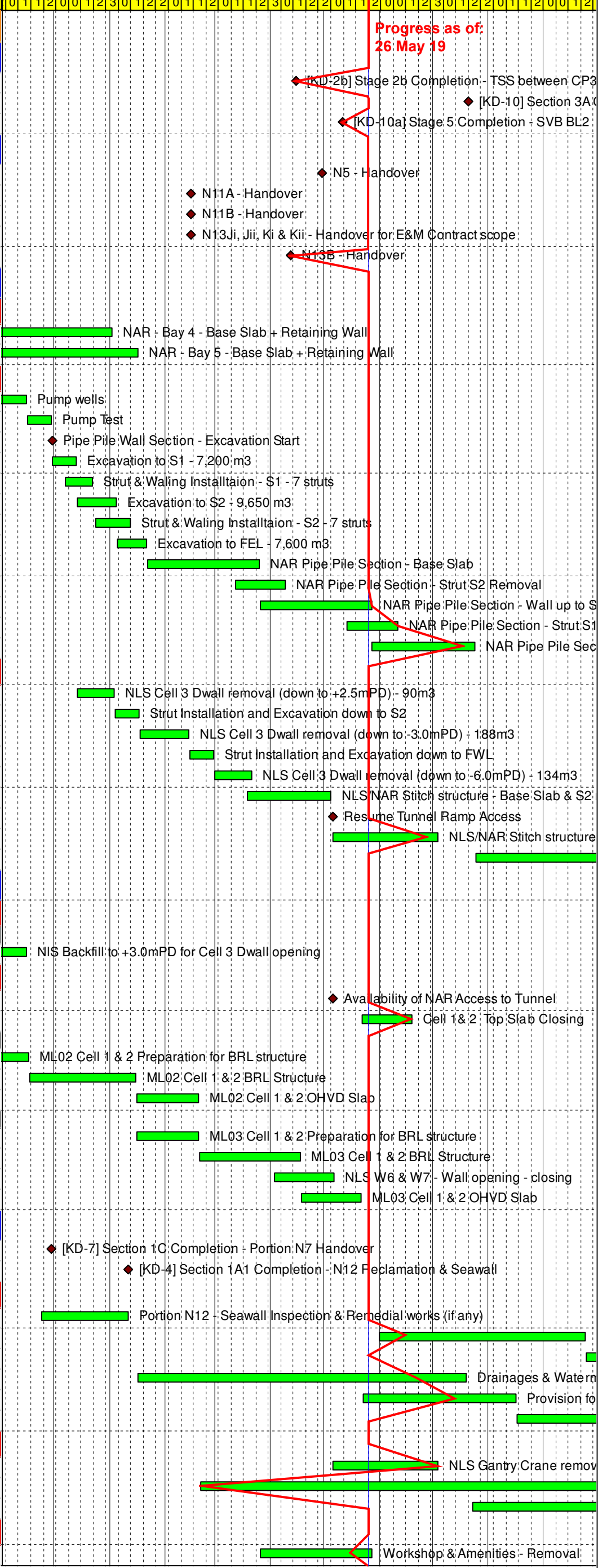


Appendix B

## Construction Programme

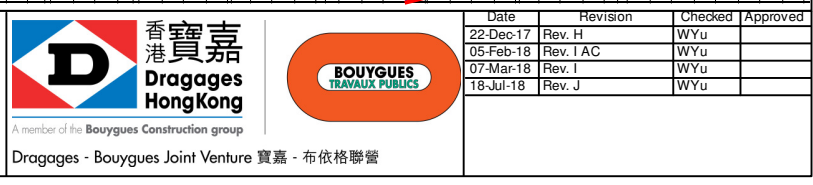
TMCLKL Northern Connection Sub-sea Tunnel Section			
Contract Key Dates			
[KD-2b] Stage 2b Completion - TSS between CP33 to CP13	0		15-Apr-19*
[KD-10] Section 3A Completion - SVB	0		20-Jul-19*
[KD-10a] Stage 5 Completion - SVB BL2	0		11-May-19*
Portion Handover Dates			
N5 - Handover	0		30-Apr-19*
N11A - Handover	0		15-Feb-19*
N11B - Handover	0		15-Feb-19*
N13Ji, Jii, Ki & Kii - Handover for E&M Contract scope	0		15-Feb-19*
N13B - Handover	0		12-Apr-19*
North Approach Ramp			
Portion N12 Section			
NAR - Bay 4 - Base Slab + Retaining Wall	72	06-Oct-18	02-Jan-19
NAR - Bay 5 - Base Slab + Retaining Wall	72	22-Oct-18	16-Jan-19
Access Ramp Section			
Pump wells	35	05-Oct-18	15-Nov-18
Pump Test	12	16-Nov-18	29-Nov-18
Pipe Pile Wall Section - Excavation Start	0	30-Nov-18	
Excavation to S1 - 7,200 m3	12	30-Nov-18	13-Dec-18
Strut & Waling Installation - S1 - 7 struts	14	07-Dec-18	22-Dec-18
Excavation to S2 - 9,650 m3	16	14-Dec-18	04-Jan-19
Strut & Waling Installation - S2 - 7 struts	15	24-Dec-18	12-Jan-19
Excavation to FEL - 7,600 m3	14	05-Jan-19	21-Jan-19
NAR Pipe Pile Section - Base Slab	48	22-Jan-19	25-Mar-19
NAR Pipe Pile Section - Strut S2 Removal	24	12-Mar-19	09-Apr-19
NAR Pipe Pile Section - Wall up to S1	48	26-Mar-19	27-May-19
NAR Pipe Pile Section - Strut S1 Removal	24	14-May-19	11-Jun-19
NAR Pipe Pile Section - Wall Remaining	48	28-May-19	24-Jul-19
NLS Interface (OAP-NAR-DWG-10442-B)			
NLS Cell 3 Dwall removal (down to +2.5mPD) - 90m3	15	14-Dec-18	03-Jan-19
Strut Installation and Excavation down to S2	12	04-Jan-19	17-Jan-19
NLS Cell 3 Dwall removal (down to -3.0mPD) - 188m3	18	18-Jan-19	14-Feb-19
Strut Installation and Excavation down to FWL	12	15-Feb-19	28-Feb-19
NLS Cell 3 Dwall removal (down to -6.0mPD) - 134m3	18	01-Mar-19	21-Mar-19
NLS/NAR Stitch structure - Base Slab & S2 removed	36	19-Mar-19	04-May-19
Resume Tunnel Ramp Access	0	06-May-19	
