

Table J1 *Cumulative Statistics on Exceedances*

Monitoring Parameters	Action/Limit Level	Total No. recorded in this reporting quarter	Total No. recorded since project commencement
1-Hr TSP	Action	0	30
	Limit	0	2
24-Hr TSP	Action	0	5
	Limit	0	1
Water Quality	Action	0	6
	Limit	0	1
Impact Dolphin Monitoring	Action	0	9
	Limit	1	9

Table J2 *Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions*

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of Summons	Successful Prosecutions
This Reporting Period (March 2017 to May 2017)	1	1	0
Total No. received since project commencement	14	1	0

Email
message

Environmental
Resources
Management

To Ramboll Environ - Hong Kong, Limited (ENPO)

From ERM- Hong Kong, Limited

Ref/Project number Contract No. HY/2012/08 Tuen Mun–Chek Lap
Kok Link–Northern Connection Sub-sea Tunnel
Section

Subject Notification of Exceedance for Impact Dolphin
Monitoring

Date 31 August 2017

16/F Berkshire House,
25 Westlands Road
Quarry Bay, Hong Kong
Telephone: (852) 2271 3113
Facsimile: (852) 2723 5660
E-mail: jovy.tam@erm.com



ERM

Dear Sir or Madam,

Please find attached the Notification of Exceedance (NOE) of the following
Log no.:

0212330_Mar2017/May2017_dolphin_STG&ANI_NEL&NWL

A total of one limit level exceedance was recorded in the quarterly impact
dolphin monitoring data between March 2017 and May 2017.

Regards,

A handwritten signature in black ink, appearing to read 'Jovy Tam', is written over a white background.

Mr Jovy Tam
Environmental Team Leader

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ERM-Hong Kong, Limited

CONTRACT NO. HY/2012/08

TUEN MUN – CHEK LAP KOK LINK –
NORTHERN CONNECTION SUB-SEA TUNNEL SECTION

Impact Dolphin Monitoring
Notification of Exceedance

Log No.	0212330_Mar2017/May2017_dolphin_STG&ANI_NEL&NWL [Total No. of Exceedances = 1 Limit Level Exceedance]	
Date	Mar 2017 to May 2017 (monitored) 25 August 2017 (results received by ERM)	
Monitoring Area	Northeast Lantau (NEL) and Northwest Lantau (NWL)	
Parameter(s) with Exceedance(s)	Quarterly encounter rate of dolphin sightings (STG) Quarterly encounter rate of total number of dolphins (ANI)	
Action Levels	North Lantau Social cluster	NEL: STG < 4.2 & ANI < 15.5 or NWL: STG < 6.9 & ANI < 31.3
Limit Levels		NEL: STG < 2.4 & ANI < 8.9 and NWL: STG < 3.9 & ANI < 17.9
Recorded Levels	NEL	STG = 0.0 & ANI = 0.0
	NWL	STG = 0.93 & ANI = 5.25
	One Limit Level Exceedance was recorded in the quarterly impact dolphin monitoring at NEL and NWL between March 2017 and May 2017. The exceedance was reported in the approved <i>Forty-third Monthly EM&A Report</i> dated 12 June 2017.	
Statistical Analyses	<p>Further to the review of the available and relevant dolphin monitoring data in the EM&A programme by this Contract, statistical analyses were conducted as follows:</p> <ul style="list-style-type: none"> A two-way ANOVA with repeated measures and unequal sample size was conducted using Period (2 levels: baseline vs impact – present quarter, March 2017 to May 2017) and Location (2 levels: NEL and NWL) as fixed factors to examine whether there were any significant differences in the average encounter rates between the baseline and present impact monitoring quarter. By setting $\alpha = 0.05$ as the significance level in the statistical tests, significant differences in STG ($p = 0.0019$) and ANI ($p = 0.0186$) were detected between Periods. A two-way ANOVA with repeated measures and unequal sample size was conducted using Cumulative Period (2 levels: baseline vs impact – cumulative quarters*, December 2012 to May 2017) and Location (2 levels: NEL and NWL) as fixed factors to examine whether there were any significant differences in the average encounter rates between the baseline and cumulative impact monitoring quarters. By setting $\alpha = 0.00005$ as the significance level in the statistical tests, significant difference in STG ($p = 0.000001$) and in ANI ($p = 0.000000$) between Cumulative Period and Location were detected. <p>*Note: The commencement date under <i>Contract No. HY/2012/08</i> is 1 November 2013.</p>	
Works Undertaken (in the monitoring quarter)	<p>In the quarter between March 2017 and May 2017, the major marine works under <i>Contract No. HY/2012/08</i> included:</p> <ul style="list-style-type: none"> Construction of Vertical Seawall; Band drain installation; and Filling works. 	

<p>Possible Reason for Action or Limit Level Exceedance(s)</p>	<p>The potential factors that may have contributed to the observed exceedance are reviewed below:</p> <ul style="list-style-type: none"> • Blocking of CWD travelling corridor: The <i>Monitoring of Marine Mammals in Hong Kong Waters (2016 – 17)</i> ⁽¹⁾ reported that dolphin usage and traveling activities to the northern side of the airport (dolphin traveling corridor) are affected by frequent high-speed ferry traffic from Sky Pier (not related to this Contract), which is likely a major factor resulting in the decrease in dolphin abundances in North Lantau. • Marine works of the Contract: As per the findings from the EIA report (<i>Section 8.11.9</i>), the major influences on the Chinese White Dolphin (CWD) <i>Sousa chinensis</i> under this Contract are marine traffics, reclamation and dredging works. The Contractor implemented the marine traffic control in the reporting period as per the requirements in the <i>EP-354/2009/D</i> and the updated <i>EM&A Manual</i>. Most of the vessels of this Contract also worked within the site boundary, in which the area is seldom used by CWD. Disturbance from vessels of this Contract is considered minor. The reclamation and dredging works of this Contract (Phase 2) commenced on 27th December 2016. Filling works were undertaken within 200m leading seawall throughout the filling period and the working rate described in the EP and the approved EIA Report were strictly followed. After reviewing of the daily filling records, all daily filling work rates in this quarter are under the maximum work rate described in the EP. During this quarter of dolphin monitoring, no adverse impact on CWD due to the activities under this Contract was observed. • Impact on water quality: According to the findings in the water quality monitoring results at the impact monitoring stations between March 2017 and May 2017, there was no exceedance on WQM. Impact mean levels of depth-averaged SS at all sampling stations during both mid-ebb and mid-flood tides were well below the corresponding ambient levels. The WQM results imply that no unacceptable impact on water quality was associated with the marine works under this Contract, and thus no indirect impacts on marine habitat quality due to change in water quality is observed in this Contract. <p>In view of the above, marine ecological mitigation measures were considered properly implemented, and thus no unacceptable impact on CWD or its habitat was associated with this Contract in this quarter from March 2017 and May 2017.</p>
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(1) Hung SKY (2016). Prepared for AFCD. Available at: https://www.afcd.gov.hk/english/conservation/con_mar/con_mar_chi/con_mar_chi_chi/files/Final_Report_2015_16.pdf

<p>Actions Taken/ To Be Taken</p>	<p>With reference to the site inspection records in this quarter, the respective marine ecological mitigation measures have been implemented properly by the Contractor throughout the marine works period, including:</p> <ol style="list-style-type: none"> 1. 250m dolphin exclusion zone; 2. Acoustic decoupling plan; 3. Training to workers; 4. Offsite vessel routing control in accordance with Regular Marine Travel Routes Plan, including routing control within existing and proposed marine park boundaries; 5. Vessels speed limited at 5 knots and 10 knots within existing and proposed marine park boundaries and site boundary respectively; 6. Idling and mooring of working vessels within site boundary; <p>The existing mitigation measures are recommended to be continuously implemented. Furthermore, it is also recommended to reduce the vessels for marine works as much as possible. The ET will monitor for future trends in exceedance(s).</p> <p>A joint team meeting was held on 17 July 2017 for discussion on CWD trend, with attendance of ENPO, HyD, Representatives of Resident Site Staff (RSS), Representatives of Environmental Team (ET) for Contract No. HY/2010/02, HY2011/03, HY/2012/07 and HY/2012/08. The discussion/recommendation as recorded in the minutes of the meeting, which might be relevant to this Contract are summarized below. It was concluded that the HZMB works is one of the contributing factors affecting the dolphins. It was also concluded the contribution of impacts due to the HZMB works as a whole (or individual marine contracts) cannot be quantified or separate from the other stress factors. It was reminded that the ETs shall keep reviewing the implementation status of the dolphin related mitigation measures and remind the contractor to ensure the relevant measures are fully implemented. The ETs were also reminded to update the BMP boundary in the Regular Marine Travel Route Plan. The participants were requested by ENPO to collect and report the marine traffic statistics. It was recommended that the marine works of HZMB projects should be completed as soon as possible so as to reduce the overall duration of impacts and allow the dolphins population to recover as early as possible. It was also suggested that the protection measures (e.g., speed limit control) for the proposed Brothers Marine Park (BMP) shall be brought forward as soon as possible before its establishment so as to provide a better habitat for dolphin recovery. It is noted that even though marine vessels may moor within the mooring site of BMP, commercial activities including loading / unloading / transshipment are not allowed except a permit is obtained. The HZMB works vessels were recommended to avoid the BMP. It was also recommended that the marine works footprint (e.g. reduce the size of peripheral silt curtain) and vessels for the marine works should be reduced as much as possible, and vessels idling / mooring in other part of the North Lantau shall be avoided whenever possible.</p> <p>It was reminded that starting from January 2016, high-speed ferry (HSF) from the SkyPier would be re-routed north to the northern edge of the Sha Chau and Lung Kwu Chau Marine Park that had the highest density of CWD in the NWL. While the HSF would reduce speed to 15 knots, the associated disturbance might still affect CWD in the area. It implied that the CWDs in the area should be closely followed.</p>
<p>Remarks</p>	<p>The results of impact dolphin monitoring, the status of implemented marine ecological mitigation measures are documented in the approved <i>Forty-first to Forty-third Monthly EM&A Reports</i>.</p>

ENVIRONMENTAL COMPLAINT/ENQUIRY INVESTIGATION REPORT

Our Reference: 0212330_Complaint LOG_20170328_13

Basic Information of Complaint/Enquiry

Reference Number:	Not disclosed
Date of Complaint/Enquiry Received	27 March 2017
Location of Complaint/Enquiry	Site near HKBCF of HZMB
Nature of Complaint/Enquiry	Noise nuisance and water pollution
Complaint/Enquiry Received by	EPD
Via	Not disclosed
Complainant/Enquirer	Not disclosed

Details of Complaint/Enquiry

On 27 March 2017, a complaint case was received by EPD regarding intermittent noise nuisance from the site near HKBCF of HZMB from 10:00pm on 26 March 2017 to the mid-night on 27 March 2017 and water pollution at the sea observed in the morning on 27 March 2017. The SOR, the Environmental Team (ET) and the Contractor(DBJV) received the complaint notification from IEC on 28 March 2017. The ET was informed that the case is categorized as complaint in nature upon the investigation, discussion and agreement between relevant parties (i.e. the Contractor (DBJV), SOR and IEC).

Investigation Report

Upon receiving the case notification from IEC on 28 March 2017, the Contractor had promptly checked the construction programme of March 2017.

According to the construction programme provided by the Contractor, the major construction works during the incident period were cutter soil mixing(CSM) ground treatment. Interview with the night time staff has been conducted. Cutter soil mixing rig and grout pump were being used. The construction works and the use of the above powered mechanical equipment were complied with the condition of current construction noise permit GW-RS0165-17. The construction programme is provided in Annex B. As the incident area is about 2.5km from the site, it is expected that there would not be any significant noise impact caused by this Contract.

