

Appendix II

Traffic Impact Assessment

Proposed Temporary Concrete Batching Plant for a Period of 5 Years

Lot 153 (Part) in D.D.77, Ping Che, New Territories

**TIA Report
March 2025**

Section 16 Planning Application

Proposed Temporary Concrete Batching Plant for a Period of 5 Years

Lot 153 (Part) in D.D.77, Ping Che, New Territories

TIA Report March 2025

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1 INTRODUCTION

1.1 General

- 1.1.1 Ozzo Technology (HK) Limited was commissioned to undertake a Traffic Impact Assessment (TIA) Study in support of the S16 planning application for the Proposed Temporary Concrete Batching Plant for a Period of 5 Years (“Application Site”).

1.2 Project Descriptions

- 1.2.1 The Application Site is located at Ping Che, situated at the east of Ping Yuen Road.
- 1.2.2 A concrete batching plant will be developed by the applicant on the Application Site to replace the existing concrete batching plant. A S16 application was submitted and approved for this concrete batching plant (application no.: A/NE-TKL/681). The applicant intends to submit a new S16 application before the expiration of previous S16 application with updated traffic figures and revised layout.

1.3 Study Objectives

- 1.3.1 The main objectives of this Traffic Impact Assessment (“TIA”) Study are to:
- (i) evaluate the existing vehicular traffic conditions of the project site and to assess the traffic and transport implications of the development to the adjacent road network and pedestrian facilities for the operation of the Application Site;
 - (ii) identify any existing and potential traffic and transport problems and to recommend possible mitigation measures and advise any necessary traffic arrangement;
 - (iii) recommend traffic improvement measures for the Application Site, as necessary.

1.4 Report Structure

- 1.4.1 Following this introductory chapter, this report is arranged as follow:
- Chapter 2 describes the Application Site;
 - Chapter 3 outlines the existing traffic conditions;
 - Chapter 4 presents the finding of Traffic Impact Assessment;
 - Chapter 5 provides the conclusion of the TIA.

2 DESCRIPTIONS OF THE APPLICATION SITE

2.1 Site Location

- 2.1.1 The site is located in Ping Che and connected by an unnamed access road. It can be accessed via Ping Yuen Road and Ping Che Road which serve as the ingress / egress route of site as shown in **Figure 2-1**.

2.2 Development Parameters for the Application Site

- 2.2.1 The Application Site is located in Lot 153 in D.D. 77 in Ping Che, with a Site area of 6,957m².
- 2.2.2 The applicant is intended to apply for a temporary concrete batching plant for a period of 5 years. The operation hours of the proposed development are Monday to Sunday from 07:00 to 23:00. No operations on public holiday.
- 2.2.3 The concrete batching plant will be developed in 2 phases. Facilities for operations and production would be in place in Phase 1, while other spaces such as equipment storage and repairing shed would be added in Phase 2 subject to the approval status of the General Building Plan of Phase 1. In view of the above, the production rate and development traffic would be the same in both Phase 1 and Phase 1 + Phase 2.

2.3 Development Traffic

- 2.3.1 The development schedule of the Application Site, is shown in the **Table 2-1** below

Table 2-1 Development Schedule

Parameters	Description
Site Area	Approx 6,957 m ²
GFA	1,506 m ² (Phase 1), 2,776 m ² (Phase 1 + Phase 2)
Maximum Concrete Production Rate	100 m ³ /hr

- 2.3.2 As given by the applicant, the maximum production rate of the existing concrete batching plant is 120 m³/hr. According to the applicant's latest business plan and review on productivity plan, the maximum production rate would only reach 100m³/hr. Nevertheless, maximum production rate of 120 m³/hr would be used to estimate development traffic (same as exiting) as a conservative approach.
- 2.3.3 With a capacity of 8 m³ per concrete truck, maximum 15 concrete trucks per hour would be required to deliver the concrete when the plant is at its maximum production (assuming a conservative production rate of 120 m³/hr). Under normal circumstance, the concrete production rate of the concrete batching plant is 80-100 m³/hr in which only 10-13 concrete trucks per hour would be required