NLS/NAR Stitch structure - Remaining Wall Structure & Str.	48	06-May-19	03-Jul-19
NAR Parapet, Cable Trough	58	25-Jul-19	02-Oct-19*
North Launching Shaft			
NLS Cell 1-3 Structure for Cell 3 Dwall opening			
Cell 2			
NIS Backfill to +3.0mPD for Cell 3 Dwall opening	24	19-Oct-18	15-Nov-18
NLS Cell 1-3 Remaining Structure			
Availability of NAR Access to Tunnel	0		06-May-19
Cell 1 & 2 Top Slab Closing	24	22-May-19	19-Jun-19
ML02			
ML02 Cell 1 & 2 Preparation for BRL structure	24	20-Oct-18	16-Nov-18
ML02 Cell 1 & 2 BRL Structure	48	17-Nov-18	15-Jan-19
ML02 Cell 1 & 2 OHVD Slab	24	16-Jan-19	19-Feb-19
ML03			
ML03 Cell 1 & 2 Preparation for BRL structure	24	16-Jan-19	19-Feb-19
ML03 Cell 1 & 2 BRL Structure	48	20-Feb-19	17-Apr-19
NLS W6 & W7 - Wall opening - closing	24	03-Apr-19	06-May-19
ML03 Cell 1 & 2 OHVD Slab	24	18-Apr-19	21-May-19
NLF Demobilization & At-grade works			
[KD-7] Section 1C Completion - Portion N7 Handover	0		29-Nov-18*
[KD-4] Section 1A1 Completion - N12 Reclamation & Seawall	0		11-Jan-19*
Portion N12 & Portion N6B			
Portion N12 - Seawall Inspection & Remedial works (if any)	39	24-Nov-18	11-Jan-19
CLP Substation - Prepare for CLP Consent for de-energization	96	01-Jun-19	24-Sep-19
CLP Substation - De-energization	24	25-Sep-19	24-Oct-19
Drainages & Watermain - Portion N12 & N6B	144	17-Jan-19	19-Jul-19
Provision for Utilities - Portion N12 & N6B	72	23-May-19	16-Aug-19
Utilities parties coordination & Remaining Civil Provision - I	117	17-Aug-19	07-Jan-20
North Launching Shaft			
NLS Gantry Crane removal	48	06-May-19	03-Jul-19
Drainages & Watermain - NLS	194	21-Feb-19	17-Oct-19
Provision for Utilities - NLS	96	23-Jul-19	14-Nov-19
Sloping Seawall			
Workshop & Amenities - Removal	48	26-Mar-19	27-May-19

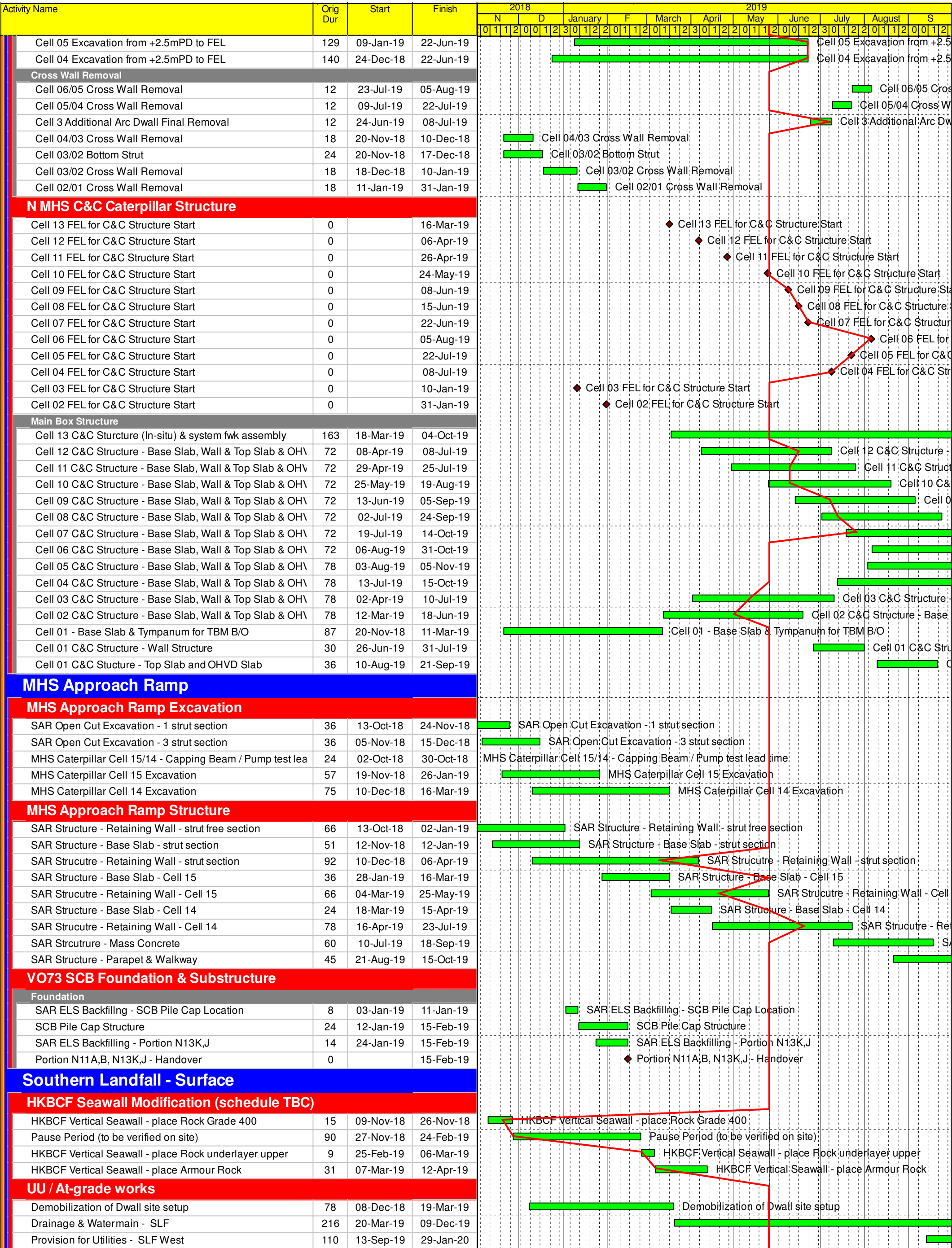






Activity Name	Orig Dur	Start	Finish	2018	2019
				N D January F March April May June July August S	
<b>S882 TBM</b>					
TBM's Final Break out at Caterpillar Cell 1	0	12-Mar-19			◆ TBM's Final Break out at Caterpillar Cell 1
