Appendix IV

Traffic Management Plan

Concrete Batching Plant at Tsing Yi - Renewal Application A/TY/139

Transport Plan

May 2024

CTA Consultants Limited
志達顧問有限公司

1. INTRODUCTION

1.1 Background

1.1.1 S16 planning application for the renewal of temporary use of proposed Concrete Batching Plant at Sai Tso Wan Road, Tsing Yi for a period of 5 years (Application No. A/TY/139) was approved by Town Planning Board (TPB) in Year 2019 with conditions. Those traffic related conditions are listed below, and they are already discharged to the satisfaction of the TPB.

Condition (a) *no queue on public roads in the vicinity of the application site resulting from the operation of the concrete batching plant shall be allowed at any time during the planning approval period*

Condition (b) *the submission of a traffic management plan including contingency plan and associated mitigation measures and traffic facilities within six months from the date of the planning approval to the satisfaction of the Commissioner for Transport or of the TPB, by 6.3.2020*

1.1.2 It is anticipated that existing license of the proposed Concrete Batching Plant will be expired in 6 September 2024. The applicant would like to submit the renewal applicant for an extension of 5 years temporary use.

1.1.3 CTA Consultants Limited ("CTA") is therefore commissioned as the Traffic Consultant to prepare this traffic statement for the captioned Application.

1.1.4 The location of the Application Site is shown in **Figure 1.1**.

1.2 Objectives

1.2.1 The objective of this paper is to prepare the transport management plan, contingency plan and associated mitigation measures at traffic facilities, collectively named "Transport Plan" to discharge the planning condition (a) & (b) as stipulated above.

1.2.2 The main scope of this Transport Plan are as follows:

- Based on the machinery and equipment requirements, and the layout arrangement of the plant, to identify the internal transport routing of the concrete trucks;
- Develop a Transport Management Plan based on the operation time for each

activity and the expected number of concrete trucks under this planning application; and

- Formulate a Contingency Plan based on the information under this planning application.

2 TRANSPORT MANAGEMENT PLAN

2.1 Parking and Loading/ Unloading Provision

2.1.1 Based on the planning submission, the following types of parking spaces will be provided within the plant to facilitate the operation of the proposed Concrete Batching Plant:

- 5 nos. of Private Car Parking Spaces; and
- 4 nos. of Loading/ Unloading Spaces (including 3 under the production bays)

2.1.2 The layout showing the internal transport facilities of the plant is shown in **Figure 2.1**.

2.2 Approved Internal Traffic Arrangement

2.2.1 The key procedures of the loading/unloading activities for the proposed Concrete Batching Plant are listed below:

i. Concrete mixer trucks will first return to a marshalling area which is located next to Sai Tso Wan Road and away from the public traffic access. All drivers will install a smart phone app in their mobile phones. The app will automatically assign production leg and notify driver via the app. Driver will check the instruction of going inside the plant to proceed the loading process from smart phone app, this ensure the trucks do not queue up at the entrance of the plant. All the trucks will still equip with walkie-talkie and communication actually remain using walkie-talkie if there is a need. (Refer to Step 1 of **Figure 2.2** and **Figure 2.3**);

Figure 2.3 Fleet Assigning Smartphone App

ii. Concrete mixer truck enters the loading and unloading area for concrete loading. Loading of concrete from the silo to concrete mixer truck at the loading/ unloading space (Refer to Step 2 of **Figure 2.2**);

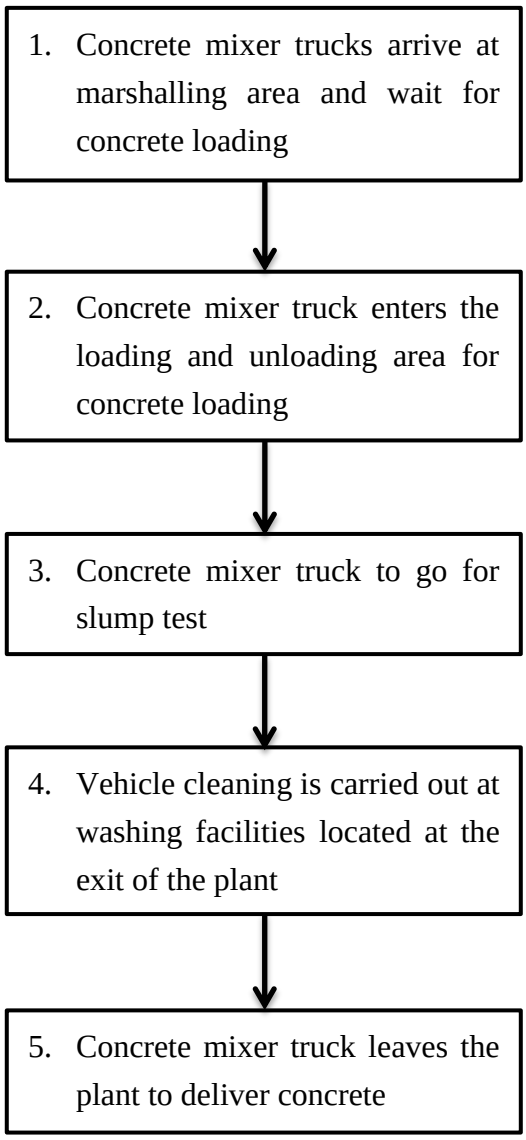
iii. Concrete mixer truck to go for slump test (Refer to Step 3 of **Figure 2.2**);;

