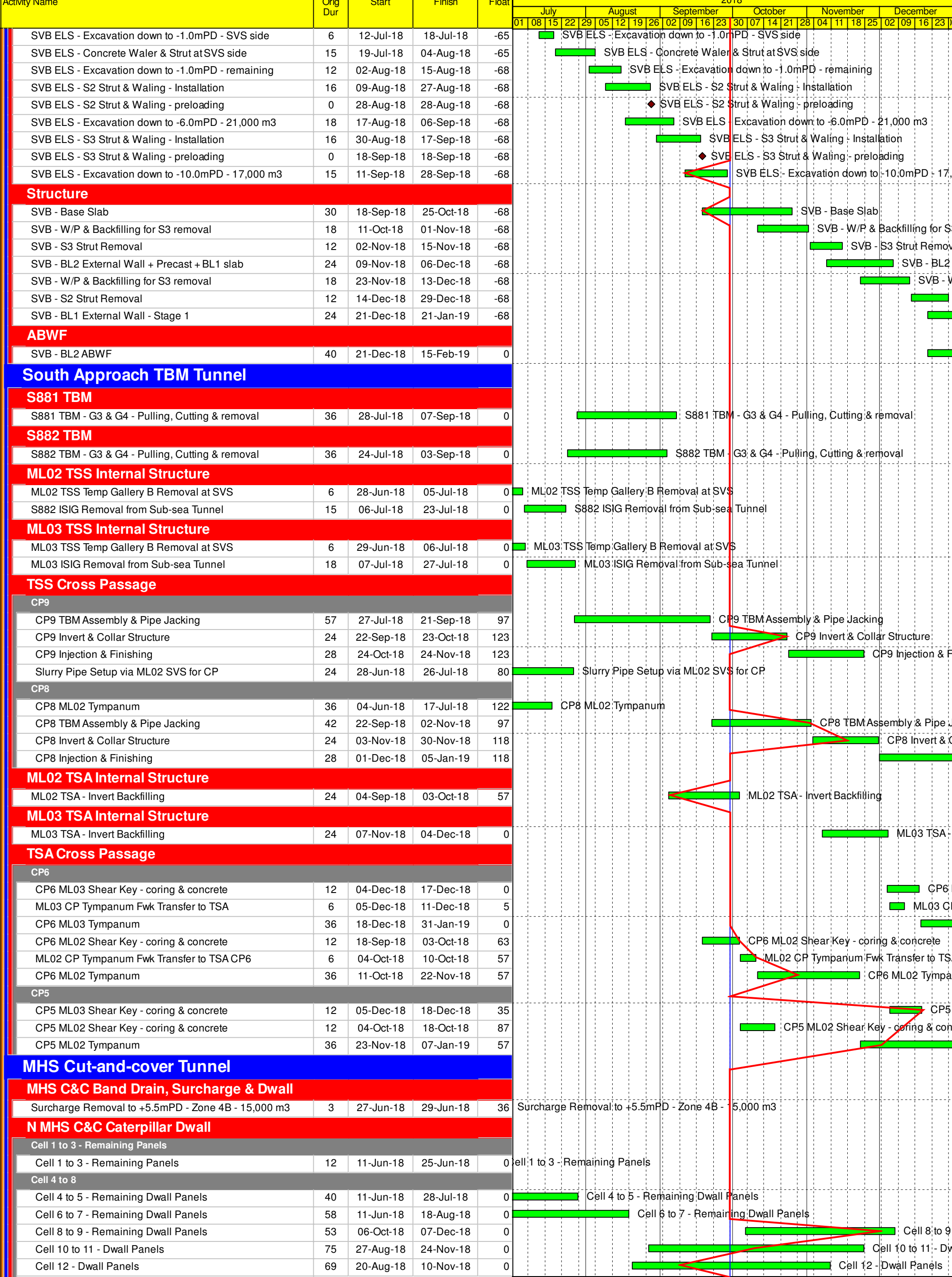
#### Portion N12 & Portion N6B

Seawall Coping - final concreting	48	27-Sep-18	23-Nov-18	0
Portion N12 - Seawall Inspection & Remedial works (if any)	39	24-Nov-18	11-Jan-19	0









Activity Name	Orig Dur	Start	Finish	Float	2018																							
					July				August				September				October				November				December			
					01	08	15	22	29	05	12	19	26	02	09	16	23	30	07	14	21	28	04	11	18	25	02	09
Cell 13 - Dwall Panels	57	13-Aug-18	20-Oct-18	0	Cell 13 - Dwall Panels																							
<b>N MHS C&amp;C Preparation for Excavation</b>																												
Cell 1 to 3 - Lead time for Dwall Interface Coring	12	08-Jun-18	22-Jun-18	0	Cell 1 to 3 - Lead time for Dwall Interface Coring																							
Cell 1 to 3 - Lead time for Capping beam including Excavation	18	23-Jun-18	14-Jul-18	0	Cell 1 to 3 - Lead time for Capping beam including Excavation																							
Cell 1 to 3 - Lead time for Pumping Test	18	16-Jul-18	04-Aug-18	0	Cell 1 to 3 - Lead time for Pumping Test																							
Cell 4 to 5 - Capping beam / Dewatering / Pump Test	24	30-Jul-18	25-Aug-18	105	Cell 4 to 5 - Capping beam / Dewatering / Pump Test																							
Cell 6 to 7 - Capping beam / Dewatering / Pump Test	24	20-Aug-18	15-Sep-18	104	Cell 6 to 7 - Capping beam / Dewatering / Pump Test																							
Cell 8 to 9 - Capping beam / Dewatering / Pump Test	24	08-Dec-18	08-Jan-19	0	Cell 8 to 9 - Capping beam / Dewatering / Pump Test																							
Cell 10 to 11 - Capping beam / Dewatering / Pump Test	24	26-Nov-18	22-Dec-18	0	Cell 10 to 11 - Capping beam / Dewatering / Pump Test																							
Cell 12 - Capping beam / Dewatering / Pump Test	24	12-Nov-18	08-Dec-18	0	Cell 12 - Capping beam / Dewatering / Pump Test																							
Cell 13 - Capping beam / Dewatering / Pump Test	24	22-Oct-18	17-Nov-18	0	Cell 13 - Capping beam / Dewatering / Pump Test																							
<b>N MHS C&amp;C Caterpillar Excavation</b>																												
MHS C&C Cell 12 to 04																												
Cell 1 to 3 - Excavation down to +2.5mPD	18	16-Jul-18	04-Aug-18	0	Cell 1 to 3 - Excavation down to +2.5mPD																							
Cell 1 to 3 - Excavation / Ring Beam / RC Strut / Wing Cort	88	06-Aug-18	19-Nov-18	0	Cell 1 to 3 - Excavation / Ring Beam / RC Strut / Wing Cort																							
Cell 13 Excavation from +2.5mPD to FEL	75	10-Dec-18	16-Mar-19	0	Cell 13 Excavation from +2.5mPD to FEL																							
Cell 12 Excavation from +2.5mPD to FEL	80	24-Dec-18	06-Apr-19	0	Cell 12 Excavation from +2.5mPD to FEL																							