- 2.3.4 Depending on the type of concrete ordered by the purchasers and stock level of raw materials, raw material delivery trucks may be required. Number of additional truck other than concrete trucks (e.g. aggregate trucks, cement/PFA/GGBS tankers and/or admixture trucks) required would be ranging from 0 to 1 per hour as raw material delivery truck would not be required in every hour. Moreover, 1 private vehicle on average per hour would also be generated by the site for staff/visitors.
- 2.3.5 The arrivals and departures of vehicles of the Application Site would be scheduled by the Applicant in order to limit the traffic generation of the Application Site with no more than 16 veh/hr in which 15 are operation vehicles such as concrete trucks, aggregate trucks, cement/PFA/GGBS tankers and/or admixture trucks and 1 is private vehicle of staffs/ visitors. Given that (1) normal concrete production rate is 80-100m³/hr; and (2) additional raw material truck would not be required in every hour, it is expected that hourly traffic can be scheduled to be no more than 15 trucks (including concrete trucks and raw material delivery truck) and 1 private vehicle based on existing operation experience. Also, one-way direction traffic would also be scheduled and managed by the Applicant.
- 2.3.6 As confirmed by the developer, the traffic generation and attraction of the concrete batching plant are summarized in **Table 2-2** below.

Table 2-2 Development Traffic

Vehicle Types	One-way Traffic (veh/hr)		One-way Traffic (pcu/hr) ⁽¹⁾	
	In	Out	In	Out
Operation Vehicles (concrete trucks, aggregate trucks, cement/PFA/GGBS tankers and/or admixture trucks)	15	15	31	31
Private Vehicle	1	1	1	1
Total	16	16	32	32

Note:

(1) PCU factor of 2 is applied on 14 concrete trucks and 2.5 is applied on 1 other truck (i.e. tanker)

- 2.3.7 By comparing the previously approved application of A/NE-TKL/681, the estimation of development traffic in this new application is on a conservative side as presented in **Table 2-3** below.

Table 2-3 Comparison of Development Traffic to Previous Application

Development	Application	AM One-way Traffic (pcu/hr)		PM One-way Traffic (pcu/hr)	
		In	Out	In	Out
Existing Concrete Batching Plant (With max pro. rate 120m ³ /hr)	Adopted in new application	32	32	32	32
Proposed Concrete Batching Plant (With max pro. rate 100m ³ /hr)	Adopted in A/NE-TKL/681	29	29	29	29

2.4 Parking and Loading/Unloading Facilities

- 2.4.1 The provision of parking and loading/unloading facilities are provided taking reference of the Hong Kong Planning Standards and Guidelines (HKPSG) and operational needs of the concrete batching plant as summarized in **Table 2-3**.

Table 2-3 Provision of Parking and Loading/Unloading Facilities

Type of Ancillary Transport Facilities	Size	HKPSG Standard	HKPSG Requirements	Operational needs	Proposed Parking and L/UL Facilities
Private Car Parking Space	2.5m (W) x 5m (L)	1 per 1000-1200m ² GFA	3	1	3
L/UL Spaces for Goods Vehicle	3.5m (W) x 7m (L) or 3.5m (W) x 11m (L)	1 per 700-900 m ² GFA	4	3	4 ⁽¹⁾
L/UL Spaces for Container Vehicle	3.5m (W) x 16m (L)	1 bay	1	1	1
Waiting Spaces for Goods Vehicle	3.5m (W) x 11m (L)	N/A	N/A	12 ⁽²⁾	14

Note:

(1) One LGV loading/unloading space (7m x 3.5m) and three HGV loading/unloading spaces (11m x 3.5m) would be provided to suit operation need