S882 TBM Final Break-out	14	12-Mar-19	25-Mar-19		■ S882 TBM Final Break-out
S882 Cutterhead / Main Shield / Main Drive - Cut & remove	36	26-Mar-19	11-May-19		■ S882 Cutterhead / Main Shield / Main Drive
Cell 1 ML02 - Shifting way for Gantry 1 & 2 Removal	12	14-May-19	27-May-19		■ Cell 1 ML02 - Shifting way for Gantry
S882 TBM G1 & G2 Removal	24	28-May-19	25-Jun-19		■ S882 TBM G1 & G2 Removal
<b>ML02 TSS Internal Structure</b>					
ML02 TSS - Remaining Corbel Structure by ISCG	13	06-May-19	21-May-19		■ ML02 TSS - Remaining Corbel Structure
ML02 TSS - Parapet installation	33	22-May-19	29-Jun-19		■ ML02 TSS - Parapet installation
Walkway corbel - TSS Remaining & SVS ML02 both side	26	02-Jul-19	31-Jul-19		■ Walkway corbel - TSS Remaining & SVS ML02 both side
ML02 TSS - OHVD by ISSG (from CP15 to SVS)	8	22-May-19	30-May-19		■ ML02 TSS - OHVD by ISSG (from CP15 to SVS)
<b>ML03 TSS Internal Structure</b>					
ML03 TSS - Remaining Corbel Structure by ISCG	14	18-Jul-19	02-Aug-19		■ ML03 TSS - Remaining Corbel Structure
ML03 TSS - Parapet installation	35	05-Aug-19	13-Sep-19		■ ML03 TSS - Parapet installation
Walkway corbel - TSS Remaining & SVS ML03 both side	27	12-Sep-19	16-Oct-19		■ Walkway corbel - TSS Remaining & SVS ML03 both side
ML03 TSS - ISSG assembly at CP15	9	08-Aug-19	17-Aug-19		■ ML03 TSS - ISSG assembly at CP15
ML03 TSS - OHVD by ISSG (from CP15 to SVS)	9	19-Aug-19	28-Aug-19		■ ML03 TSS - OHVD by ISSG (from CP15 to SVS)
ML03 ISSG Crossing at SVS	12	29-Aug-19	11-Sep-19		■ ML03 ISSG Crossing at SVS
<b>TSS Cross Passage</b>					
<b>CP9</b>					
CP9 Injection & Finishing	28	24-Oct-18	24-Nov-18	■	CP9 Injection & Finishing
<b>CP8</b>					
CP8 Invert & Collar Structure	24	03-Nov-18	30-Nov-18	■	CP8 Invert & Collar Structure
CP8 Injection & Finishing	28	01-Dec-18	05-Jan-19	■	CP8 Injection & Finishing
<b>ML02 TSA Internal Structure</b>					
ML02 TSA - Parapet installation	15	18-Jul-19	03-Aug-19		■ ML02 TSA - Parapet installation