Moreover, the water pollution at the sea shown in the photo provided by IEC (*Provided in Annex A*) is not likely to be related to this Contract since the site shown in the photo is not the site of this Contract. The incident area is also far away from the site of this Contract. Moreover, no marine works were undertaken at Southern Landfall during the incident period. Site investigation was conducted with SOR and DBJV on 19 April 2017. No improper discharge was observed. Wetsep records are provided in Annex F. A location map showing the distance between this site and the incident area is shown in Annex C. The site drainage plan showing the discharge location is shown in Annex D. Moreover, no contract-related marine traffic in the concerned waters was recorded according to the marine travel route record. The marine travel route record is provided in Annex E.

Based on the above, there is no evidence to prove that the complaint case is related to this Contract.

Mitigation Measures and Follow-Up Actions Recommended to/Undertaken by Contractor

There is no evidence to prove that the complaint case is related to this Contract.

Nevertheless, The Contractor has been reminded to adhere strictly to implement all relevant mitigation measures of noise impact recommended or specified in the EP (EP-354/2009/D), the approved EIA and the Updated EM&A Manual of this Project to avoid causing noise pollution. No other additional action is required. The Contractor shall also fully comply with the conditions in the approved CNP to carry out construction works under the Contract.

The Contractor has also been reminded to adhere strictly to implement all relevant mitigation measures of water quality impact recommended or specified in the EP (EP-354/2009/D), the approved EIA, Updated EM&A Manual and the Water Discharge License of this Project to avoid causing water pollution. The Contractor shall also fully comply with the conditions in the approved water discharge license to carry out construction works under the Contract.

Date of File Closed : 11 May 2017

Approved and Filed by:



(Jovy Tam, ET Leader)

Date: 11 May 2017

Annex A

Photo record



Annex A **Photo provided by IEC**



Annex B

Construction Programme

Activity Name	2017						
	Dec	Jan	Feb	Mar	Apr	May	Jun
TMCLK - Northern Connection Sub-Sea Tunnel Section							
Contract Dates							
Commencement and Completion Dates							
KD01 - Achievement of Stage 1 - Nth TBM & C&C for E&MS/TCSS							
Site Possession Date							
Portions: X1,(N10,11,13 & 14) - Sth Landfall							
Portions: N1 to N4 & N12							
General Submissions							
Environmental							
Environmental Permit Submissions							
Supplementary WMP of C&C Tunnel at Sth.Landfall							
Supplementary WMP of C&C Tunnel at Sth.Landfall							
Sediment Quality Report/Dumping Permit							
Southern Landfall							
Southern landfall - Commencement of Shaft & C&C Tunnel Dwall							
Southern Landfall - Commencement of Retrieval Shaft Excavation							
Sediment Sampling & Testing Plan (SSTP) - if required							
Complete SSTP and Obtain EPD's approval							
Sediment Quality Report (SQR) - if required							
Advance Ground Investigation works for Sediment sampling							
Sediment Sample Testing & Report preparation							
Dumping Permit for Load Dumping (Loading Permit) - if required							
Finalize the application document and submit to EPD - for Dwall							
Notify the results and issue Loading Permit for Local & Cross Boundary Crossing - for Dwall							
PAYMENT MILESTONE							
Design and Design Checking of the Works							
MS 2.5 Submit AIP for seawall modification works at Southern Landfall							
MS 2.6 Approve AIP for seawall modification works at Southern Landfall by the Supervising Officer							
MS 2.44 Approve DDA for South Ventilation Building by the Supervising Officer							
MS 2.52 Approve DDA for Facilities Provision for TCSS by the Supervising Officer							
MS 2.60 Approve DDA for Drainage, Sewerage, Waterworks and Utilities at Northern Landfall by the Supervising Officer							
MS 2.69 Submit draft Operation and Maintenance Manual for all Tunnels and Cross Passgaes							
MS 2.70 Accept Operation and Maintenance Manual for all Tunnels and Cross Passgaes by the Supervising Officer							
MS 2.71 Submit draft Operation and Maintenance Manual for all works except Tunnels and Cross Passgaes							
MS 2.72 Accept Operation and Maintenance Manual for all works except Tunnels and Cross Passgaes by the Supervising Officer							
Tunnel Boring Machine (TBM) and Back-up Equipment for TBM Tunnel							
MS 3.1.6 Removal of TBM for Southbound Tunnel from Site after the completion of TBM Tunnel							
MS 3.1.12 Removal of TBM for Northbound Tunnel from Site after the completion of TBM Tunnel							
MS 3.1.25 Demolition of Slurry Treatment Plant on completion							
MS 3.1.26 Complete the whole of the activities under this Cost Centre Part to the satisfaction of the Supervising Officer							
TBM Tunnel							
MS 3.3.4 Complete walls of retrieval shaft							
MS 3.3.5 Complete excavation to formation level for retrieval shaft and complete casting of base slab							
MS 3.3.6 Complete all necessary works of retrieval shaft to facilitate retrieval of TBM							
MS 3.3.40 Completion of excavation, support and permanent lining for 47.5% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.41 Completion of excavation, support and permanent lining for 50% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.42 Completion of excavation, support and permanent lining for 52.5% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.43 Completion of excavation, support and permanent lining for 55% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.44 Completion of excavation, support and permanent lining for 57.5% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.45 Completion of excavation, support and permanent lining for 60% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.46 Completion of excavation, support and permanent lining for 62.5% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.47 Completion of excavation, support and permanent lining for 65% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.48 Completion of excavation, support and permanent lining for 67.5% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.49 Completion of excavation, support and permanent lining for 70% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.50 Completion of excavation, support and permanent lining for 72.5% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.51 Completion of excavation, support and permanent lining for 75% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.52 Completion of excavation, support and permanent lining for 77.5% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.53 Completion of excavation, support and permanent lining for 80% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.54 Completion of excavation, support and permanent lining for 82.5% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.55 Completion of excavation, support and permanent lining for 85% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.56 Completion of excavation, support and permanent lining for 87.5% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.57 Completion of excavation, support and permanent lining for 90% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.58 Completion of excavation, support and permanent lining for 92.5% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.59 Completion of excavation, support and permanent lining for 95% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.60 Completion of excavation, support and permanent lining for 97.5% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.61 Completion of excavation, support and permanent lining for 100% of the total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.104 Completion of excavation, support and permanent lining for 70% of the total length (measured on plan) of the Southbound TBM Tunnel							
MS 3.3.105 Completion of excavation, support and permanent lining for 72.5% of the total length (measured on plan) of the Southbound TBM Tunnel							
MS 3.3.106 Completion of excavation, support and permanent lining for 75% of the total length (measured on plan) of the Southbound TBM Tunnel							
MS 3.3.107 Completion of excavation, support and permanent lining for 77.5% of the total length (measured on plan) of the Southbound TBM Tunnel							
MS 3.3.108 Completion of excavation, support and permanent lining for 80% of the total length (measured on plan) of the Southbound TBM Tunnel							
MS 3.3.109 Completion of excavation, support and permanent lining for 82.5% of the total length (measured on plan) of the Southbound TBM Tunnel							
MS 3.3.110 Completion of excavation, support and permanent lining for 85% of the total length (measured on plan) of the Southbound TBM Tunnel							
MS 3.3.111 Completion of excavation, support and permanent lining for 87.5% of the total length (measured on plan) of the Southbound TBM Tunnel							
MS 3.3.112 Completion of excavation, support and permanent lining for 90% of the total length (measured on plan) of the Southbound TBM Tunnel							
MS 3.3.113 Completion of excavation, support and permanent lining for 92.5% of the total length (measured on plan) of the Southbound TBM Tunnel							
MS 3.3.114 Completion of excavation, support and permanent lining for 95% of the total length (measured on plan) of the Southbound TBM Tunnel							
MS 3.3.115 Completion of excavation, support and permanent lining for 97.5% of the total length (measured on plan) of the Southbound TBM Tunnel							
MS 3.3.116 Completion of excavation, support and permanent lining for 100% of the total length (measured on plan) of the Southbound TBM Tunnel							
MS 3.3.118 Complete tunnel internal structures for 50% of total length (measured on plan) of the Northbound TBM Tunnel							
MS 3.3.121 Complete tunnel internal structures for 25% of total length (measured on plan) of the Southbound TBM Tunnel							
MS 3.3.122 Complete tunnel internal structures for 50% of total length (measured on plan) of the Southbound TBM Tunnel							

- Planned Bar
- Planned Bar - Critical
- Planned Milestone
- Progress bar
- Progress Milestone

TMCLK - Northern Connection Sub-Sea Tunnel Section
Detailed Works Programme (Rev. F)
Three Months Rolling Programme
Progress as of 26-Feb-17



Date	Revision	Checked	Approved
12-Feb-14	TMCLKDUGEN-PRG-08507	WYu	SPe
08-Apr-14	TMCLKDUGEN-PRG-08507 Rev.B	SPe	WYu
28-Aug-14	TMCLKDUGEN-PRG-08507 Rev.C	CLa	WYu
30-Oct-15	TMCLKDUGEN-PRG-08507 Rev.F	WYu	