(2) 15 Trucks arrive per hour – 3 in L/UL bays = 12 waiting

- 2.4.2 The layout plan of the Application Site showing the locations of the facilities (both Phase 1 and Phase 2) mentioned in **Table 2-3** is shown in **Figure 2-3** and **Figure 2-4**. The swept path analysis for internal circulation is also attached in **Appendix A**.
- 2.4.3 As mentioned in **Section 2.3.4**, the maximum arrival rate would be 16 vehicles in which 15 are trucks (composition of concrete trucks, aggregate trucks, cement/PFA/GGBS tankers and/or admixture trucks) and 1 is private vehicle. By providing 18 L/UL space/ parking in total for trucks/ container vehicle and 3 parking for private vehicle, it is considered to be sufficient to cope with both operation needs and HKPSG requirement.

2.5 Access Arrangement

- 2.5.1 Vehicles can access the site via a new proposed access road (through lots 158 RP, 157 RP, 155 RP and 154) as indicated in **Figure 2-3** and **Figure 2-4**. The width of the access road is ranging from 7.3m – 9.2m, which can accommodate the longest vehicle (16m) entering and existing the site. The site consists of 2 gates (hereinafter named as “North Gate” and “East Gate”) with 10m wide. In Phase 1, the north gate would be used for accessing the site and the south gate would be used for leaving, the access arrangement would be swapped in Phase 2 (north gate for leaving the site and the south gate for entering) to suit operational needs. Swept path analysis for the site access is also conducted and included in **Appendix A**.
- 2.5.2 A road improvement scheme was committed in previous approved S16 application A/NE-TKL/681 to cope with the traffic generated/ attracted by the concrete batching plant as shown in **Figure 2-2**. A new 2m wide footpath and works for passing bays (passing bay extension and repave an area as indicated in **Figure 2-2**) would be implemented along the access road between Ping Yuen Road and the Application Site, road markings would also be added along Ping Yuen Road. The proposed road improvement scheme will also be carried out by the applicant in this application.
- 2.5.3 Staffs will be deployed to conduct traffic management/ control within the site to facilitate internal circulation and safety, and also deployed near the accesses of the site to ensure one-way traffic is maintained as mentioned in **Section 2.3.4** and smooth maneuvering of vehicles entering/ exiting the site so as to prevent vehicles queuing back to public road. Staffs will also guide vehicles to the empty space within the site when necessary to facilitate vehicles circulation and maneuvering.

3 EXISTING TRAFFIC CONDITIONS

3.1 Existing Road Network

- 3.1.1 The Application Site is Located at the east of Ping Yuen Road and connected by a single track access road where passing bays are provided along the access road.
- 3.1.2 Ping Yuen Road (section between Ping Che Road and the access road leading to the Application Site) is currently a single track access road with passing bay provided along the road.
- 3.1.3 Ping Che Road is a District Distributor and a single 2-lane carriageway, connecting Sha Tau Kok Road at its southern end and Lin Ma Hang Road at its northern end.

3.2 Traffic Surveys

- 3.2.1 Vehicular count survey was conducted on a typical weekday in February 2025 at the critical junctions and links shown in **Figure 3-1** during the period of 0600-1000 for AM peak and 1500-1900 for PM peak. The details of the critical junctions are listed in **Table 3-1** below.

Table 3-1 Critical Junctions and Links

Index	Location	Type
J1	Ping Che Road/ Ping Yuen Road (Southern Section)	Priority
J2	Ping Che Road/ Ping Yuen Road (Northern Section)	Priority
J3	Ping Yuen Road/ Access Road to the Application Site	Priority
L1	Ping Che Road (section between Ping Yuen Road and Ng Chau S Road)	Road Link
L2	Ping Yuen Road (section between Ping Che Road and Access Road to the Application Site)	Road Link
L3	Access Road to the Application Site	Road Link

3.3 Existing Vehicle Traffic Conditions

All vehicle flows recorded during the traffic surveys have been converted to passenger car unit (PCU) based on the PCU factors as indicated in Table 2.3.1.1 of Volume 2 of Transport Planning and Design Manual (TPDM) as illustrated in **Table 3-2**.