Walkway corbel - MHS TBM ML02 both sides	12	05-Aug-19	17-Aug-19		■ Walkway corbel - MHS TBM ML02 both sides
ML02 TSA - Corbel Structure	18	26-Jun-19	17-Jul-19		■ ML02 TSA - Corbel Structure
ML02 ISSG Crossing at SVS	12	04-Jul-19	17-Jul-19		■ ML02 ISSG Crossing at SVS
ML02 TSA - OHVD by ISSG	9	18-Jul-19	27-Jul-19		■ ML02 TSA - OHVD by ISSG
ML02 TSA - ISSG dismantling	9	29-Jul-19	07-Aug-19		■ ML02 TSA - ISSG dismantling
<b>ML03 TSA Internal Structure</b>					
ML03 TSA - Invert Backfilling	24	07-Nov-18	04-Dec-18	■	ML03 TSA - Invert Backfilling
ML03 TSA - Parapet installation	16	16-Sep-19	04-Oct-19		■ ML03 TSA - Parapet installation
ML03 TSA - Corbel Structure	16	03-Aug-19	21-Aug-19		■ ML03 TSA - Corbel Structure
ML03 TSA - OHVD by ISSG	9	12-Sep-19	23-Sep-19		■ ML03 TSA - OHVD by ISSG
ML03 TSA - Lead time for Fire Proofing	6	24-Sep-19	30-Sep-19		■ ML03 TSA - Lead time for Fire Proofing
<b>TSA Cross Passage</b>					
<b>CP6</b>					
CP6 ML03 Shear Key - coring & concrete	12	04-Dec-18	17-Dec-18	■	CP6 ML03 Shear Key - coring & concrete
ML03 CP Tympanum Fwk Transfer to TSA	6	05-Dec-18	11-Dec-18	■	ML03 CP Tympanum Fwk Transfer to TSA
CP6 ML03 Tympanum	36	18-Dec-18	31-Jan-19	■	CP6 ML03 Tympanum
ML02 CP Tympanum Fwk Transfer to TSA CP6	6	04-Oct-18	10-Oct-18	■	ML02 CP Tympanum Fwk Transfer to TSA CP6
CP6 ML02 Tympanum	36	11-Oct-18	22-Nov-18	■	CP6 ML02 Tympanum
CP6 TBM Assembly & Pipe Jacking	42	01-Feb-19	14-Mar-19	■	CP6 TBM Assembly & Pipe Jacking
CP6 Invert & Collar Structure	24	15-Mar-19	12-Apr-19	■	CP6 Invert & Collar Structure
CP6 Injection & Finishing	28	13-Apr-19	21-May-19	■	CP6 Injection & Finishing
<b>CP5</b>					
CP5 ML03 Shear Key - coring & concrete	12	05-Dec-18	18-Dec-18	■	CP5 ML03 Shear Key - coring & concrete
CP5 ML03 Tympanum	36	01-Feb-19	21-Mar-19	■	CP5 ML03 Tympanum
CP5 ML02 Shear Key - coring & concrete	12	04-Oct-18	18-Oct-18	■	CP5 ML02 Shear Key - coring & concrete
CP5 ML02 Tympanum	36	23-Nov-18	07-Jan-19	■	CP5 ML02 Tympanum
CP5 TBM Assembly & Pipe Jacking	42	22-Mar-19	02-May-19	■	CP5 TBM Assembly & Pipe Jacking