iv. Vehicle cleaning is carried out at washing facilities within the plant before leaving the plant (Refer to Step 4 of **Figure 2.2**); and

v. Concrete mixer trucks depart from the plant to deliver concrete to the construction sites (Refer to Step 5 of **Figure 2.2**).

2.2.2 The operating procedure is summarized in the flow chart below and presented in

Figure 2.4 Plant Operation Flowcharts



3 CONTINGENCY PLAN

3.1 Introduction

3.1.1 In case of malfunction of the system in the plant, the production of the plant will be reduced and the trip generation of the concrete mixer trucks will be different. Therefore, 3 contingency plans are derived as follows:

3.2 Case 1: Failure of 1 Production Leg

3.2.1 In case if one loading/ unloading bay is malfunctioned within the plant, the production rate of concrete will be reduced by one-third.

3.2.2 As advice by the operator, around 28 nos. of trucks are used by the operator and 23 nos. of additional trucks are ordered from other parties. If one loading / unloading is malfunctioned, the number of ordered trucks will be reduced to avoid occupy the parking spaces. Thus, the traffic arrangement will basically be the same as normal operation. The parking arrangement of the plant for two-third concrete production scenario is detailed as follows:

- 5 nos. of private car parking space;
- 29 nos. of waiting/parking spaces at marshalling area; and
- 3 nos. of loading/ unloading area (including 2 under the production bay).

3.2.3 The internal transport arrangement of the plant under Failure of 1 Production Leg scenario is shown in **Figure 3.1**.

3.3 Case 2: Failure of 2 Production Legs

3.3.1 In case if two loading/ unloading bay is malfunctioned within the plant, the production rate of concrete will be reduced by two-third.

3.3.2 No additional trucks will be ordered and only operator's trucks will be used. The spared operator's trucks will be parked at marshalling area. The parking arrangement of the plant for two-third concrete production scenario is detailed as follows:

- 5 nos. of private car parking space; and
- 18 nos. of waiting/parking spaces at marshalling area;
- 11 nos. of idled truck space at marshalling area; and
- 2 nos. of loading/ unloading area (including 1 under the production bay).

3.3.3 The internal transport arrangement of the plant under Failure of 2 Production Legs scenario is shown in **Figure 3.2**.

3.4 Case 3: Failure of 3 Production Legs

3.4.1 In case if three loading/ unloading bays are malfunctioned, the production rate of concrete will be reduced to 0. Under this circumstance, the plant will not operate and all operator's trucks will stack within the plant and the marshalling area. The parking arrangement is detailed as follows:

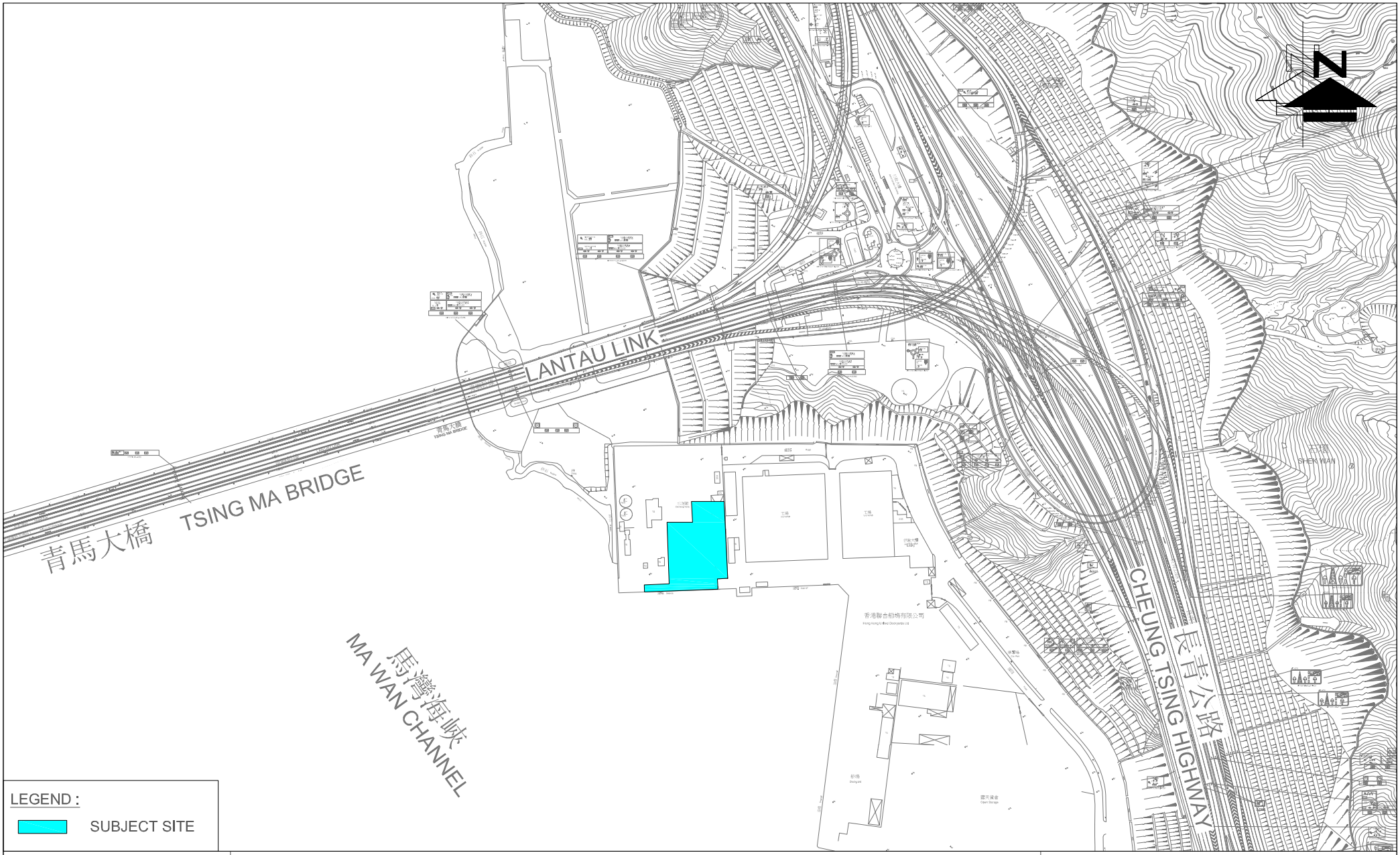
- 5 nos. of private car parking space;
- 26 nos. of waiting/parking spaces at marshalling area; and
- 28 nos. of idled truck space within the plant and marshalling area;

3.4.2 The internal transport arrangement of the plant under no concrete production scenario is shown in **Figure 3.3**.

3.4.3 Based on the above cases, it is revealed that there are sufficient waiting/parking spaces for the plant to hold all the concrete batching trucks for the operation. Therefore, no queue on public roads will be happened at any time during the planning approval period.

4 CONTINGENCY PLAN

4.1 As there is no change in the production rate and the operating and delivery arrangement, as a result in no change in the trip generation of the asphalt plant. All the submissions for discharge planning conditions were submitted and they were reviewed and were approved by the government departments. Therefore, the applicant for the renewal is considered acceptable from a traffic engineering point of view.



LEGEND :

SUBJECT SITE

FIGURE NO.: 1.1	PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A/TY/139
PROJECT NO.: 24002HK	DRAWING TITLE: SITE LOCATION PLAN
SCALE: 1 : 5000 @A4	DATE: 01 FEB 2024