Table 3-2 Passenger Car Unit Conversion Factors

Vehicle Type	PCU Conversion Factor ⁽¹⁾
	Priority junction/ Roundabout
Car / Taxi	1.00
Public Light Bus / Minibus / Light Goods Vehicle	1.50
Medium Goods Vehicle	2.00
Heavy Goods Vehicle	2.50
Bus / Coach	2.50

Notes:

(1) Table 2.3.1.1, Chapter 2.3, Volume 2, TPDM-2024

- 3.3.1 By applying the above PCU factors, vehicular traffic flows in PCUs are calculated and the AM and PM peak hour is identified to occur at 08:30-09:30 and 16:30-17:30 for AM peak and PM peak respectively. **Figure 3-2** presents the 2025 observed Weekday AM and PM peak hour traffic flows on the road network in the vicinity of the Application Site.
- 3.3.2 To better understand the seasonal effect of traffic flow in the application area, monthly variation trend of ATC station 6206 at Jockey Club Road (the closest screenline station) has been taken as reference. **Table 3-3** presents the monthly variation trend of ATC station 6206 in the year of 2023.

Table 3-3 Monthly Variation at ATC Station No. 6206

Day	Percentage of Average (%)											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
M-F	96.98	97.18	98.67	99.47	99.37	99.20	100.50	98.84	101.99	101.91	102.65	103.26

Source: Annual Traffic Census (ATC) Reports published by Transport Department

- 3.3.3 As shown in **Table 3-3**, the traffic volume recorded at ATC station 6206 in February is at low side throughout the year in 2023 and the highest was recorded in December. In order to provide a conservative estimate on traffic flow, a seasonal factor of 6.3% ($103.26 / 97.18$) is applied on 2025 observed flow to derive the 2025 Adjusted Flows for subsequent assessments.
- 3.3.4 Based on the adjusted 2025 traffic flows, the peak hour performances of the key junctions are assessed. The assessment results are indicated in **Table 3-4** and detailed junction calculation sheets are given in **Appendix B**.

Table 3-4 2025 Peak Hour Junction Capacity Assessment

Jn. ID.	Location ⁽¹⁾	Type	Capacity Index ⁽²⁾	2025 Weekday	
				AM Peak	PM Peak
J1	Ping Che Road/ Ping Yuen Road (Southern Section)	J1	DFC	0.28	0.21
J2	Ping Che Road/ Ping Yuen Road (Northern Section)	J2	DFC	0.19	0.13
J3	Ping Yuen Road/ Access Road to the Application Site	J3	DFC	0.14	0.06

Notes:

(1) Refer to Figure 3-1 for junction locations

(2) DFC = Design Flow to Capacity for priority junction and roundabout

3.3.5 The results reveal that all the assessed key junctions are operated satisfactorily during the peak hours.

4 TRAFFIC IMPACT ASSESSMENT

4.1 Design Year

- 4.1.1 According to current programme, the proposed concrete batching plant will commission in the year of 2025, the design year for traffic forecast is therefore set to be 3 year later (i.e. year 2028).

4.2 Methodology

- 4.2.1 In forecasting the future traffic flows on the road network in the Study Area, due considerations are given to the following information and factors:

- Historical traffic data from Annual Traffic Census (ATC) published by Transport Department;
- The forecasted population and employment from the 2021-based Territorial Population and Employment Data Matrices (TPEDM) planning data published by Planning Department;
- Committed and planned developments in the Study Area.

- 4.2.2 The following steps are undertaken to derive the 2028 Peak Hour Reference Flows (i.e. without the Project Site) and Design Flows (i.e. with the Application Site).