CP5 Invert & Collar Structure	24	03-May-19	31-May-19	■	CP5 Invert & Collar Structure
CP5 Injection & Finishing	28	01-Jun-19	05-Jul-19	■	CP5 Injection & Finishing
<b>MHS Cut-and-cover Tunnel</b>					
<b>N MHS C&amp;C Caterpillar Dwall</b>					
<b>Cell 4 to 8</b>					
Cell 8 to 9 - Remaining Dwall Panels	53	06-Oct-18	07-Dec-18	■	Cell 8 to 9 - Remaining Dwall Panels
<b>N MHS C&amp;C Preparation for Excavation</b>					
Cell 8 to 9 - Capping beam / Dewatering / Pump Test	24	08-Dec-18	08-Jan-19	■	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	■	Cell 10 to 11 - Capping beam / Dewatering / Pump Test
Cell 12 - Capping beam / Dewatering / Pump Test	24	12-Nov-18	08-Dec-18	■	Cell 12 - Capping beam / Dewatering / Pump Test
Cell 13 - Capping beam / Dewatering / Pump Test	24	22-Oct-18	17-Nov-18	■	Cell 13 - Capping beam / Dewatering / Pump Test
<b>N MHS C&amp;C Caterpillar Excavation</b>					
<b>MHS C&amp;C Cell 12 to 04</b>					
Cell 13 Excavation from +2.5mPD to FEL	75	10-Dec-18	16-Mar-19	■	Cell 13 Excavation from +2.5mPD to FEL
Cell 12 Excavation from +2.5mPD to FEL	80	24-Dec-18	06-Apr-19	■	Cell 12 Excavation from +2.5mPD to FEL
Cell 11 Excavation from +2.5mPD to FEL	89	02-Jan-19	26-Apr-19	■	Cell 11 Excavation from +2.5mPD to FEL
Cell 10 Excavation from +2.5mPD to FEL	105	09-Jan-19	24-May-19	■	Cell 10 Excavation from +2.5mPD to FEL
Cell 09 Excavation from +2.5mPD to FEL	105	23-Jan-19	08-Jun-19	■	Cell 09 Excavation from +2.5mPD to FEL
Cell 08 Excavation from +2.5mPD to FEL	105	30-Jan-19	15-Jun-19	■	Cell 08 Excavation from +2.5mPD to FEL
Cell 07 Excavation from +2.5mPD to FEL	111	30-Jan-19	22-Jun-19	■	Cell 07 Excavation from +2.5mPD to FEL
Cell 06 Excavation from +2.5mPD to FEL	123	16-Jan-19	22-Jun-19	■	Cell 06 Excavation from +2.5mPD to FEL





Activity Name	Orig Dur	Start	Finish
Cell 05 Excavation from +2.5mPD to FEL	129	09-Jan-19	22-Jun-19
Cell 04 Excavation from +2.5mPD to FEL	140	24-Dec-18	22-Jun-19
<b>Cross Wall Removal</b>			
Cell 06/05 Cross Wall Removal	12	23-Jul-19	05-Aug-19