Cell 04 Excavation from +2.5mPD to FEL	140	24-Dec-18	22-Jun-19	0	Cell 04 Excavation from +2.5mPD to FEL																							
Cross Wall Removal																												
Cell 04/03 Cross Wall Removal	18	20-Nov-18	10-Dec-18	95	Cell 04/03 Cross Wall Removal																							
Cell 03/02 Bottom Strut	24	20-Nov-18	17-Dec-18	89	Cell 03/02 Bottom Strut																							
Cell 03/02 Cross Wall Removal	18	18-Dec-18	10-Jan-19	89	Cell 03/02 Cross Wall Removal																							
<b>N MHS C&amp;C Caterpillar Structure</b>																												
Main Box Structure																												
Cell 01 - Base Slab & Tympanum for TBM B/O	87	20-Nov-18	11-Mar-19	0	Cell 01 - Base Slab & Tympanum for TBM B/O																							
<b>MHS Approach Ramp</b>																												
<b>Band Drain &amp; Surcharge</b>																												
Surcharge Removal to +5.5mPD - Zone 3 - 30,000 m3	15	08-Jun-18	26-Jun-18	0	Surcharge Removal to +5.5mPD - Zone 3 - 30,000 m3																							
<b>MHS Ramp Dwall, Treatment &amp; King Post</b>																												
Caterpillar Cell 14 to 15 - Dwall Panels	75	04-Jul-18	29-Sep-18	0	Caterpillar Cell 14 to 15 - Dwall Panels																							
SAR Straight Wall - Dwall Panels	66	08-Jun-18	25-Aug-18	0	SAR Straight Wall - Dwall Panels																							
SAR Open Cut - Sheet Pile Installation	48	08-Jun-18	04-Aug-18	0	SAR Open Cut - Sheet Pile Installation																							
SAR Open Cut - Dewatering Well - along sheet piles	36	30-Jun-18	11-Aug-18	0	SAR Open Cut - Dewatering Well - along sheet piles																							
SAR Open Cut - Dewatering Well - along Dwall	15	13-Aug-18	29-Aug-18	0	SAR Open Cut - Dewatering Well - along Dwall																							
SAR Open Cut - Pump Test	12	30-Aug-18	12-Sep-18	0	SAR Open Cut - Pump Test																							
SAR Open Cut ELS - King Post Installation	18	06-Aug-18	25-Aug-18	39	SAR Open Cut ELS - King Post Installation																							
<b>MHS Approach Ramp Excavation</b>																												
SAR Open Cut Excavation - Above +2.5mPD	12	30-Aug-18	12-Sep-18	0	SAR Open Cut Excavation - Above +2.5mPD																							
SAR Open Cut Excavation - strut free section	36	13-Sep-18	27-Oct-18	0	SAR Open Cut Excavation - strut free section																							
SAR Open Cut Excavation - 1 strut section	36	13-Oct-18	24-Nov-18	0	SAR Open Cut Excavation - 1 strut section																							
SAR Open Cut Excavation - 3 strut section	36	05-Nov-18	15-Dec-18	0	SAR Open Cut Excavation - 3 strut section																							
MHS Caterpillar Cell 15/14 - Capping Beam / Pump test lead	24	02-Oct-18	30-Oct-18	16	MHS Caterpillar Cell 15/14 - Capping Beam / Pump test lead																							