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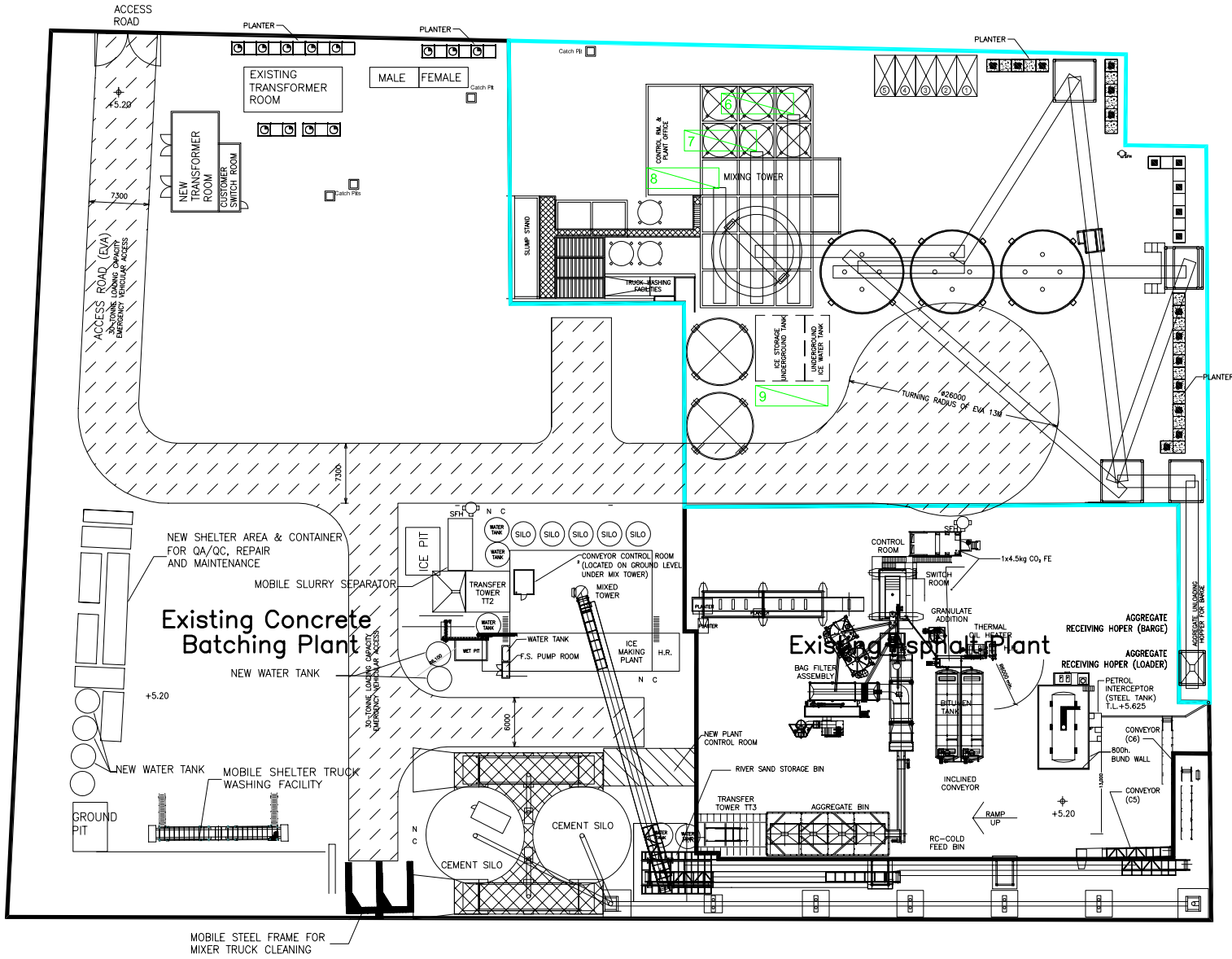

LEGEND :

- SUBJECT SITE BOUNDARY OF PROPOSED CONCRETE BATCHING PLANT
- INTERNAL ACCESS ROAD
- PARKING SPACE
- LOADING / UNLOADING SPACE

FIGURE NO.: 2.1	PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A/TY/139
PROJECT NO.: 24002HK	DRAWING TITLE: LAYOUT PLAN FOR EXISTING CONCRETE BATCHING PLANT
SCALE: 1 : 750 @A4	DATE: 01 FEB 2024