2028 Background Flows = 2025 Adjusted Flows x annual growth factors

2028 Reference Flows = 2028 Background Flows + additional traffic by
planned and committed developments

2028 Design Flows = 2028 Reference Flows + development traffic

4.3 Future Year Traffic Flows

Historical Traffic Growth

- 4.3.1 Reference is made to the 2021-based Territorial Population and Employment Data Matrices (TPEDM) planning data published by Planning Department (North District).
- 4.3.2 As Kwu Tung New Development Area (KTN NDA) is part of North District, considering the application site is located in the rural area (close to boundary area) and is not in the proximity to town centre or other planned NDA, in order to better reflect the growth trend in the application area, the population and employment of KTN NDA is excluded from the North District Data. **Table 4-1** presents the forecast population and employment data from 2021 to 2031.

Table 4-1 2021-Based TPEDM for North District

Category	2021	2026	2031 ⁽¹⁾	% Growth p.a. 2021 - 2031
Population	309,650	352,000	303,950	-0.19%
Employment Places	84,150	104,050	106,150	2.35%
Total	393,800	456,050	410,100	0.41%

Note:

(1) 131,600 population and 38,700 employments of KTN NDA is excluded.

4.3.3 As shown in **Table 4-1**, an average annual growth of 0.41% per annum was recorded over the period of 2021 – 2031

4.3.4 Apart from TPEDM, historical trend of traffic growth in the vicinity of the Application Site over the 5-year period of 2019 to 2023 are also extracted from the Annual Traffic Census (ATC) Reports as indicated in **Table 4-2**.

Table 4-2 Traffic Data from ATC in the vicinity of the site

Station	Road	Between		2019	2020	2021	2022	2023	Average Annual Growth 2019-2023
6653	Ping Che Rd	Sha Tau Kok Rd	Lin Ma Hang Rd	11,820	11,030	11,870	11,510	12,150	0.69%
5660	Sha Tau Kok Rd	Ping Che Rd	Sha Ho Rd	33,630	23,740	22,980	22,280	22,810	-9.25%
5860	Sha Tau Kok Rd	Ping Che Rd	Ma Sik Rd	6,570	6,300	5,970	4,900	5,010	-6.55%
Total				45,450	34,770	34,850	33,790	34,960	-6.35%

4.3.5 As indicated in **Table 4-2**, the traffic on the road network in the vicinity of the Application Site recorded an average annual growth of -6.35% over the period of 2019 – 2023.

4.3.6 Taking into account the above factors, it is proposed to adopt an average growth rate of +1% per annum from a conservative approach to estimate the 2028 Background Traffic Flows.

Planned and Committed Developments

4.3.7 By referring to the TPB website, it is known that there would be other planned developments commissioned in the vicinity of the application site and would be taken into account to forecast future traffic flow, as listed in **Table 4-3**.

Table 4-3 Planned / Committed Developments in the Site Vicinity

Application No.	Location	Land Use	Area (m ²)	Planning Application Status
A/NE-TKL/608-1	Lots 825, 834 and 836 in D.D. 77 and Adjoining Government Land, Ping Che, New Territories	Industrial Use (Laundry Workshop)	GFA 1,871	Approved/Agreed 11/10/2023