MHS Caterpillar Cell 15 Excavation	57	19-Nov-18	26-Jan-19	0	MHS Caterpillar Cell 15 Excavation																							
MHS Caterpillar Cell 14 Excavation	75	10-Dec-18	16-Mar-19	0	MHS Caterpillar Cell 14 Excavation																							
<b>MHS Approach Ramp Structure</b>																												
SAR Structure - Base Slab - strut free section	60	13-Sep-18	24-Nov-18	0	SAR Structure - Base Slab - strut free section																							
SAR Structure - Retaining Wall - strut free section	66	13-Oct-18	02-Jan-19	0	SAR Structure - Retaining Wall - strut free section																							
SAR Structure - Base Slab - strut section	51	12-Nov-18	12-Jan-19	0	SAR Structure - Base Slab - strut section																							
SAR Structure - Retaining Wall - strut section	92	10-Dec-18	06-Apr-19	0	SAR Structure - Retaining Wall - strut section																							
<b>VO73 SCB Foundation &amp; Substructure</b>																												
Foundation																												
SCB Foundation - Predrilling & Toe level confirmation	30	08-Jun-18	14-Jul-18	0	SCB Foundation - Predrilling & Toe level confirmation																							
SCB Foundation - Barrettes - within SAR cofferdam	24	16-Jul-18	11-Aug-18	0	SCB Foundation - Barrettes - within SAR cofferdam																							
SCB Foundation - Barrettes - outside SAR cofferdam	24	13-Aug-18	08-Sep-18	74	SCB Foundation - Barrettes - outside SAR cofferdam																							
SCB Foundation - Verification Coring - within SAR cofferdam	27	13-Aug-18	12-Sep-18	0	SCB Foundation - Verification Coring - within SAR cofferdam																							
SCB Foundation - Verification Coring - outside SAR cofferdam	27	10-Sep-18	12-Oct-18	74	SCB Foundation - Verification Coring - outside SAR cofferdam																							
<b>Southern Landfall - Surface</b>																												
<b>HKBCF Seawall Modification (schedule TBC)</b>																												
HKBCF Vertical Seawall - place Rock underlayer bottom	9	01-Aug-18*	10-Aug-18	-229	HKBCF Vertical Seawall - place Rock underlayer bottom																							
Pause Period (to be verified on site)	90	11-Aug-18	08-Nov-18	-287	Pause Period (to be verified on site)																							
HKBCF Vertical Seawall - place Rock Grade 400	15	09-Nov-18	26-Nov-18	-229	HKBCF Vertical Seawall - place Rock Grade 400																							
Pause Period (to be verified on site)	90	27-Nov-18	24-Feb-19	-287	Pause Period (to be verified on site)																							
<b>UU / At-grade works</b>																												
Demobilization of Dwall site setup	78	08-Dec-18	19-Mar-19	0	Demobilization of Dwall site setup																							