Activity Name	2016							2017						
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cross Passages for TBM Tunnel														
MS 3.3.1 Complete 50% of ground treatment for excavation of all Type 1 Cross Passages(Percentage to be certified for 50%)	◆ MS 3.3.1 Complete 50% of ground treatment for excavation of all Type 1 Cross Passages(Percentage to be certified for 50%)													
MS 3.3.3 Complete 50% of ground treatment for excavation of all Type 2 Cross Passages(Percentage to be certified for 50%)	◆ MS 3.3.3 Complete 50% of ground treatment for excavation of all Type 2 Cross Passages(Percentage to be certified for 50%)													
MS 3.3.5 Complete 50% of excavation and support for all Type 1 Cross Passages(Percentage to be certified for 50%)		◆ MS 3.3.5 Complete 50% of excavation and support for all Type 1 Cross Passages(Percentage to be certified for 50%)												
MS 3.3.7 Complete 50% of excavation and support for all Type 2 Cross Passages(Percentage to be certified for 50%)		◆ MS 3.3.7 Complete 50% of excavation and support for all Type 2 Cross Passages(Percentage to be certified for 50%)												
MS 3.3.9 Complete 50% of permanent lining and internal structures for all Type 1 Cross Passages(Percentage to be certified for 50%)			◆ MS 3.3.9 Complete 50% of permanent lining and internal structures for all Type 1 Cross Passages(Percentage to be certified for 50%)											
MS 3.3.11 Complete 50% of permanent lining and internal structures for all Type 2 Cross Passages(Percentage to be certified for 50%)				◆ MS 3.3.11 Complete 50% of permanent lining and internal structures for all Type 2 Cross Passages(Percentage to be certified for 50%)										
Cut-and-cover Tunnels at Southern Landfalls														
MS 4.1.1 Complete 10% of total length (measured on plan) of temporary retaining walls for excavation of Cut-and-cover Tunnel														
MS 4.1.2 Complete 20% of total length (measured on plan) of temporary retaining walls for excavation of Cut-and-cover Tunnel														
MS 4.1.3 Complete 30% of total length (measured on plan) of temporary retaining walls for excavation of Cut-and-cover Tunnel														
MS 4.1.4 Complete 40% of total length (measured on plan) of temporary retaining walls for excavation of Cut-and-cover Tunnel														
MS 4.1.5 Complete 50% of total length (measured on plan) of temporary retaining walls for excavation of Cut-and-cover Tunnel														
MS 4.1.6 Complete 60% of total length (measured on plan) of temporary retaining walls for excavation of Cut-and-cover Tunnel														
MS 4.1.7 Complete 70% of total length (measured on plan) of temporary retaining walls for excavation of Cut-and-cover Tunnel														
MS 4.1.8 Complete 80% of total length (measured on plan) of temporary retaining walls for excavation of Cut-and-cover Tunnel														
MS 4.1.9 Complete 90% of total length (measured on plan) of temporary retaining walls for excavation of Cut-and-cover Tunnel														
MS 4.1.10 Complete 100% of total length (measured on plan) of temporary retaining walls for excavation of Cut-and-cover Tunnel														
MS 4.1.11 Complete 40% of excavation for Cut-and-cover tunnel														
MS 4.1.12 Complete 60% of excavation for Cut-and-cover tunnel														
MS 4.1.13 Complete 80% of excavation for Cut-and-cover tunnel														
MS 4.1.14 Complete 100% of excavation for Cut-and-cover tunnel			◆ MS 4.1.14 Complete 80% of excavation for Cut-and-cover tunnel											
MS 4.1.15 Complete permanent tunnel structure for 10% of the total length (measured on plan) of Cut-and-cover Tunnel														
MS 4.1.16 Complete permanent tunnel structure for 20% of the total length (measured on plan) of Cut-and-cover Tunnel														
MS 4.1.17 Complete permanent tunnel structure for 30% of the total length (measured on plan) of Cut-and-cover Tunnel														
MS 4.1.18 Complete permanent tunnel structure for 40% of the total length (measured on plan) of Cut-and-cover Tunnel														
MS 4.1.19 Complete permanent tunnel structure for 50% of the total length (measured on plan) of Cut-and-cover Tunnel														
MS 4.1.20 Complete permanent tunnel structure for 60% of the total length (measured on plan) of Cut-and-cover Tunnel														
MS 4.1.21 Complete permanent tunnel structure for 70% of the total length (measured on plan) of Cut-and-cover Tunnel														
MS 4.1.22 Complete permanent tunnel structure for 80% of the total length (measured on plan) of Cut-and-cover Tunnel														
MS 4.1.23 Complete permanent tunnel structure for 90% of the total length (measured on plan) of Cut-and-cover Tunnel														
MS 4.1.24 Complete permanent tunnel structure for 100% of the total length (measured on plan) of Cut-and-cover Tunnel														
MS 4.1.26 Complete excavation for 50% of total length (measured on plan) of all Cross Passages														
MS 4.1.27 Complete excavation for 100% of total length (measured on plan) of all Cross Passages														
MS 4.1.29 Complete pavement for 50% of the total length (measured on plan) of Cut-and-cover Tunnel														
MS 4.1.29 Complete pavement for 50% of the total length (measured on plan) of Cut-and-cover Tunnel														
Cut-and-cover Tunnel at Northern Landfall														
MS 4.2.22 Complete tunnel internal structure for 50% of NB Northern Landfall TBM Tunnel														
MS 4.2.23 Complete tunnel internal structure for 100% of NB Northern Landfall TBM Tunnel														
MS 4.2.24 Complete tunnel internal structure for 50% of SB Northern Landfall TBM Tunnel														
MS 4.2.25 Complete tunnel internal structure for 100% of SB Northern Landfall TBM Tunnel														
MS 4.2.29 Complete 100% of permanent lining and internal structures for all Northern Landfall Cross Passages														
MS 4.2.30 Complete Permanent tunnel structure for 25% of Cut and Cover Tunnel														
MS 4.2.31 Complete Permanent tunnel structure for 50% of Cut and Cover Tunnel														
MS 4.2.32 Complete Permanent tunnel structure for 75% of Cut and Cover Tunnel														
MS 4.2.34 Complete Permanent junction structure at interface between Cut-and-cover and TBM Tunnel														
Approach Ramp Structures to Cut-and-cover Tunnel at Southern Landfall														
MS 5.1.2 Complete 40% of excavation for approach ramp structures														
MS 5.1.3 Complete 60% of excavation for approach ramp structures														
MS 5.1.4 Complete 80% of excavation for approach ramp structures														
MS 5.1.5 Complete 100% of excavation for approach ramp structures														
MS 5.1.6 Complete retaining wall foundation for 10% of the total length (measured on plan) of approach ramp structures														
MS 5.1.7 Complete retaining wall foundation for 20% of the total length (measured on plan) of approach ramp structures														
MS 5.1.8 Complete retaining wall foundation for 30% of the total length (measured on plan) of approach ramp structures														
MS 5.1.9 Complete retaining wall foundation for 40% of the total length (measured on plan) of approach ramp structures														
MS 5.1.10 Complete retaining wall foundation for 50% of the total length (measured on plan) of approach ramp structures														
MS 5.1.11 Complete retaining wall foundation for 60% of the total length (measured on plan) of approach ramp structures														
MS 5.1.12 Complete retaining wall foundation for 70% of the total length (measured on plan) of approach ramp structures														
MS 5.1.13 Complete retaining wall foundation for 80% of the total length (measured on plan) of approach ramp structures														
MS 5.1.14 Complete retaining wall foundation for 90% of the total length (measured on plan) of approach ramp structures														
MS 5.1.15 Complete retaining wall foundation for 100% of the total length (measured on plan) of approach ramp structures														
At grade Roads at Northern Landfall														
MS 6.2.13 Complete drainage installation of 20% length of total length (measured on plan) of drainage pipes														
MS 6.2.17 Complete sewerage installation of 20% length of total length (measured on plan) of sewerage pipes														
MS 6.2.13 Complete drainage installation of 20% length of total length (measured on plan) of drainage pipes														
MS 6.2.17 Complete sewerage installation of 20% length of total length (measured on plan) of sewerage pipes														
South Ventilation Buildings														
MS 7.1.1 Complete 100% of cofferdam for excavation														
MS 7.1.2 Complete 100% of excavation to the formation level														
MS 7.1.3 Complete 100% of foundation for the ventilation building														
MS 7.1.4 Complete concreting works of 25% area of the total construction floor area for the ventilation building														
MS 7.1.5 Complete concreting works of 50% area of the total construction floor area for the ventilation building														
MS 7.1.6 Complete concreting works of 75% area of the total construction floor area for the ventilation building														
MS 7.1.7 Complete concreting works of 100% area of the total construction floor area for the ventilation building														
North Ventilation Buildings														
MS 7.2.4 Complete concreting works of 25% area of the total construction floor area for the ventilation building														
MS 7.2.5 Complete concreting works of 50% area of the total construction floor area for the ventilation building														
MS 7.2.6 Complete concreting works of 75% area of the total construction floor area for the ventilation building														
MS 7.2.7 Complete concreting works of 100% area of the total construction floor area for the ventilation building														
Facilities Provision for E&M Works for TBM Tunnel, Cut & Cover Tunnels and Cross Passages														
MS 9.1.1 Complete 25% of bonding terminal, opening and accessories, etc.														
MS 9.1.2 Complete 25% of plinth, hoisting facilities and accessories, etc.														
MS 9.1.3 Complete 50% of bonding terminal, opening and accessories, etc.														
MS 9.1.4 Complete 50% of plinth, hoisting facilities and accessories, etc.														
MS 9.1.5 Complete 75% of bonding terminal, opening and accessories, etc.														
MS 9.1.6 Complete 75% of plinth, hoisting facilities and accessories, etc.														

- Planned Bar
- Planned Bar - Critical
- Planned Milestone
- Progress bar
- Progress Milestone



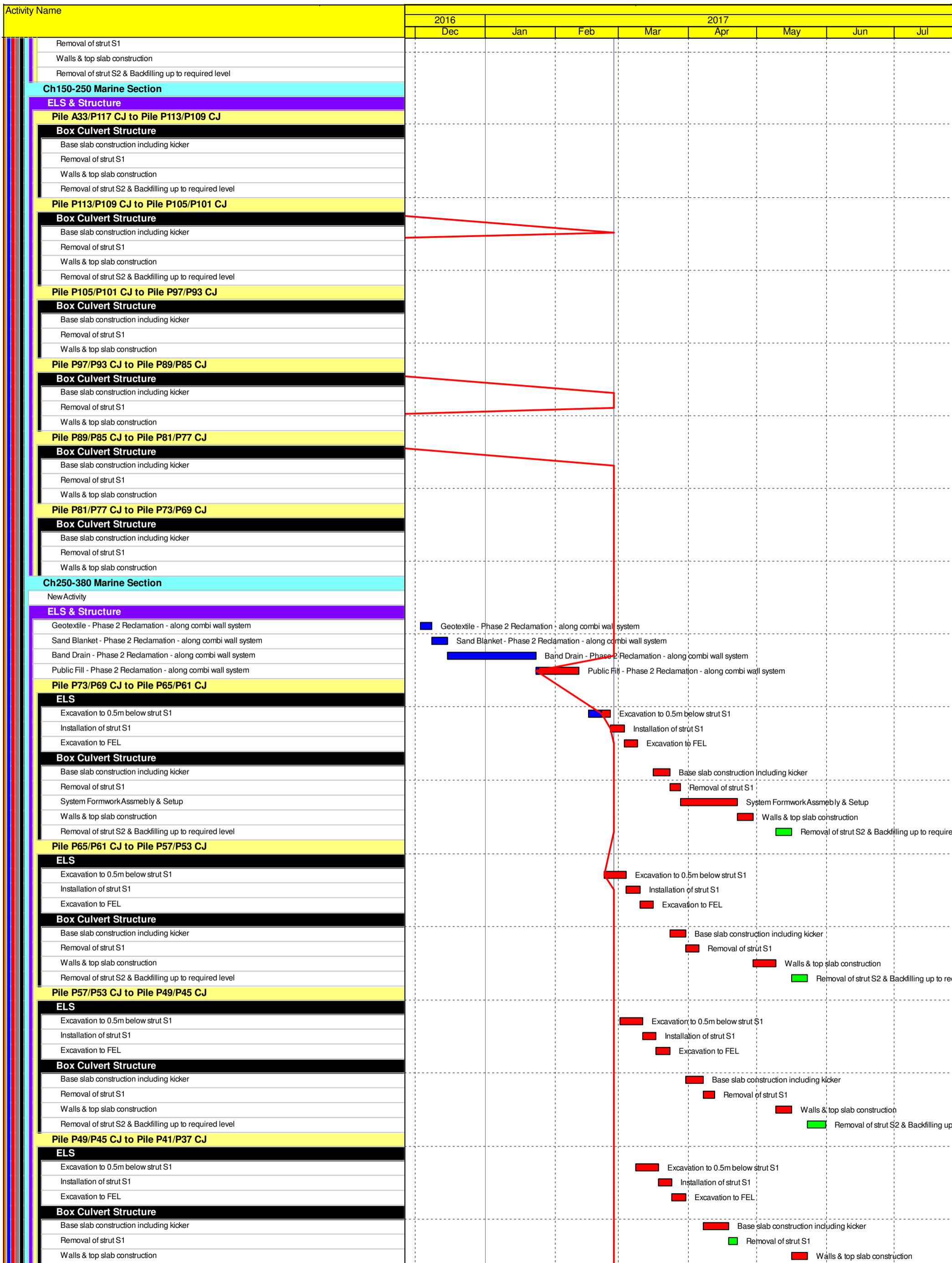
Date	Revision	Checked	Approved
12-Feb-14	TMCLKDJUGEN-PRG-98507	WYu	SPe
08-Apr-14	TMCLKDJUGEN-PRG-98507 Rev.B	SPe	WYu
28-Aug-14	TMCLKDJUGEN-PRG-98507 Rev.C	CLa	WYu
30-Oct-15	TMCLKDJUGEN-PRG-98507 Rev.F	WYu	