A/NE-TKL/663-13	Lot 838 S.A (Part) in D.D. 77, Ng Chow South Road, Ta Kwu Ling, New Territories	Proposed Temporary Wholesale Trade with Ancillary Warehouse	GFA 1,334	Approved/Agreed 25/10/2024
A/NE-TKL/728	Lots 173 RP, 174, 175, 177, 178 S.A, 178 S.B and 178 S.C in D.D. 77 and Adjoining Government Land, Ping Che, New Territories	Industrial Use	GFA 2,410	Approved with condition(s) on a temporary basis 16/08/2024
A/NE-TKL/776	Lots 887, 890 S.A RP, 890 RP and 890 S.B in D.D. 77 and Adjoining Government Land, Ping Che, Sheung Shui, New Territories	Temporary Warehouse and Cold Store with Ancillary Rural Workshop	GFA 2,260	Approved with condition(s) on a temporary basis 25/10/2024
A/NE-TKL/688-8	Lots 1255 RP (Part), 1256 (Part) and 1257 RP (Part) in D.D. 79, Ta Kwu Ling, New Territories	Temporary Wholesale Trade with Ancillary Warehouse	GFA 2,258	Approved/Agreed 21/10/2024
A/NE-TKL/692-7	Government Land in D.D. 82, Ping Che, Ta Kwu Ling, New Territories	Proposed Temporary Transitional Housing and Ancillary Facilities	GFA 14,924	Approved/Agreed 28/10/2024
A/NE-TKL/779	Lots 4 S.A (Part), 4 S.B (Part), 4 S.C (Part) and 6 S.B in D.D. 84 and Adjoining Government Land, Ping Che, New Territories	Proposed Temporary Warehouse for Storage of Construction Materials and Electronic Products	GFA 2,668	Approved with condition(s) on a temporary basis 22/11/2024
A/NE-TKL/757	Lots 5, 6 S.A, 6 S.A ss.1, 7, 8 S.A, 8 S.B, 9 S.A (Part), 9 S.B (Part), 10 S.B (Part) and 11 (Part) in D.D. 84, Ta Kwu Ling, New Territories	Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities	GFA 6,804	Approved with condition(s) on a temporary basis 21/06/2024
A/NE-TKL/755	Lots 9 S.A (Part), 9 S.B (Part), 10 S.A, 10 S.B (Part) and 11 (Part) in D.D. 84, Ta Kwu Ling, New Territories	Proposed Temporary Medium Goods Vehicle and Container Tractor/Trailer Park with Ancillary Facilities	GFA 1,094	Approved with condition(s) on a temporary basis 21/06/2024
A/NE-TKL/746	Lots 645 (Part), 647, 650 S.A, 650 S.B (Part), 651 (Part), 653 (Part) and 654 (Part) in D.D. 82, Ta Kwu Ling, New Territories	Proposed Temporary Open Storage of Construction Material and Machinery with Ancillary Facilities	Site Area 5,913	Approved with condition(s) on a temporary basis 15/03/2024
A/NE-TKL/737	Lots 967 (Part), 968 (Part), 969 (Part), 971 (Part), 972, 973, 975, 976, 977 and 978 RP in D.D. 82 and Adjoining Government Land, Ping Che, New Territories	Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities	GFA 7,696	Approved with condition(s) on a temporary basis 11/09/2023
A/NE-TKL/743	Lot 1115 (Part) in D.D. 82, Ping Che, New Territories	Proposed Temporary Open Storage of Construction Machinery and Materials	Site Area 700	Approved with condition(s) on a temporary basis 19/04/2024
A/NE-TKL/741	Lot 1088 S.B (Part) in D.D. 82, Tong Fong, Ping Che, New Territories	Temporary Place of Recreation, Sports or Culture (Hobby Farm)	GFA 147	Approved with condition(s) on a temporary basis 16/02/2024

2028 Reference Flows and Design Flows

- 4.3.8 As the concrete batching Plant is currently operating at the application site and the traffic generation/ attraction of the proposed development in this S16 application would be same as exiting, no additional development traffic is added on top of the reference traffic flow and thus 2028 reference traffic flow would be same as 2028 design traffic flow.
- 4.3.9 By incorporating the planned development traffic and annual growth mentioned in **Section 4.3.7** and **Section 4.3.6** respectively, the 2028 Reference and Design Traffic Flow are presented in **Figure 4-1** and **Figure 4-2**.

4.4 Future Year Junction Capacity Assessments

- 4.4.1 The critical road junctions as identified in **Section 3.2** are assessed in the light of traffic forecast for the design year 2028 defined in **Section 4.1**. The results are shown in in **Table 4-4** with detailed junction calculation sheets provided in **Appendix C**.