Cell 05/04 Cross Wall Removal	12	09-Jul-19	22-Jul-19
Cell 3 Additional Arc Dwall Final Removal	12	24-Jun-19	08-Jul-19
Cell 04/03 Cross Wall Removal	18	20-Nov-18	10-Dec-18
Cell 03/02 Bottom Strut	24	20-Nov-18	17-Dec-18
Cell 03/02 Cross Wall Removal	18	18-Dec-18	10-Jan-19
Cell 02/01 Cross Wall Removal	18	11-Jan-19	31-Jan-19
<b>N MHS C&amp;C Caterpillar Structure</b>			
Cell 13 FEL for C&C Structure Start	0		16-Mar-19
Cell 12 FEL for C&C Structure Start	0		06-Apr-19
Cell 11 FEL for C&C Structure Start	0		26-Apr-19
Cell 10 FEL for C&C Structure Start	0		24-May-19
Cell 09 FEL for C&C Structure Start	0		08-Jun-19
Cell 08 FEL for C&C Structure Start	0		15-Jun-19
Cell 07 FEL for C&C Structure Start	0		22-Jun-19
Cell 06 FEL for C&C Structure Start	0		05-Aug-19
Cell 05 FEL for C&C Structure Start	0		22-Jul-19
Cell 04 FEL for C&C Structure Start	0		08-Jul-19
Cell 03 FEL for C&C Structure Start	0		10-Jan-19
Cell 02 FEL for C&C Structure Start	0		31-Jan-19
<b>Main Box Structure</b>			
Cell 13 C&C Structure (In-situ) & system fwk assembly	163	18-Mar-19	04-Oct-19
Cell 12 C&C Structure - Base Slab, Wall & Top Slab & OH\	72	08-Apr-19	08-Jul-19
Cell 11 C&C Structure - Base Slab, Wall & Top Slab & OH\	72	29-Apr-19	25-Jul-19
Cell 10 C&C Structure - Base Slab, Wall & Top Slab & OH\	72	25-May-19	19-Aug-19
Cell 09 C&C Structure - Base Slab, Wall & Top Slab & OH\	72	13-Jun-19	05-Sep-19
Cell 08 C&C Structure - Base Slab, Wall & Top Slab & OH\	72	02-Jul-19	24-Sep-19
Cell 07 C&C Structure - Base Slab, Wall & Top Slab & OH\	72	19-Jul-19	14-Oct-19
Cell 06 C&C Structure - Base Slab, Wall & Top Slab & OH\	72	06-Aug-19	31-Oct-19
Cell 05 C&C Structure - Base Slab, Wall & Top Slab & OH\	78	03-Aug-19	05-Nov-19
Cell 04 C&C Structure - Base Slab, Wall & Top Slab & OH\	78	13-Jul-19	15-Oct-19
Cell 03 C&C Structure - Base Slab, Wall & Top Slab & OH\	78	02-Apr-19	10-Jul-19
Cell 02 C&C Structure - Base Slab, Wall & Top Slab & OH\	78	12-Mar-19	18-Jun-19
Cell 01 - Base Slab & Tympanum for TBM B/O	87	20-Nov-18	11-Mar-19