Activity Name	2016		2017					
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Facilities Provision for E&M Works for North Ventilation Building								
MS 9.5.1 Complete 25% of bonding terminal, main earth mat, clean earth mat, earth pit, lightning pit, conceal								◆ MS 9.5.1 Complete 25% of bonding terminal, main earth mat, clean earth mat, earth pit, lightning pit, conceal
MS 9.5.2 Complete 25% of plinth, hoisting facilities, louver, wire mesh and accessories, etc.								◆ MS 9.5.2 Complete 25% of plinth, hoisting facilities, louver, wire mesh and accessories, etc.
MS 9.5.3 Complete 25% of floor drain, water tank and accessories, etc.								◆ MS 9.5.3 Complete 25% of floor drain, water tank and accessories, etc.
Construction								
Northern Landfall								
North Reclamation (Phase 1)								
Construction								
Zone C1								
Reclamation								
Surcharge Removal - Zone C1 - (CH493 to 543)								■ Surcharge Removal - Zone C1
Surcharge Removal - Zone C1 - (CH493 to 543)								■ Surcharge Removal - Zone C1
Zone C2								
Reclamation								
Surcharge Removal - Zone C2 - (CH543 to 598)								■ Surcharge Removal - Zone C2
Zone B								
Reclamation								
Surcharge Removal - Zone B - (CH598 to 648)								
Surcharge Removal - Zone B - (CH598 to 698) stage 1								
Surcharge Period - Zone B - (CH648 to 698) stage 2								
Surcharge Removal - Zone B - (CH598 to 698) stage 2								
Zone F								
CH184 to CH231								
F - Anchor wall Installation - CH184 to CH231								
F - Backfilling up to 0.0mPD & G2 Installation to Anchor Wall - CH184 to CH231								
F - Backfilling up to +3.0mPD & G1 Installation to Anchor Wall - CH184 to CH231								
F - Backfilling up to +6.0mPD to Anchor Wall - CH184 to CH231								
F - Backfilling to +6.0mPD to Existing Seawall - CH184 to CH231								
CH231 to CH278								
F - Backfilling up to +6.0mPD - CH231 to CH278								
F - Anchor wall Installation - CH231 to CH278								
F - Backfilling up to 0.0mPD & G2 Installation to Anchor Wall - CH231 to CH278								
F - Backfilling up to +3.0mPD & G1 Installation to Anchor Wall - CH231 to CH278								
F - Backfilling up to +6.0mPD to Anchor Wall - CH231 to CH278								
F - Backfilling to +6.0mPD to Existing Seawall - CH231 to CH278								
CH278 to CH327								
F - Backfilling up to +6.0mPD - CH278 to CH327								
F - Anchor wall Installation - CH278 to CH327								
F - Backfilling up to 0.0mPD & G2 Installation to Anchor Wall - CH278 to CH327								
F - Backfilling up to +3.0mPD & G1 Installation to Anchor Wall - CH278 to CH327								
F - Backfilling up to +6.0mPD to Anchor Wall - CH278 to CH327								
F - Backfilling to +6.0mPD to Existing Seawall - CH278 to CH327								
CH327 to CH381								
F - Backfilling up to +6.0mPD - CH327 to CH381								
F - Anchor wall Installation - CH327 to CH381								
F - Backfilling up to 0.0mPD & G2 Installation to Anchor Wall - CH327 to CH381								
F - Backfilling up to +3.0mPD & G1 Installation to Anchor Wall - CH327 to CH381								
F - Backfilling up to +6.0mPD to Anchor Wall - CH327 to CH381								
F - Backfilling to +6.0mPD to Existing Seawall - CH327 to CH381								
Box Culvert Extension								
Construction								
Ch000-010 Culvert Outfall								
Removal of temporary bulk head								
CH100-150 Land Section								
Pile A41/A39 CJ to Pile A39/A37 CJ								
Box Culvert Structure								
Pile cap construction								
Base slab construction including kicker								
Removal of strut S1								
Sliding formworks 1st assembly								
Walls & top slab construction								
Removal of strut S2 & Backfilling up to required level								
Pile A39/A37 CJ to Pile A37/A35 CJ								
Box Culvert Structure								
Pile cap construction								
Base slab construction including kicker								
Removal of strut S1								
Walls & top slab construction								
Removal of strut S2 & Backfilling up to required level								
Pile A37/A35 CJ to Pile A35/A33 CJ								
ELS								
Excavation to FEL								
Box Culvert Structure								
Pile cap construction								
Base slab construction including kicker								
Removal of strut S1								
Walls & top slab construction								
Removal of strut S2 & Backfilling up to required level								
Pile A35/A33 CJ to Pile A33/P117 CJ								
ELS								
Excavation to FEL								
Box Culvert Structure								
Pile cap construction								
Base slab construction including kicker								

■ Planned Bar
■ Planned Bar - Critical
◆ Planned Milestone
■ Progress bar
◆ Progress Milestone



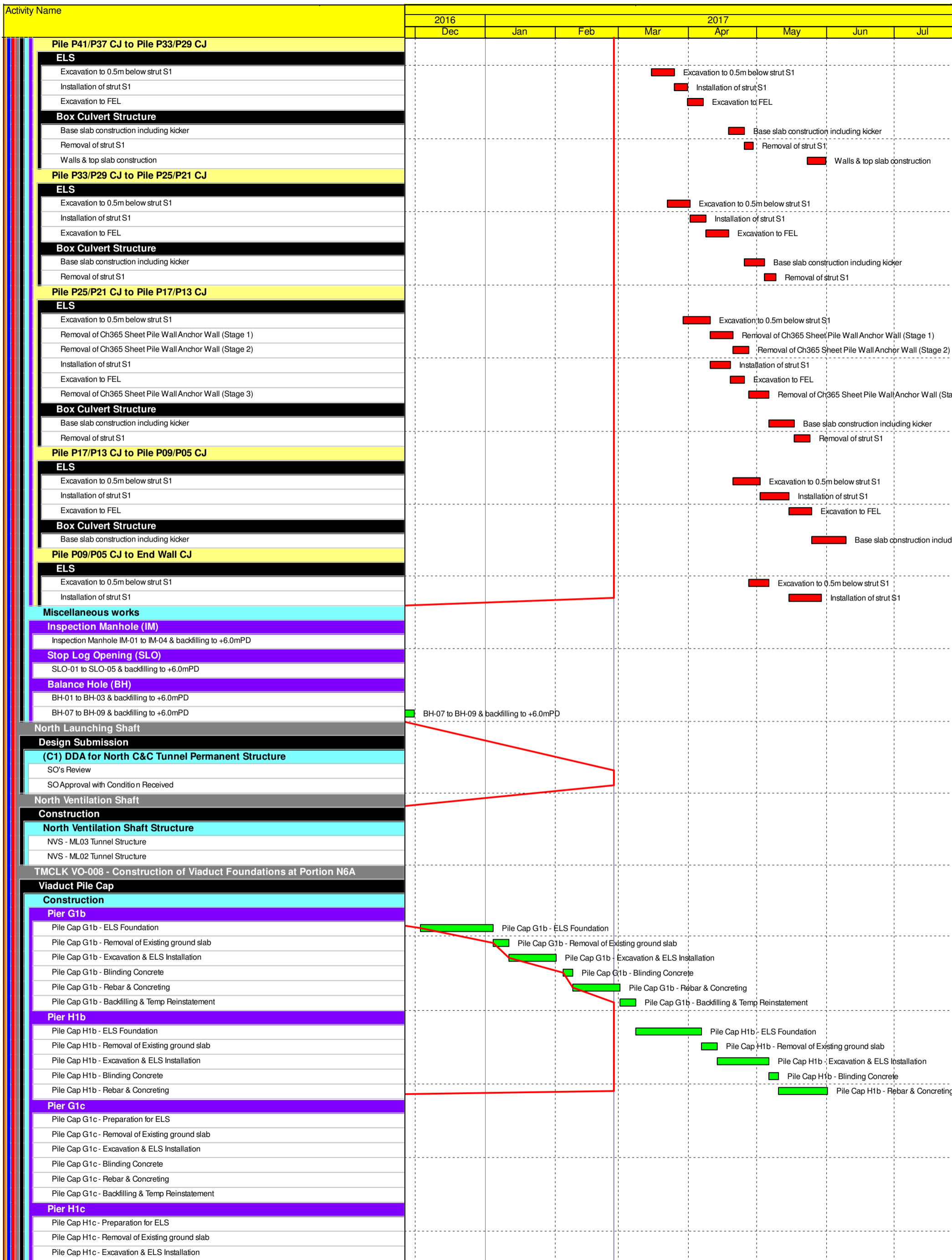
Date	Revision	Checked	Approved
12-Feb-14	TMCLKDJGEN-PRG-98507	WYu	SPe
08-Apr-14	TMCLKDJGEN-PRG-98507 Rev.B	SPe	WYu
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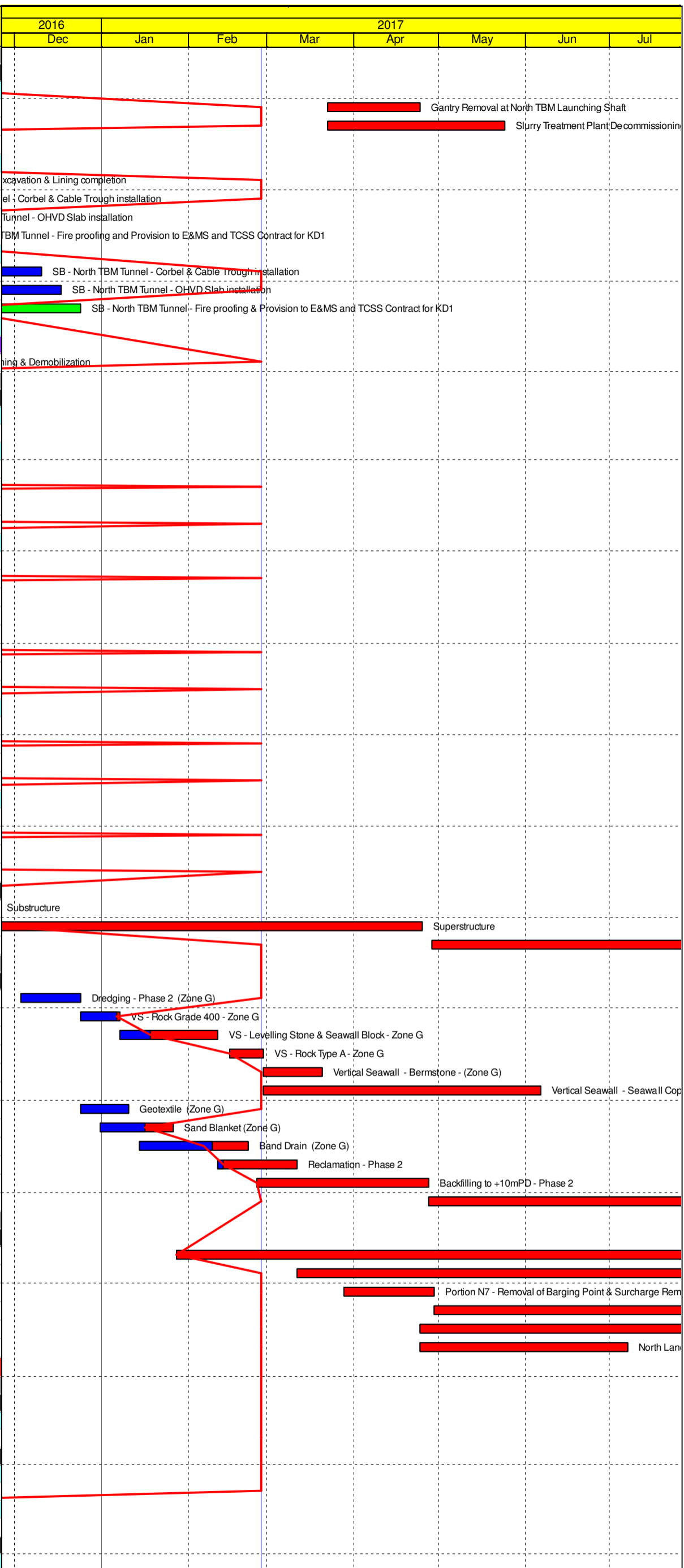