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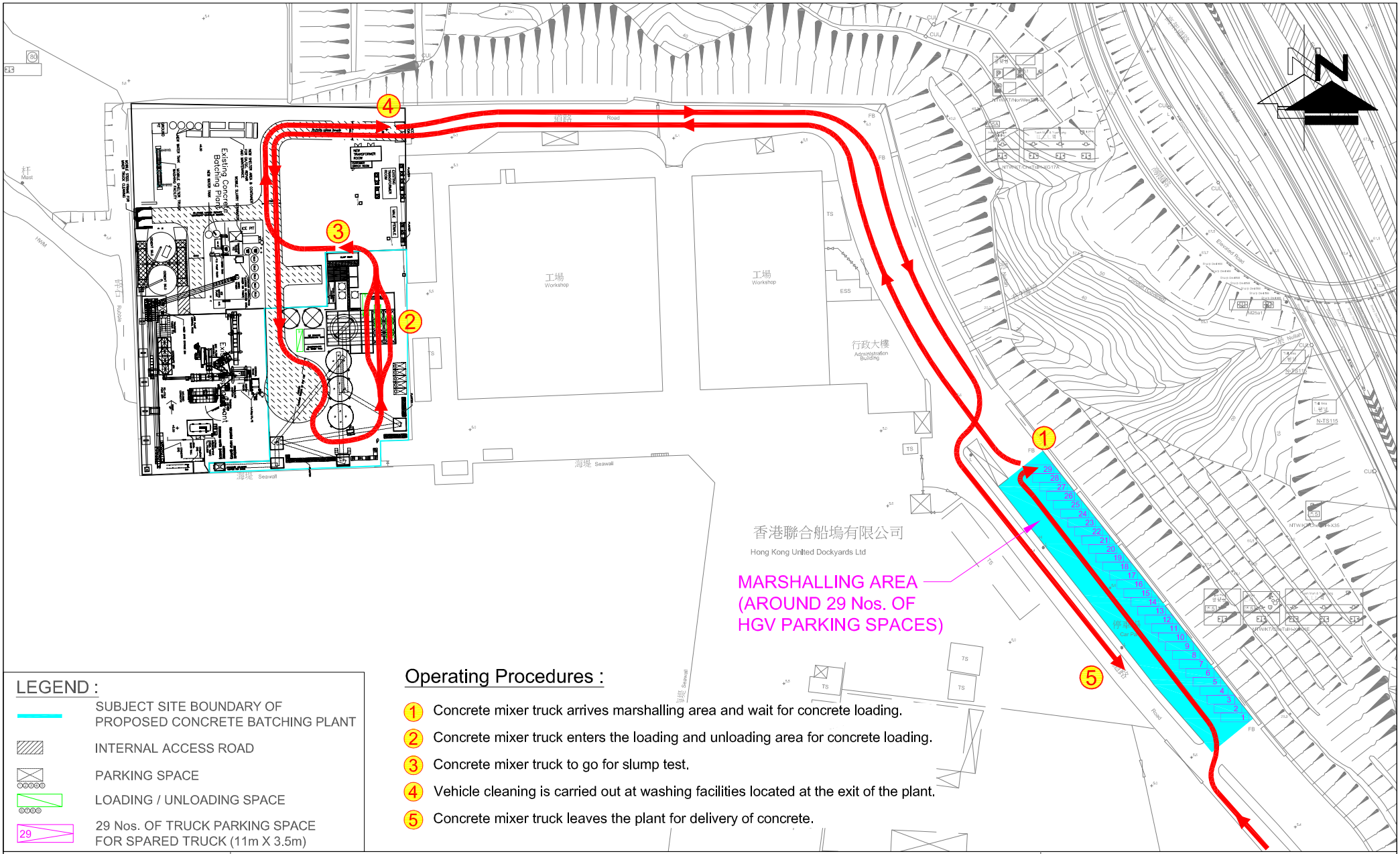

LEGEND :

- SUBJECT SITE BOUNDARY OF PROPOSED CONCRETE BATCHING PLANT
- INTERNAL ACCESS ROAD
- PARKING SPACE
- LOADING / UNLOADING SPACE
- 29 Nos. OF TRUCK PARKING SPACE FOR SPARED TRUCK (11m X 3.5m)

Operating Procedures :

1. Concrete mixer truck arrives marshalling area and wait for concrete loading.
2. Concrete mixer truck enters the loading and unloading area for concrete loading.
3. Concrete mixer truck to go for slump test.
4. Vehicle cleaning is carried out at washing facilities located at the exit of the plant.
5. Concrete mixer truck leaves the plant for delivery of concrete.

FIGURE NO.: 2.2	PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A/TY/139
PROJECT NO.: 24002HK	DRAWING TITLE: OPERATION OF THE CONCRETE BATCHING PLANT
SCALE: 1 : 2000 @A4	DATE: 01 FEB 2024

