

TMCLKL Northern Connection Sub-sea Tunnel Section

Contract Key Dates

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| [KD-2b] Stage 2b Completion - TSS between CP33 to CP13 | 0 | 15-Apr-19* |
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Portion Handover Dates

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|--|---|------------|
| 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

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

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| NLS Temp Access Ramp - Closure | 0 | 04-Jun-18 | |
| NLS Temp Access Ramp - Concrete Block & Backfill | 18 | 04-Jun-18 | 25-Jun-18 |
| Pre-drilling - 4 G.I. | 12 | 26-Jun-18 | 10-Jul-18 |
| Pre-bored H-piles - 12p | 36 | 11-Jul-18 | 21-Aug-18 |
| Pre-bored H-piles - Pile Load Test | 36 | 22-Aug-18 | 04-Oct-18 |
| Pipe Pile Wall - Access Ramp Section | 36 | 11-Jul-18 | 21-Aug-18 |
| Pipe Pile Wall - TAM Grouting | 36 | 22-Aug-18 | 04-Oct-18 |
| 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 Installtaion - 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 Installtaion - 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 |

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

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| 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 Stich structure - Base Slab & S2 removed | 36 | 19-Mar-19 | 04-May-19 |

North Ventilation Building

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

NLS Cell 1 False Tunnel

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| ML03 | | | |
| Cell 1 - Alimak Removal | 15 | 06-Jun-18 | 23-Jun-18 |

NLS Cell 1-3 Structure for Cell 3 Dwall opening

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|---|----|-----------|-----------|
| Cell 3 | | | |
| Cell 3 - Removal of existing NLS Ramp | 18 | 04-Jun-18 | 25-Jun-18 |
| Cell 3 - Dwall extension | 35 | 26-Jun-18 | 06-Aug-18 |
| Cell 3 - Remaining Base Slab | 18 | 07-Aug-18 | 27-Aug-18 |
| Cell 3 - Middle Wall | 24 | 28-Aug-18 | 24-Sep-18 |
| Cell 3 - Top Slab | 18 | 26-Sep-18 | 18-Oct-18 |
| Cell 3 - Base Slab - Connecting to NAR | 18 | 28-Aug-18 | 17-Sep-18 |
| Cell 3 - Wall 17 & 18 | 24 | 18-Sep-18 | 18-Oct-18 |
| Cell 2 | | | |
| Cell 2 - Removal of remaining NLS Ramp | 12 | 04-Jun-18 | 16-Jun-18 |
| Cell 2 - Expose Coupler for W6 & 7 | 12 | 19-Jun-18 | 03-Jul-18 |
| Cell 2 - Wall 6 & 7 | 24 | 04-Jul-18 | 31-Jul-18 |
| Cell 2 - ML03 - Prepare Scaffolding for Top Beams | 18 | 01-Aug-18 | 21-Aug-18 |
| Cell 2 - ML03 Top Beams | 24 | 22-Aug-18 | 18-Sep-18 |
| Cell 2 - ML02 - Prepare Scaffolding for Top beams | 18 | 22-Aug-18 | 11-Sep-18 |
| Cell 2 - ML02 - Top Beams | 24 | 19-Sep-18 | 19-Oct-18 |
| NIS Backfill to +3.0mPD for Cell 3 Dwall opening | 24 | 19-Oct-18 | 15-Nov-18 |

NLS Cell 1-3 Remaining Structure

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| 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 |