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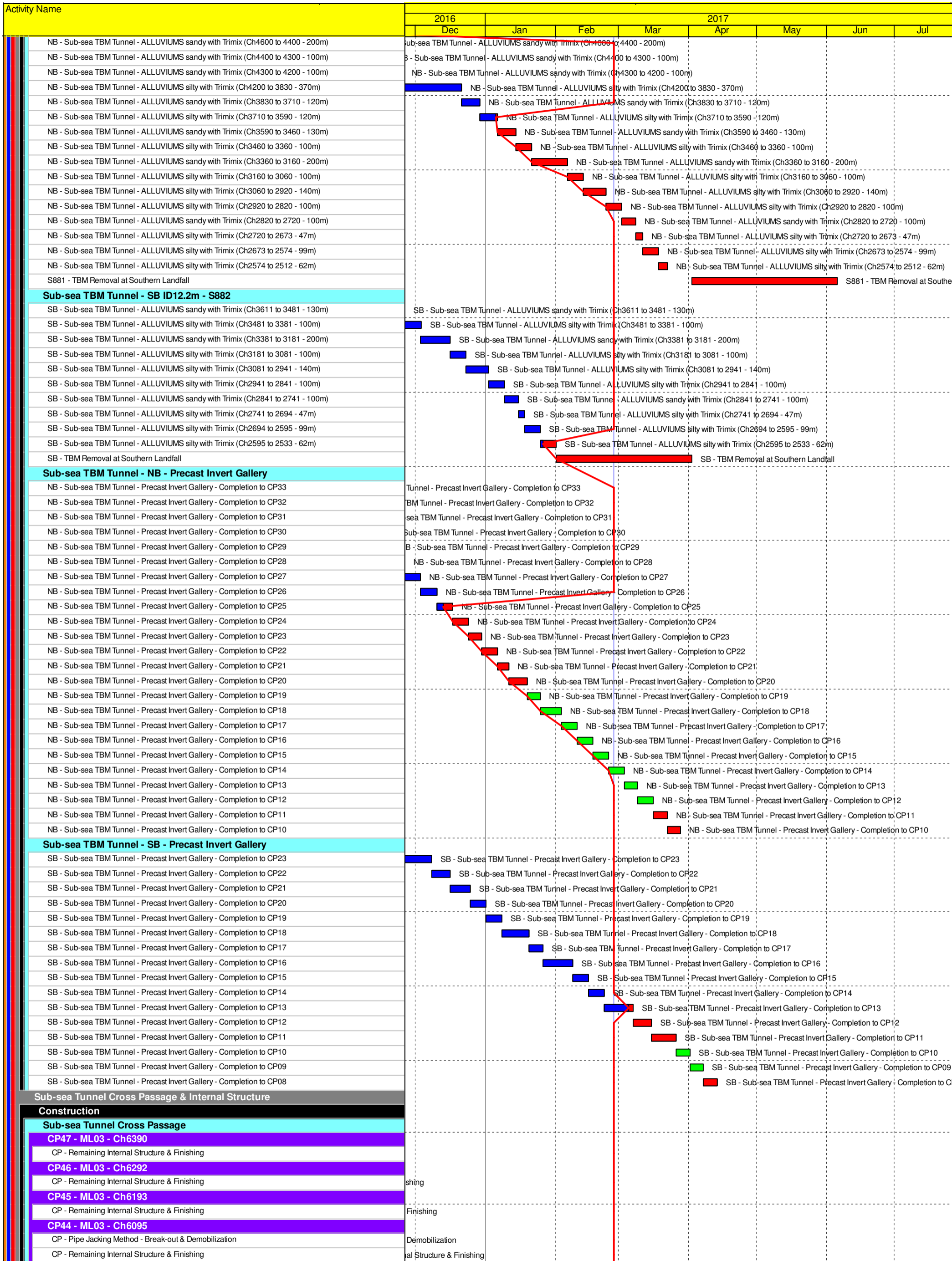
Activity Name	
North Approach TBM Tunnelling & Cross Passage	
Construction	
Northern Landfall Surface Setup for TBM operation	
Gantry Removal at North TBM Launching Shaft	
Slurry Treatment Plant De-commissioning & Removal	
Gantry Removal at North Ventilation Shaft	
North Approach Tunnel Internal Structure - NB	
CP51 - Excavation & Lining completion	
NB - North TBM Tunnel - Corbel & Cable Trough installation	
NB - North TBM Tunnel - OHVD Slab installation	
NB - North TBM Tunnel - Fire proofing and Provision to E&MS and TCSS Contract for KD1	
North Approach Tunnel Internal Structure - SB	
SB - North TBM Tunnel - Corbel & Cable Trough installation	
SB - North TBM Tunnel - OHVD Slab installation	
SB - North TBM Tunnel - Fire proofing & Provision to E&MS and TCSS Contract for KD1	
North Approach Cross Passage	
CP51 - Traditional Method	
CP Finishing & Demobilization	
North Ventilation Building	
Design Submission	
(A11) Submissions to Design Advisory Panel of ArchSD	
ArchSD's comment	
(I1) DDA for North Vent.Bldgs. GBP & Arch.Submission	
IPs Review	
IP's No Objection Received	
SO's Review	
SO Approval with Condition Received	
(I1) DDA for North & South Vent.Bldg. ABWF works	
Designer to Reply RTC + Update Submission	
Submit Updated DDA to SO/ICE/IPs	
ICE Approval & Issue Check Cert	
Submit ICE Check Cert to SO	
IPs Review	
IP's No Objection Received	
SO's Review	
SO Approval with Condition Received	
(I2) DDA for North Vent.Bldgs.Structural Design incl.Vent.Connections	
IPs Review	
IP's No Objection Received	
SO's Review	
SO Approval with Condition Received	
(I3) DDA for North & South Vent.Bldgs. Service and E&M Provision	
IPs Review	
IP's No Objection Received	
SO's Review	
SO Approval with Condition Received	
Construction	
Substructure	
Superstructure	
Finishing Works	
North Reclamation (Phase 2)	
Construction	
Dredging - Phase 2 (Zone G)	
VS - Rock Grade 400 - Zone G	
VS - Levelling Stone & Seawall Block - Zone G	
VS - Rock Type A - Zone G	
Vertical Seawall - Bermstone - (Zone G)	
Vertical Seawall - Seawall Coping - (Zone G)	
Geotextile (Zone G)	
Sand Blanket (Zone G)	
Band Drain (Zone G)	
Reclamation - Phase 2	
Backfilling to +10mPD - Phase 2	
Surcharge - Phase 2	
North Surface Roadworks, Utility & Drainage works	
Construction	
North Landfall - Underground Sewerage & Drainage - Summary	
North Landfall - Underground Sewerage & Drainage - Portion N5	
Portion N7 - Removal of Barging Point & Surcharge Removal to +6mPD	
North Landfall - Underground Sewerage & Drainage - Portion N7	
North Landfall - Watermain & Undergourd Utilities - Summary	
North Landfall - Watermain & Undergourd Utilities - Zone E	
Sub-sea Tunnel	
Sub-sea TBM Tunnelling	
Major Procurement	
Precast Semgnet ID12.40 - Production for Sub-sea TBM Tunnel	
ID12.40 TBM Segment Ring Fabrication - 12 rings per day	
Design Submission	
(G1) DDA for TBM Tunnel Lining Structural Design - Sub-sea tunnel	
Sub-sea TBM Tunnel Segment - Fabrication	
(G3) DDA for TBM Tunnel Internal Structures (Sub-sea)	
Sub-sea Tunnel - Precast Gallery Fabrication	
Construction	
Sub-sea TBM Tunnel - NB ID12.2m - S881	

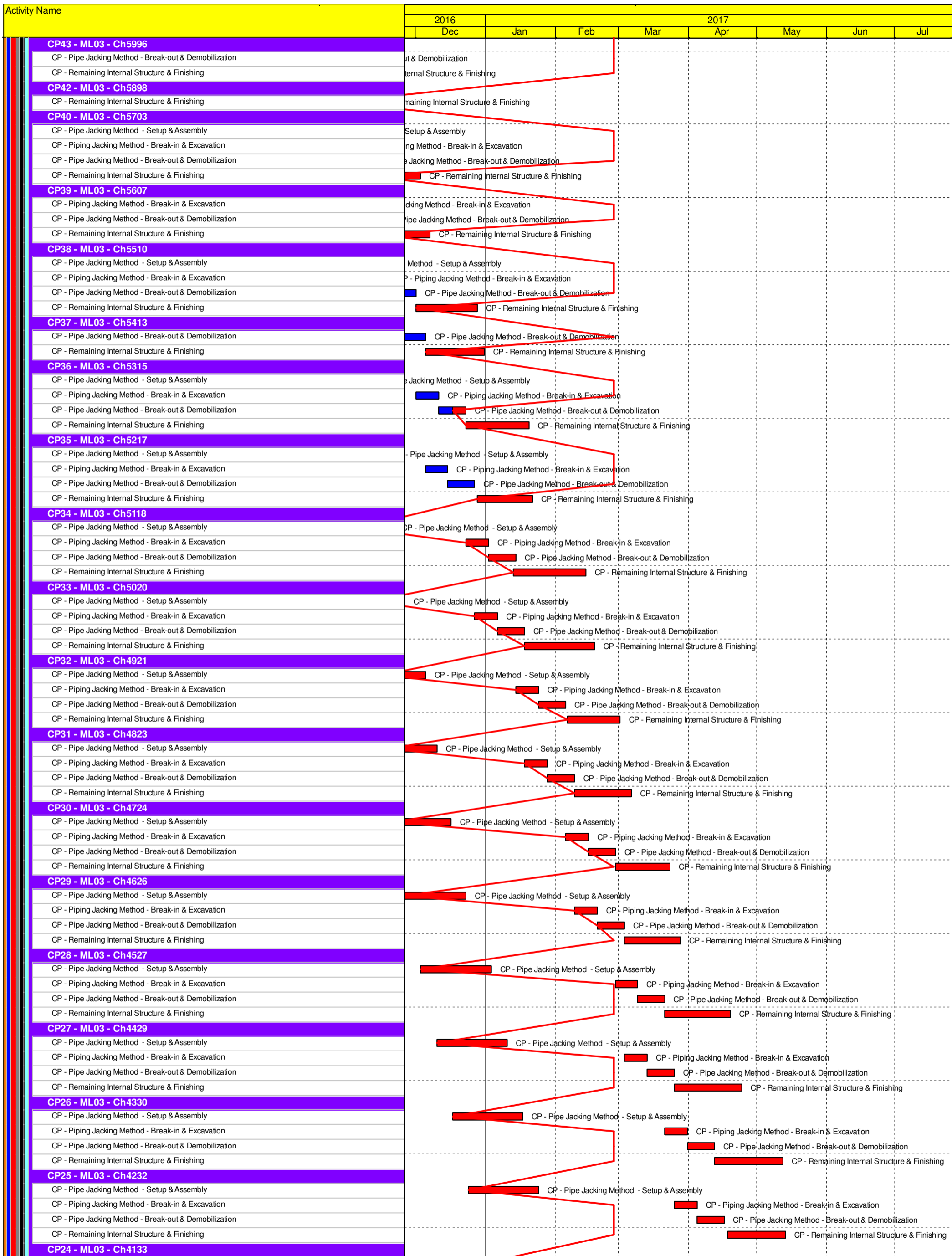


■	Planned Bar
■	Planned Bar - Critical
■	Progress bar
◆	Planned Milestone
◆	Progress Milestone



Date	Revision	Checked	Approved
12-Feb-14	TMCLKDBJGEN-PRG-98507	WYu	SPe
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30-Oct-15	TMCLKDBJGEN-PRG-98507 Rev.F	WYu	