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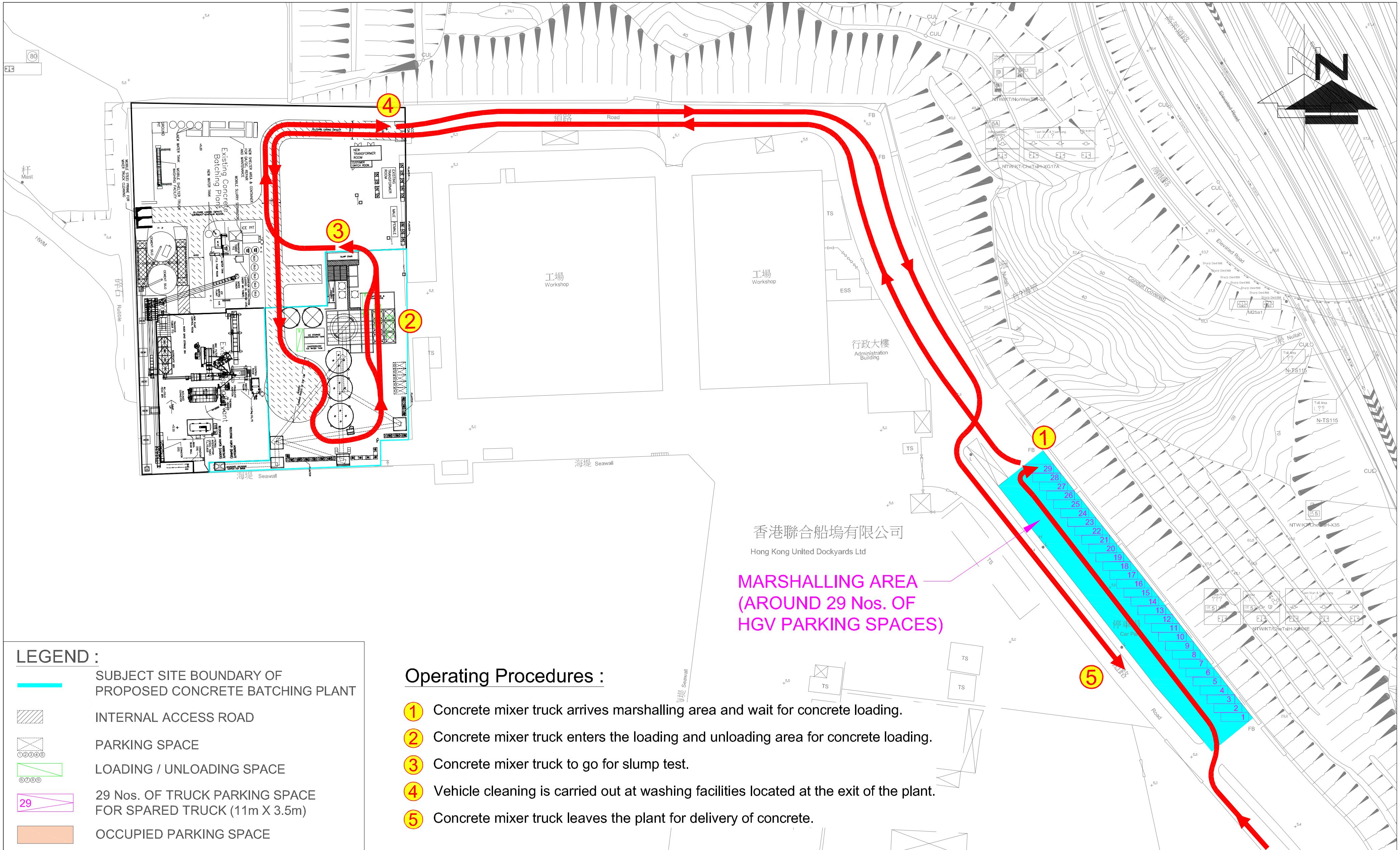

LEGEND :

- SUBJECT SITE BOUNDARY OF PROPOSED CONCRETE BATCHING PLANT
- INTERNAL ACCESS ROAD
- PARKING SPACE
- LOADING / UNLOADING SPACE
- 29 Nos. OF TRUCK PARKING SPACE FOR SPARED TRUCK (11m X 3.5m)
- OCCUPIED PARKING SPACE

Operating Procedures :

1. Concrete mixer truck arrives marshalling area and wait for concrete loading.
2. Concrete mixer truck enters the loading and unloading area for concrete loading.
3. Concrete mixer truck to go for slump test.
4. Vehicle cleaning is carried out at washing facilities located at the exit of the plant.
5. Concrete mixer truck leaves the plant for delivery of concrete.