Cell 01 C&C Structure - Wall Structure	30	26-Jun-19	31-Jul-19
Cell 01 C&C Structure - Top Slab and OHVD Slab	36	10-Aug-19	21-Sep-19
<b>MHS Approach Ramp</b>			
<b>MHS Approach Ramp Excavation</b>			
SAR Open Cut Excavation - 1 strut section	36	13-Oct-18	24-Nov-18
SAR Open Cut Excavation - 3 strut section	36	05-Nov-18	15-Dec-18
MHS Caterpillar Cell 15/14 - Capping Beam / Pump test lead	24	02-Oct-18	30-Oct-18
MHS Caterpillar Cell 15 Excavation	57	19-Nov-18	26-Jan-19
MHS Caterpillar Cell 14 Excavation	75	10-Dec-18	16-Mar-19
<b>MHS Approach Ramp Structure</b>			
SAR Structure - Retaining Wall - strut free section	66	13-Oct-18	02-Jan-19
SAR Structure - Base Slab - strut section	51	12-Nov-18	12-Jan-19
SAR Structure - Retaining Wall - strut section	92	10-Dec-18	06-Apr-19
SAR Structure - Base Slab - Cell 15	36	28-Jan-19	16-Mar-19
SAR Structure - Retaining Wall - Cell 15	66	04-Mar-19	25-May-19
SAR Structure - Base Slab - Cell 14	24	18-Mar-19	15-Apr-19
SAR Structure - Retaining Wall - Cell 14	78	16-Apr-19	23-Jul-19
SAR Structure - Mass Concrete	60	10-Jul-19	18-Sep-19
SAR Structure - Parapet & Walkway	45	21-Aug-19	15-Oct-19
<b>VO73 SCB Foundation &amp; Substructure</b>			
<b>Foundation</b>			
SAR ELS Backfilling - SCB Pile Cap Location	8	03-Jan-19	11-Jan-19
SCB Pile Cap Structure	24	12-Jan-19	15-Feb-19
SAR ELS Backfilling - Portion N13K,J	14	24-Jan-19	15-Feb-19
Portion N11A,B, N13K,J - Handover	0		15-Feb-19
<b>Southern Landfall - Surface</b>			
<b>HKBCF Seawall Modification (schedule TBC)</b>			
HKBCF Vertical Seawall - place Rock Grade 400	15	09-Nov-18	26-Nov-18
Pause Period (to be verified on site)	90	27-Nov-18	24-Feb-19
HKBCF Vertical Seawall - place Rock underlayer upper	9	25-Feb-19	06-Mar-19
HKBCF Vertical Seawall - place Armour Rock	31	07-Mar-19	12-Apr-19
<b>UU / At-grade works</b>			
Demobilization of Dwall site setup	78	08-Dec-18	19-Mar-19
Drainage & Watermain - SLF	216	20-Mar-19	09-Dec-19
Provision for Utilities - SLF West	110	13-Sep-19	29-Jan-20