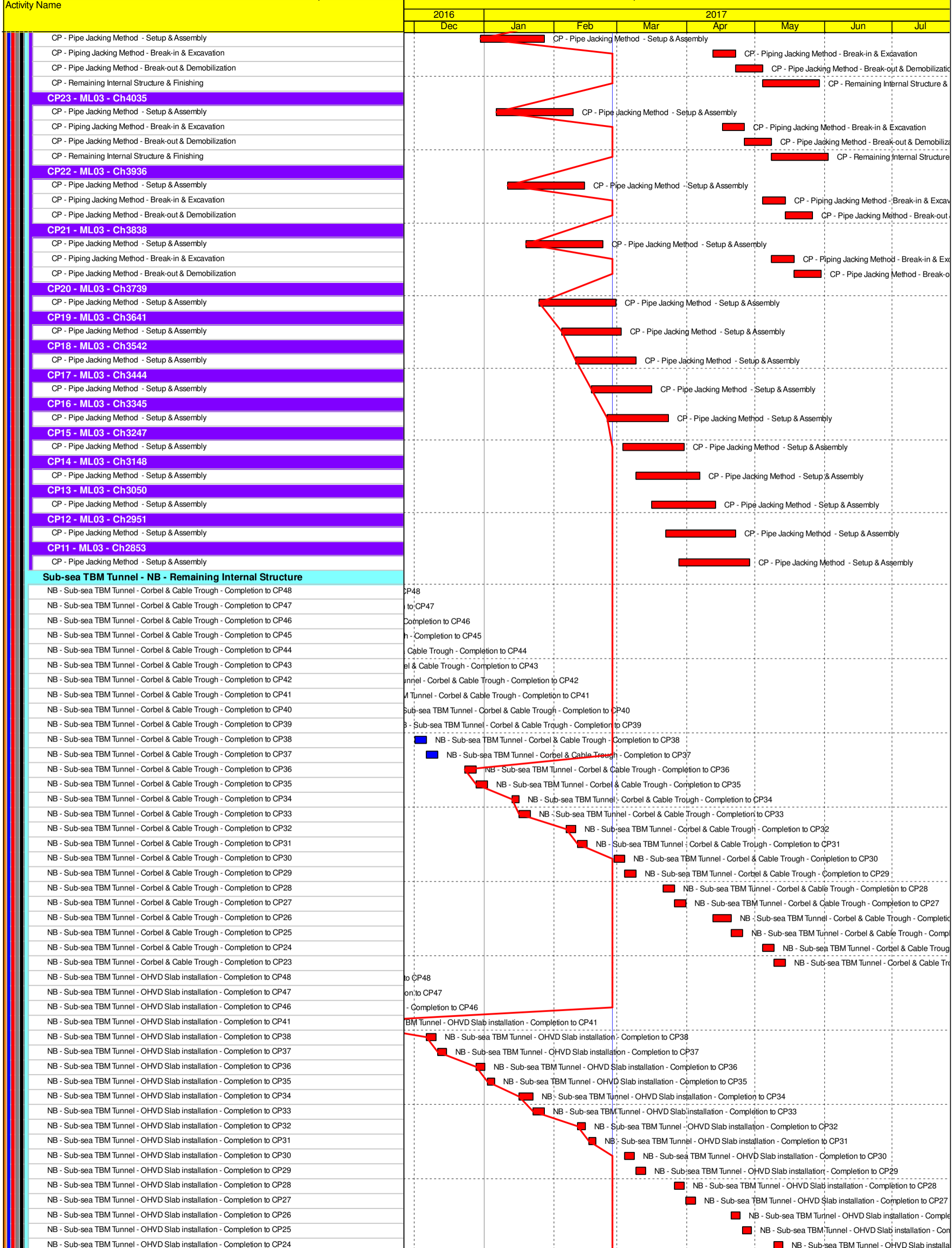


- Planned Bar
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- Planned Milestone
- Progress bar
- Progress Milestone

TMCLK - Northern Connection Sub-Sea Tunnel Section
 Detailed Works Programme (Rev. F)
 Three Months Rolling Programme
 Progress as of 26-Feb-17



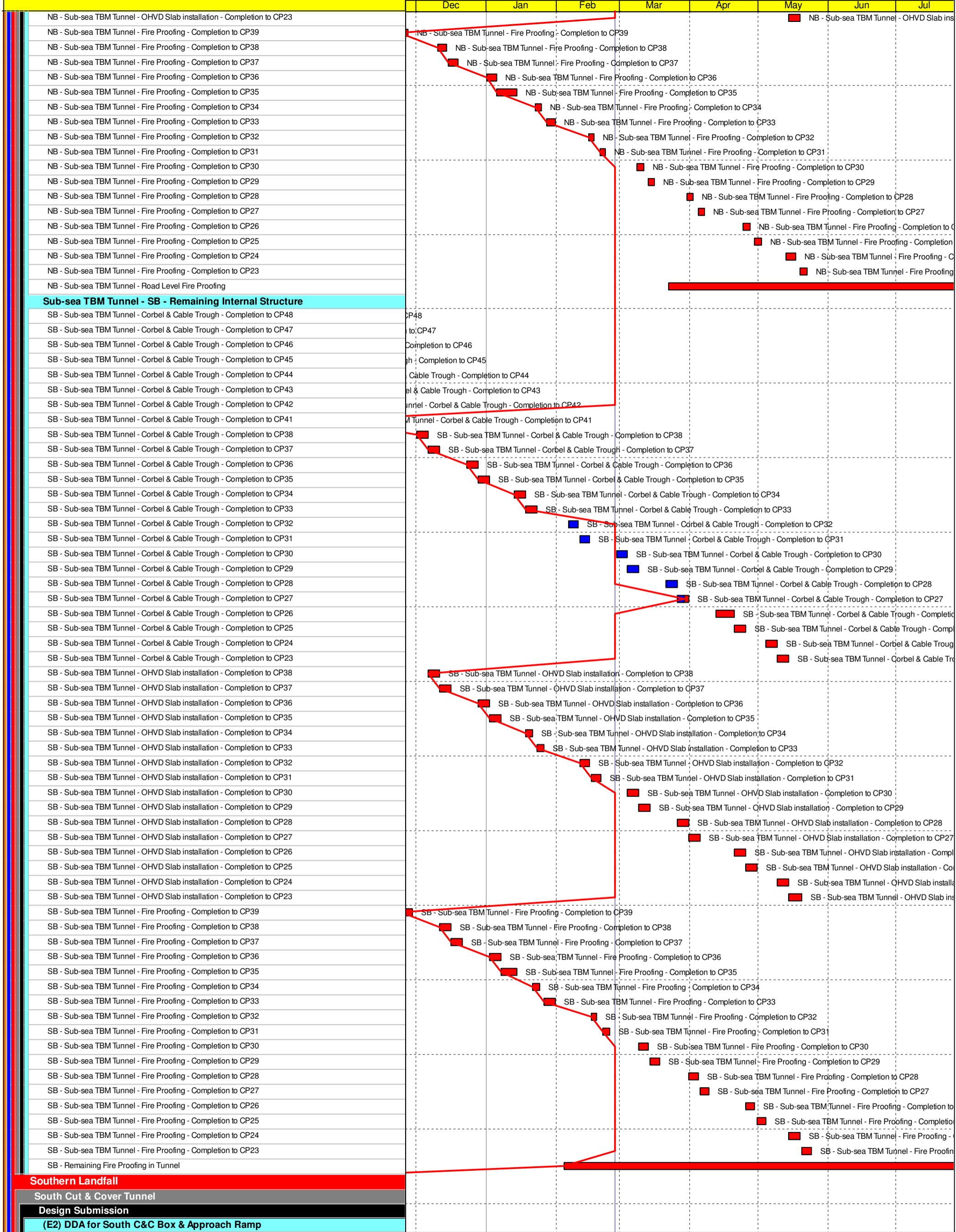
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08-Apr-14	TMCLKDUGEN-PRG-98507 Rev.B	SP	WYu
28-Aug-14	TMCLKDUGEN-PRG-98507 Rev.C	CLa	WYu
30-Oct-15	TMCLKDUGEN-PRG-98507 Rev.F	WYu	



- Planned Bar
- Planned Bar - Critical
- Progress bar
- ◆ Planned Milestone
- ◆ Progress Milestone

Dragages - Bouygues Joint Venture 寶嘉 - 布依格聯營

Date	Revision	Checked	Approved
12-Feb-14	TMCLKDWPF-PRG-08507	WYu	SPe
08-Apr-14	TMCLKDWPF-PRG-08507 Rev.B	SPe	WYu
28-Aug-14	TMCLKDWPF-PRG-08507 Rev.C	CLa	WYu
30-Oct-15	TMCLKDWPF-PRG-08507 Rev.F	WYu	



- Planned Bar
- Planned Bar - Critical
- Planned Milestone
- Progress bar
- Progress Milestone



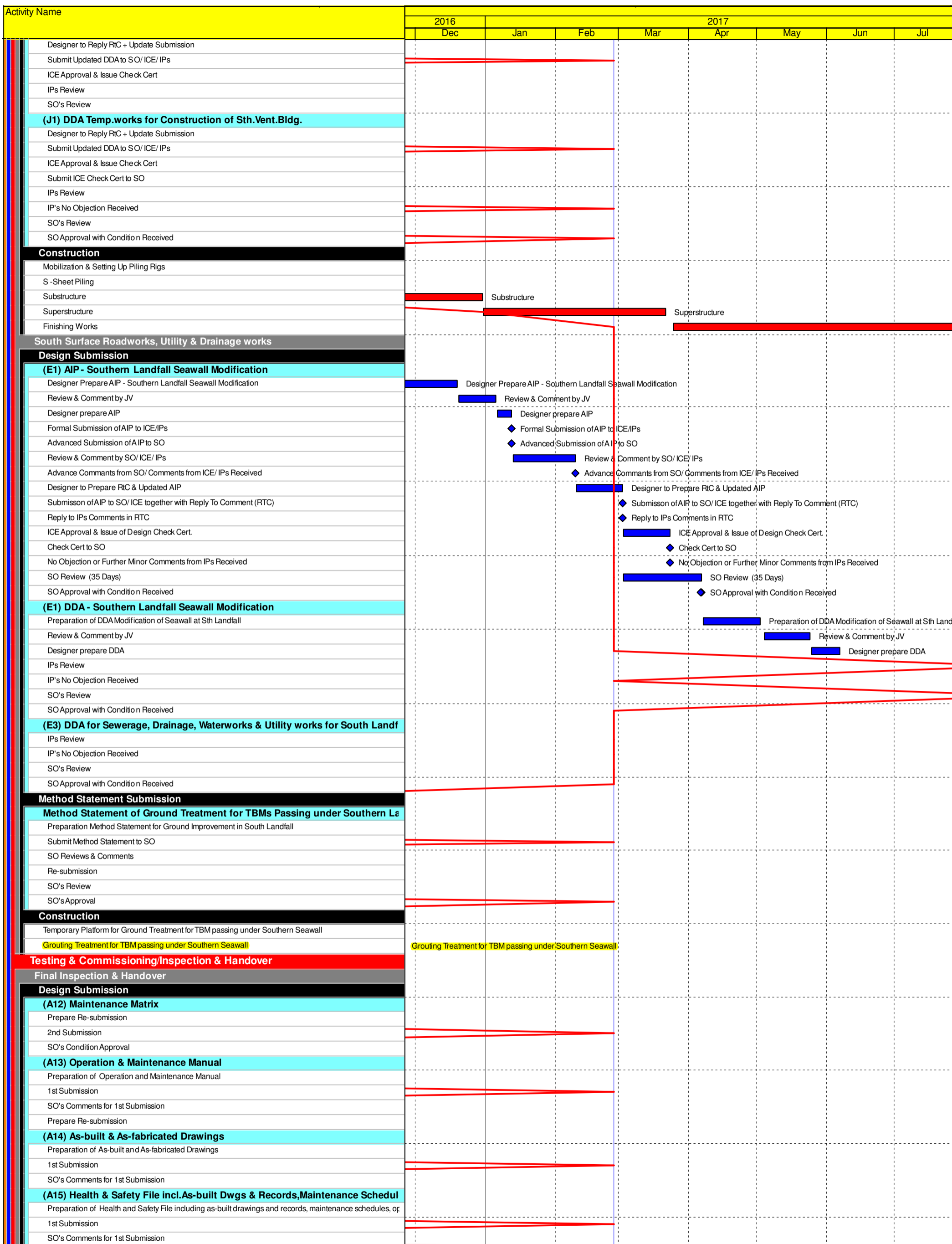
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12-Feb-14	TMCLKDJGEN-PRG-08507	WYu	SPe
08-Apr-14	TMCLKDJGEN-PRG-08507 Rev.B	SPe	WYu
28-Aug-14	TMCLKDJGEN-PRG-08507 Rev.C	CLa	WYu
30-Oct-15	TMCLKDJGEN-PRG-08507 Rev.F	WYu	