FIGURE NO.: 3.1	PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A/TY/139
PROJECT NO.: 24002HK	DRAWING TITLE: CONTINGENCY PLAN 1 : FAILURE OF 1 PRODUCTION LEG
SCALE: 1 : 2000 @A4	DATE: 01 FEB 2024

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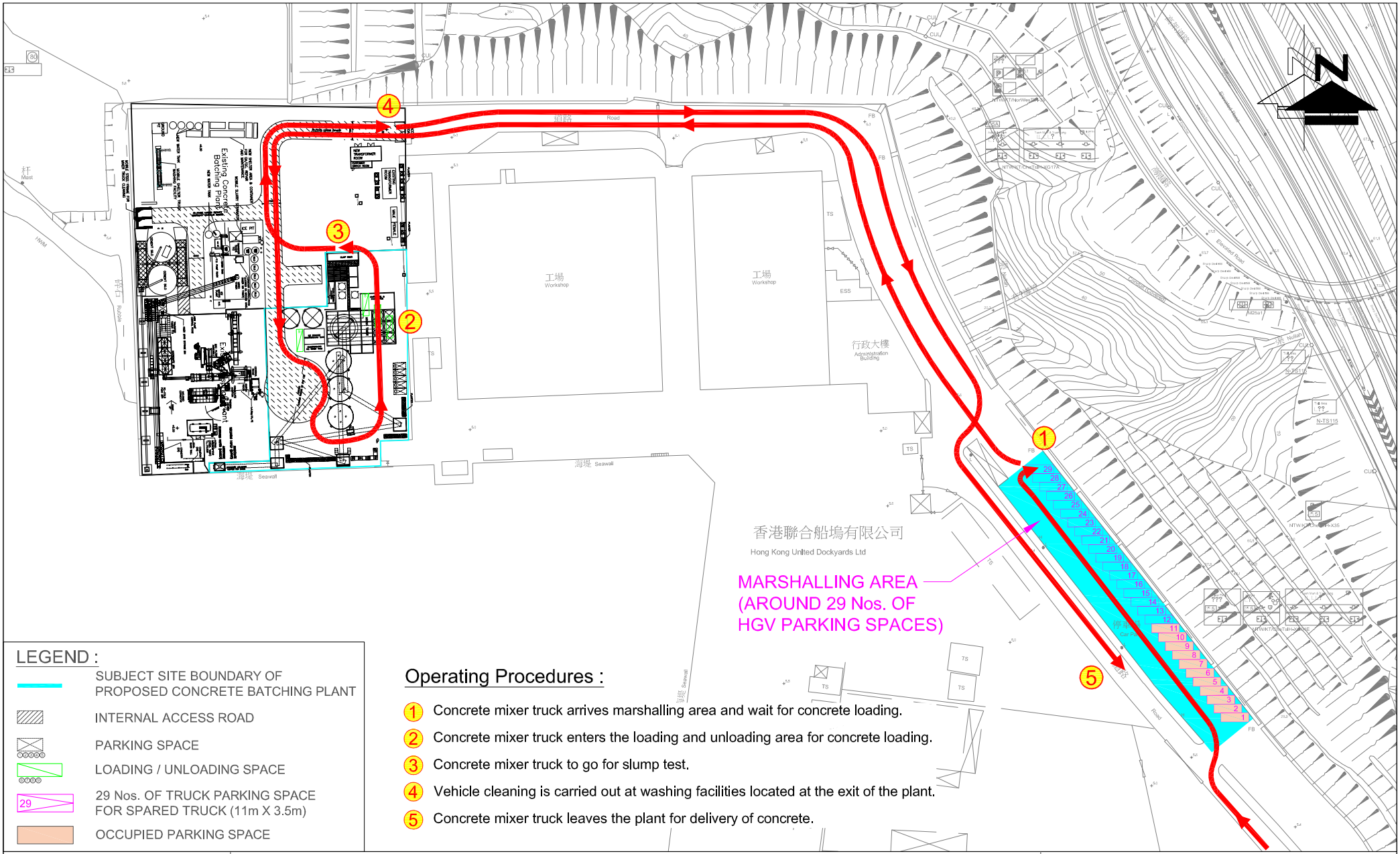

LEGEND :

- SUBJECT SITE BOUNDARY OF PROPOSED CONCRETE BATCHING PLANT
- INTERNAL ACCESS ROAD
- PARKING SPACE
- LOADING / UNLOADING SPACE
- 29 Nos. OF TRUCK PARKING SPACE FOR SPARED TRUCK (11m X 3.5m)
- OCCUPIED PARKING SPACE

Operating Procedures :

1. Concrete mixer truck arrives marshalling area and wait for concrete loading.
2. Concrete mixer truck enters the loading and unloading area for concrete loading.
3. Concrete mixer truck to go for slump test.
4. Vehicle cleaning is carried out at washing facilities located at the exit of the plant.
5. Concrete mixer truck leaves the plant for delivery of concrete.