Activity Name	2016							2017	
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	
Review & Comment by JV									
Designer prepare DDA									
Formal Submission of DDA to ICE/ IPs									
Advanced Submission to SO									
IPs/ SO's Advance Comments/ ICE Comments									
Comments Received									
Designer to Reply RtC + Update Submission									
Submit Updated DDA to SO/ ICE/ IPs									
ICE Approval & Issue Check Cert									
IPs Review									
SO's Review									
Method Statement Submission									
Method Statement of Construction Methodology of C&C Tunnels									
Preparation Method Statement for C&C Tunnels									
Submit Method Statement to SO									
SO Reviews & Comments									
Re-submission									
SO's Review									
Construction									
C&C Tunnel - 4th 85m - Tunnel Structure									
C&C Tunnel - 4th 85m - Backfilling									
C&C Tunnel - 5th 85m - Tunnel Structure									
C&C Tunnel - 5th 85m - Backfilling									
C&C Tunnel - 6th 85m - Tunnel Structure									
C&C Tunnel - 6th 85m - Backfilling									
C&C Tunnel - 7th 67m - Excavation by vertical mean									
C&C Tunnel - 7th 67m - Tunnel Structure									
C&C Tunnel - 7th 67m - Backfilling									
C&C Tunnel - 8th 85m - Excavation by vertical mean									
C&C Tunnel - 8th 85m - Tunnel Structure									
Intermediate Slab									
South Retrieval Shaft									
Design Submission									
(F4) Gantry Crane Support/Foundations in Southern Landfall									
Designer to Reply RtC + Update Submission									
Submit Updated IFA to SO/ ICE/ IPs									
ICE Approval & Issue Check Cert									
IPs Review									
IP's No Objection Received									
SO's Review									
SO Approval with Condition Received									
Method Statement Submission									
Method Statement of Construction Methodology of Retrieval Shaft									
Preparation Method Statement for Retrieval Shaft									
Submit Method Statement to SO									
SO Reviews & Comments									
Re-submission									
SO's Review									
Construction									
South Retrieval Shaft - Diaphragm Wall									
Retrieval Shaft - Temp. Slab/Prepare for TBM Breakthrough									
South Approach Ramp									
Construction									
Approach Ramp (CH1580-1850) - Pipe Pile/Sheet Piles Wall									
Approach Ramp (CH1580-1850) - Tension Piles									
Approach Ramp (CH1580-1800) - Excavation,									
Remaining Approach Tunnel Structure									
South Ventilation Building									
Design Submission									
(1) DDA for South Vent.Bldg. GBP & Arch.Submission									
IPs Review									
IP's No Objection Received									
SO's Review									
SO Approval with Condition Received									
(12) DDA for South Vent.Bldg. Foundation Design									
Review & Comment by JV									
Designer prepare DDA									
Formal Submission of DDA to ICE/ IPs									
Advanced Submission to SO									
IPs/ SO's Advance Comments/ ICE Comments									
Comments Received									
Designer to Reply RtC + Update Submission									
Submit Updated DDA to SO/ ICE/ IPs									
ICE Approval & Issue Check Cert									
IPs Review									
SO's Review									
(12) DDA for South Vent.Bldg.Structural Design incl.Vent.Connections									
Review & Comment by JV									
Designer prepare DDA									
Formal Submission of DDA to ICE/ IPs									
Advanced Submission to SO									
IPs/ SO's Advance Comments/ ICE Comments									
Comments Received									

- Planned Bar
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- ◆ Planned Milestone
- Progress bar
- ◆ Progress Milestone



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Annex C

Location Map



Site location

1.00 公里

Incident area

2.46 公里

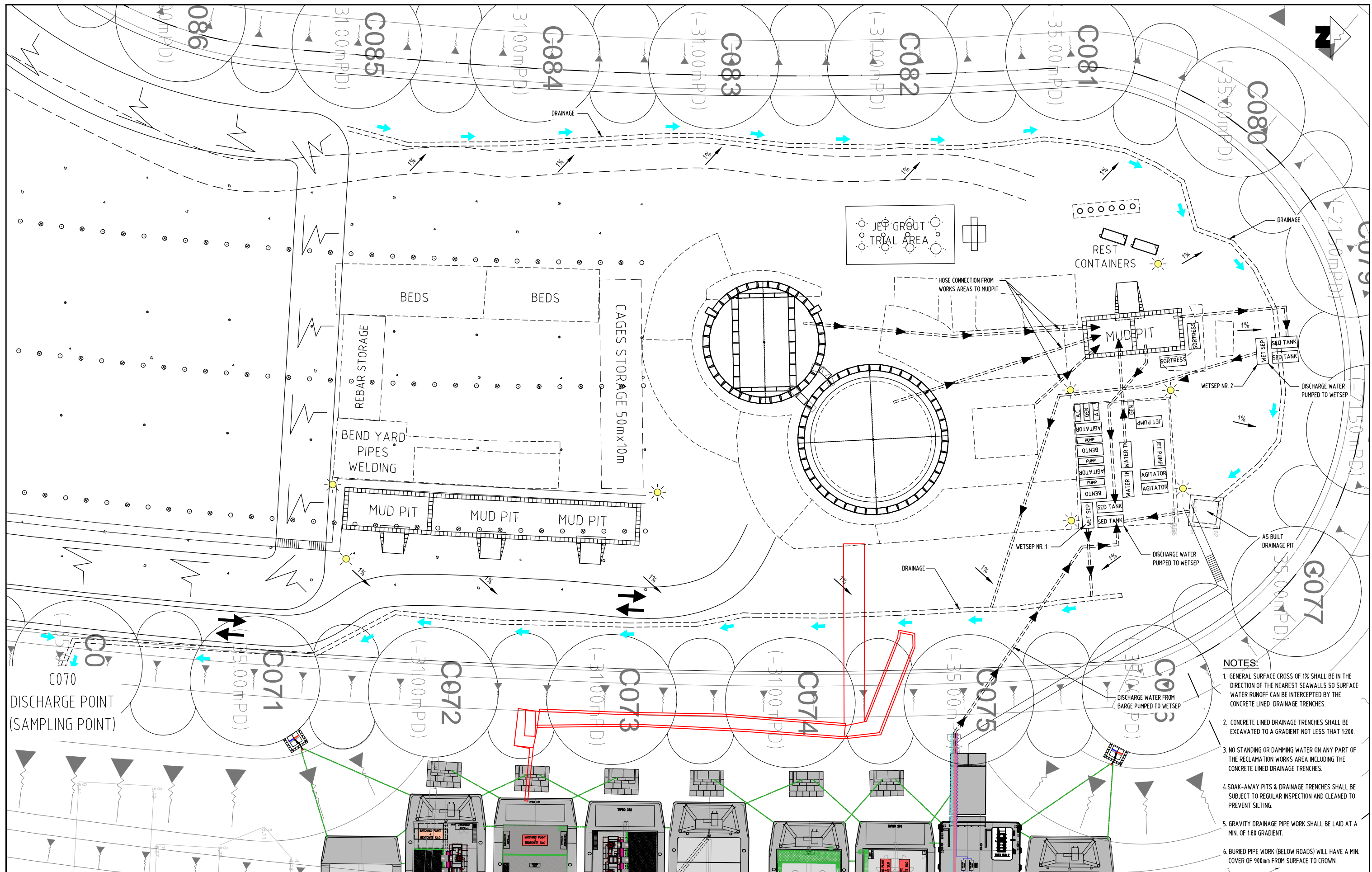
測量距離

在地圖上按一下即可新增路徑

總距離：2.46 公里 (1.53 英里)

Annex D

Site Drainage Plan



- NOTES:**
1. GENERAL SURFACE CROSS OF 1% SHALL BE IN THE DIRECTION OF THE NEAREST SEAWALLS SO SURFACE WATER RUNOFF CAN BE INTERCEPTED BY THE CONCRETE LINED DRAINAGE TRENCHES.
 2. CONCRETE LINED DRAINAGE TRENCHES SHALL BE EXCAVATED TO A GRADIENT NOT LESS THAN 1:200.
 3. NO STANDING OR DAMMING WATER ON ANY PART OF THE RECLAMATION WORKS AREA INCLUDING THE CONCRETE LINED DRAINAGE TRENCHES.
 4. SOAK-AWAY PITS & DRAINAGE TRENCHES SHALL BE SUBJECT TO REGULAR INSPECTION AND CLEANED TO PREVENT SILTING.
 5. GRAVITY DRAINAGE PIPE WORK SHALL BE LAID AT A MIN. OF 1:80 GRADIENT.
 6. BURIED PIPE WORK (BELOW ROADS) WILL HAVE A MIN. COVER OF 900mm FROM SURFACE TO CROWN.

Rev.	Date	Drawn	Designed	Verified	Description	Approved
D	27JUL16	AGM	pkv	Ble	UPDATE	SPo
C	15JUN16	pkv	pkv	ACh	WESTSEP NR. 3 REMOVED	SPo
B	14JUN16	pkv	pkv	ACh	DISCHARGE FROM BARGE ADDED	SPo
A	07JUN16	pkv	pkv	BLe	FIRST ISSUE	SPo

Main Contractor

Dragages - Bouygues Joint Venture 宜嘉 - 中鐵建聯營

Client

路政署
HIGHWAYS DEPARTMENT

Contractor's Designer

ARUP Ove Arup & Partners
Hong Kong Limited

Project

Contract No. HY/2012/08
Tuen Mun - Chek Lap Kok Link -
Northern Connection Sub-Sea Tunnel Section

Drawing Title

SOUTHERN LANDFALL
PORTION E1 SURFACE WATER DRAINAGE & DISCHARGE
ARRANGEMENT - GENERAL LAYOUT

Drawing no.

TMCLKL8-DBJ-SAA-MSI-10026

Scale

NTS

CADD Ref.

SAA-MSI-10026

Issue Status

DFT (DRAFT)

Revision

D

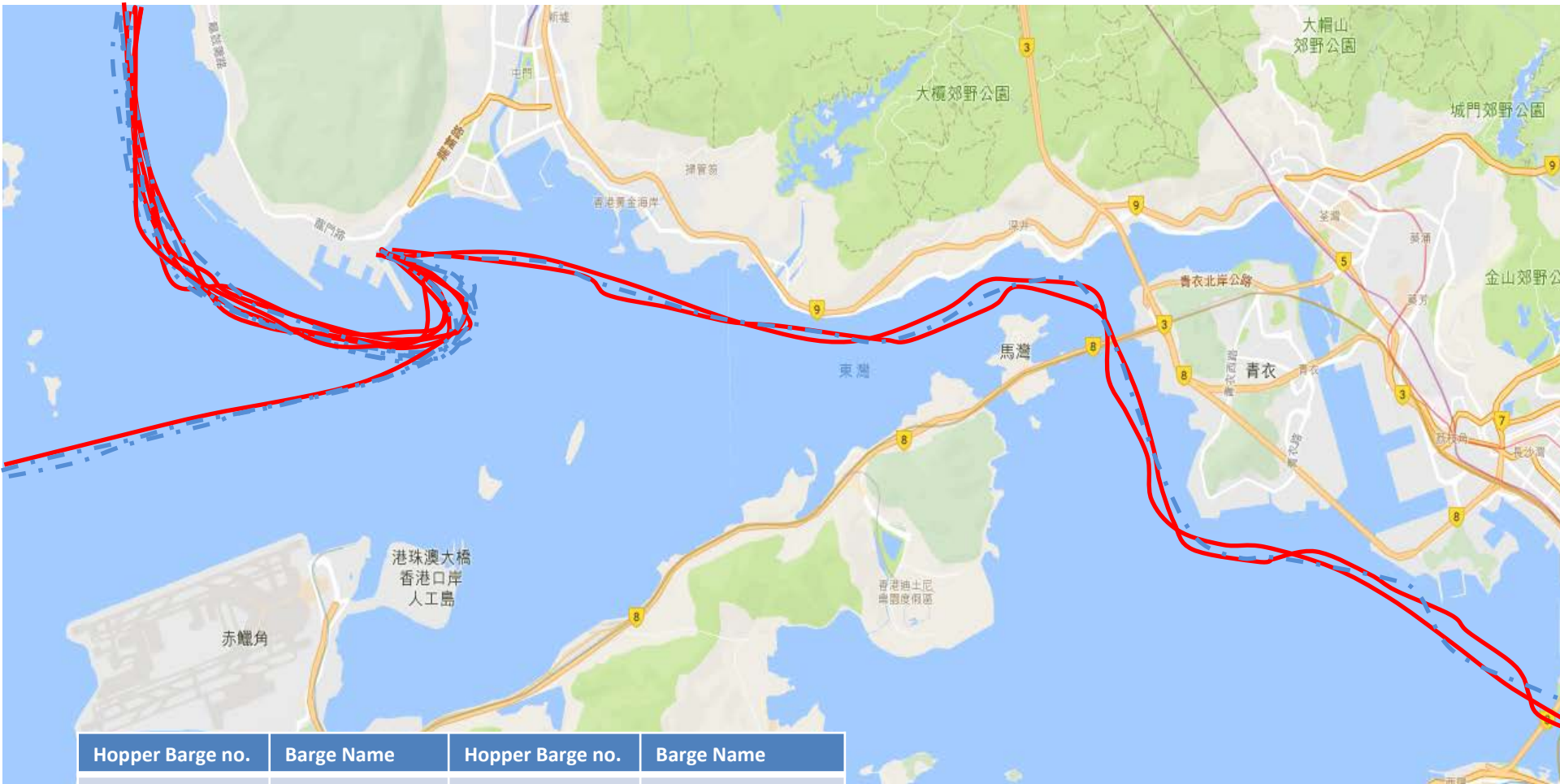
Annex E

Marine Travel Route Record

Contract No. HY/2012/08

Tuen Mun-Chek Lap Kok Link Northern Connection Sub-sea Tunnel Section

Records of Off-site Marine Vessel Routing – March 2017



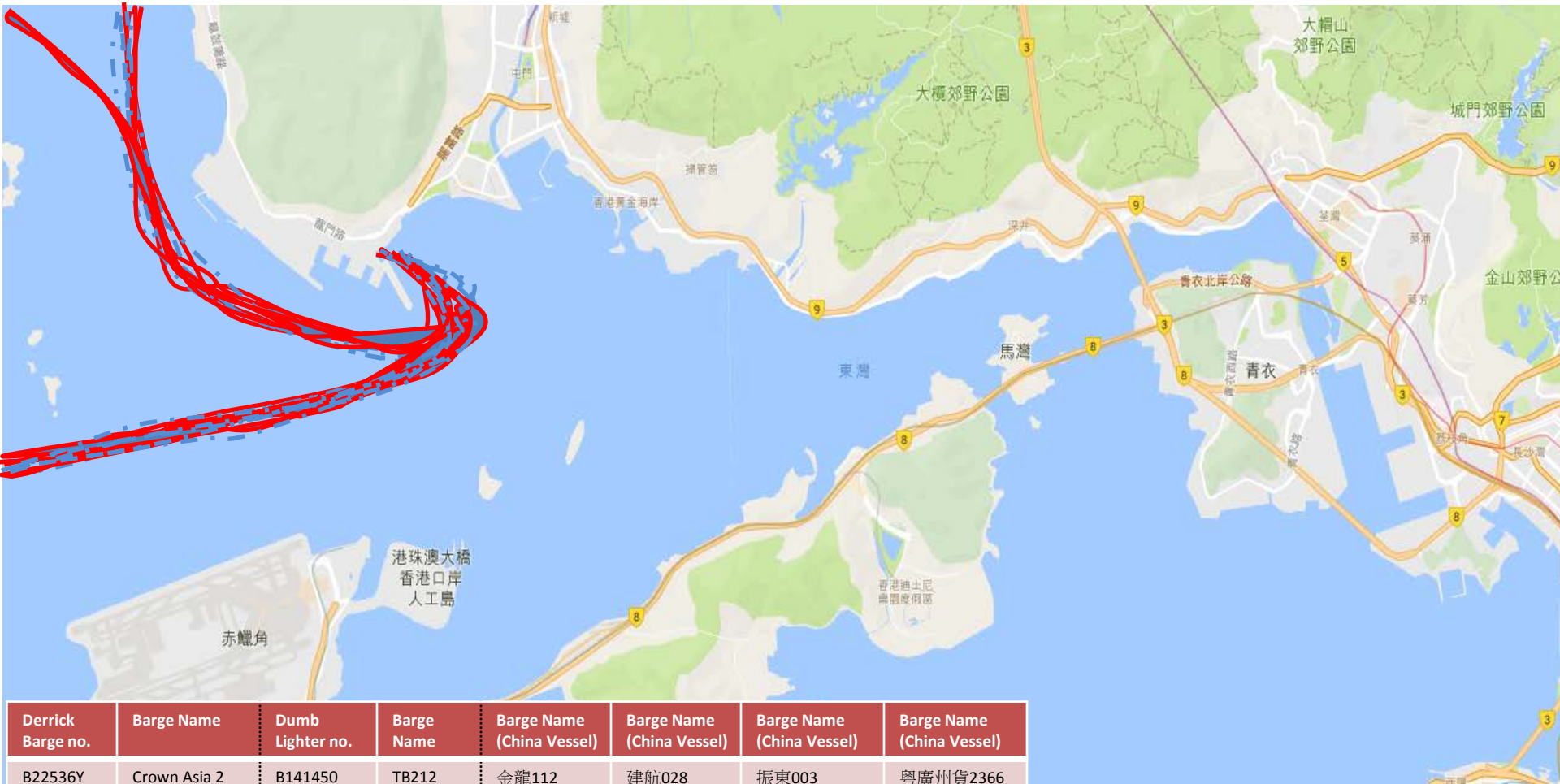
Hopper Barge no.	Barge Name	Hopper Barge no.	Barge Name
B21342V	HB1007S	B21843V	Crown Asia 21
B21396V	SH102		
B21521V	Hang Yang 861		
B21630V	Geoworks SB-1		

--- To Works Area
— From Works Area

Contract No. HY/2012/08

Tuen Mun-Chek Lap Kok Link Northern Connection Sub-sea Tunnel Section

Records of Off-site Marine Vessel Routing – March 2017



Derrick Barge no.	Barge Name	Dumb Lighter no.	Barge Name	Barge Name (China Vessel)	Barge Name (China Vessel)	Barge Name (China Vessel)	Barge Name (China Vessel)
B22536Y	Crown Asia 2	B141450	TB212	金龍112	建航028	振東003	粵廣州貨2366
B22570Y	Crown Asia 11			金龍113	建航036	振東988	粵廣州貨3662
B22600Y	Crown Asia 12			金龍119	建航066	嘉信878	粵廣州貨4866
B21702Y	Crown Asia 13			金龍663	建航118	聯福88	BM40614Y - Leung Ngau Chai
B21507V	Crown Asia 15			金龍883	建航287	粵廣州貨1062	

- - - - - To Works Area
————— From Works Area

Annex F

Wetsep Record



Contract No. HY/2012/08
Tuen Mun - Chek Lap Kok Link
Northern Connection Sub-sea Tunnel Section

WETSEP Checking Record
污水處理機檢查記錄

WETSEP Location 污水處理機位置: 28
Date 日期: 20-3-2017 to 26-3-2017

	Monday 星期一	Tuesday 星期二	Wednesday 星期三	Thursday 星期四	Friday 星期五	Saturday 星期六	Sunday 星期日
1. WETSEP In Normal Operation? 處理機是否正常運作?	✓	✓	✓	✓	✓	✓	✓
2. pH Value 酸鹼度 (6.0-9.0)	8.6	8.6	8.7	8.6	7.8	7.6	7.9
3. Electrical Supply OK? 電力供應正常?	✓	✓	✓	✓	✓	✓	✓
4. Outlet Abnormal? (Any Sludge? Any Colour Change? Flowrate?) 出水口有否異常? (污泥有否積聚? 顏色有否改變? 流量有否異常?)	有異常	有異常	有異常	有異常	無	無	無
5. Potion Enough? 藥水是否足夠?	✓	✓	✓	✓	✓	✓	✓
6. Clean the Sedimentation Tank? 有否清理隔沙缸?	有 09:00	有 09:00	有 09:00	有 09:00	有	有	有
7. Clean the De-silt Basin? 有否清理蓄泥池?	有 09:30	有 09:30	有 09:30	有 09:30	有	有	有
8. Are the Cleansing Records of Sedimentation Tank/ De-silt Basin Stored Properly? 清理蓄泥池記錄是否妥善儲存?	✓	✓	✓	✓	✓	✓	✓
9. Others 其他情況	一切正常	一切正常	一切正常	一切正常	/	/	/
Verified by Site Foreman/Supervisor 地盤管工/監督簽署確認							

*Please - tick (✓) in the box if the condition is normal. *若情況正常, 請於方格內加上剔號(✓).
cross (X) in the box if the condition is abnormal, and write down the non-conformance.
*若情況不尋常, 請於方格內加上交叉(X), 並寫下不尋常狀況。

Remarks:

(1) Please keep the record and send to environmental department in monthly basis.

備註:

(1) 請將記錄妥善保存, 並每月將記錄交回環保部。

24/04/2017

WETSEP Location 污水處理機位置: 28

Date 日期: 27-3-2017 to 29-3-2017

24/04/2017

	Monday 星期一	Tuesday 星期二	Wednesday 星期三	Thursday 星期四	Friday 星期五	Saturday 星期六	Sunday 星期日
1. WETSEP in Normal Operation? 處理機是否正常運作?	✓	✓	✓	✓	✓	✓	✓
2. pH Value 酸鹼度 (6.0 - 9.0)	6.9	7.4	6.7	8.2	8.9	8.6	7.3
3. Electrical Supply OK? 電力供應正常?	✓	✓	✓	✓	✓	✓	✓
4. Outlet Abnormal? (Any Sludge? Any Colour Change? Flowrate?) 出水口有否異常? (污泥有否積聚? 顏色有否改變? 流量有否異常?)	無	無	無	無	無	無	無
5. Potion Enough? 藥水是否足夠?	✓	✓	✓	✓	✓	✓	✓
6. Clean the Sedimentation Tank? 有否清理隔沙缸?	有	有	有	有	有	有	有
7. Clean the De-silt Basin? 有否清理蓄泥池?	有	有	有	有	有	有	有
8. Are the Cleansing Records of Sedimentation Tank/ De-silt Basin Stored Properly? 清理蓄泥池記錄是否妥善儲存?	✓	✓	✓	✓	✓	✓	✓
9. Others 其他情況	/	/	/	/	/	/	無
Verified by Site Foreman/Supervisor 地盤管工/監督簽署確認	✓	✓	✓	✓	✓	✓	✓

*Please - tick (✓) in the box if the condition is normal. *若情況正常, 請於方格內加上剔號(✓).
cross (X) in the box if the condition is abnormal, and write down the non-conformance.
*若情況不尋常, 請於方格內加上交叉(X), 並寫下不尋常狀況。

Remarks:

- (1) Please keep the record and send to environmental department in monthly basis.
備註:
(1) 請將記錄妥善保存, 並每月將記錄交回環保部。