FIGURE NO.: 3.2	PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A/TY/139
PROJECT NO.: 24002HK	DRAWING TITLE: CONTINGENCY PLAN 2 : FAILURE OF 2 PRODUCTION LEGS
SCALE: 1 : 2000 @A4	DATE: 01 FEB 2024

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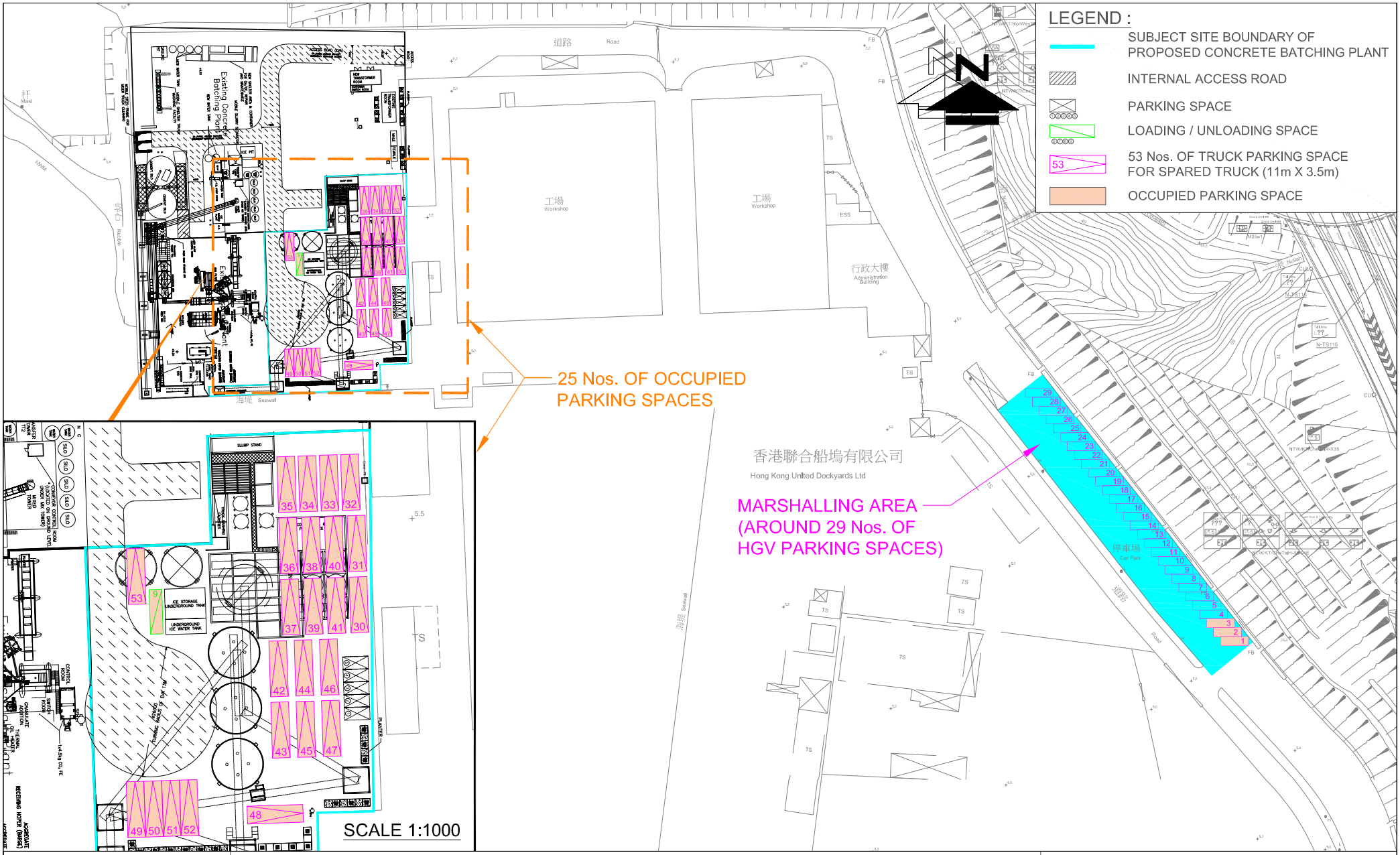

FIGURE NO.: 3.3	PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A/TY/139
PROJECT NO.: 24002HK	DRAWING TITLE: CONTINGENCY PLAN 3 : FAILURE OF 3 PRODUCTION LEGS
SCALE: 1 : 2000 @A4	DATE: 01 FEB 2024

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