Table 4-4 2028 Peak Hour Junction Capacity Assessment

Jn. ID.	Location ⁽¹⁾	Type	Capacity Index ⁽²⁾	2028 Reference Scenario		2028 Design Scenario	
				AM Peak	PM Peak	AM Peak	PM Peak
J1	Ping Che Road/ Ping Yuen Road (Southern Section)	Priority	DFC	0.36	0.28	0.36	0.28
J2	Ping Che Road/ Ping Yuen Road (Northern Section)	Priority	DFC	0.27	0.20	0.27	0.20
J3	Ping Yuen Road/ Access Road to the Application Site	Priority	DFC	0.24	0.17	0.24	0.17

Notes:

(1) Refer to Figure 3-1 for junction locations

(2) DFC = Design Flow to Capacity for priority junction and roundabout

- 4.4.2 It is indicated in the above **Table 4-4** that the identified critical junctions would operate satisfactorily during peak hours in the design years of 2028, taking account of the known planned/ committed major developments in the vicinity of the Application Site.

4.5 Future Year Link Capacity Assessments

4.5.1 The critical road links as identified in **Section 3.2** are also assessed based on the future year traffic flow derived in **Section 4.3** and the results are presented in **Table 4-5**.

Table 4-5 2028 Peak Hour Road Link Capacity Assessment

No.	Location ⁽¹⁾	Dir.	Design Capacity (veh/hr)	2028 Reference Scenario (AM Peak)		2028 Reference Scenario (PM Peak)		2028 Design Scenario (AM Peak)		2028 Design Scenario (PM Peak)	
				Flows (veh/hr)	P/Df ⁽⁴⁾	Flows (veh/hr)	P/Df ⁽⁴⁾	Flows (veh/hr)	P/Df ⁽⁴⁾	Flows (veh/hr)	P/Df ⁽⁴⁾
L1	Ping Che Road (section between Ping Yuen Road and Ng Chau S Road)	2-way	1530 ⁽²⁾	734	0.48	659	0.43	734	0.48	659	0.43
L2	Ping Yuen Road (section between Ping Che Road and Access Road to the Application Site)	2-way	720 ⁽³⁾	216	0.30	180	0.25	216	0.30	180	0.25

Notes:

(1) Refer to Figure 3-1 for road link locations

(2) For single 2-lane carriageway (7.3m), the design flow is 1700 veh/hr. With consideration of high heavy vehicle content, 10% reduction in design flow per carriageway is adopted, the design flow would be 1530 veh/hr

(3) For 2-lane single carriageway, the 2-way design flow is 800 veh/hr. With consideration of high heavy vehicle content, 10% reduction in design flow per carriageway is adopted, the design flow would be 720 veh/hr

(4) P/Df = Peak Hourly Flows/Design Flow Ratios (P/Df) for road links

4.5.2 To access the performance of the Access Road L3, same approach used in the TIA of previously approved application A/NE-TKL/681 is adopted. Performance of the road link is assessed by calculating the utilization capacity of the critical section of L3 (between the 2 passing bays point A and point B as shown in **Figure 2-2**) as **Table 4-6** below:

Table 4-6 2028 Road Link L3 Performance

Link Section	2028 Design Traffic Flow (pcu/hr) [A]		Distance Required for Bypassing the Critical Road Section (m)	Time Required for Bypassing the Critical Road Section (sec) ⁽¹⁾ [B]	Total Time Required for Bypassing the Critical Road Section (sec) [A] x [B]	
	AM Peak	PM Peak			AM Peak	PM Peak
Point A -> Point B	115	76	75	10	1150	760
Point B -> Point A	109	81	75	10	1090	810
Total					2240	1570
Utilization [A] x [B] / 3600 sec =					62.2%	43.6%

Notes:

(1) Assuming travelling speed of 30km/hr.

4.5.3 As presented in **Table 4-6**, a total time of 2240 to 1570 sec would be utilized by the 2028 design traffic flows within an hour during AM and PM peaks. The utilization capacity of the Road Link L3 would be 62.2% and 43.6% respectively for AM peak and PM peak and would operate within capacity in the design year of 2028.

4.5.4 Poisson Distribution and multi-servers queuing (M/M/N) theory are also used to assess the queueing situation at the two passing bays of the Access Road and the probability of no. of vehicles waiting at the passing bays during AM peak (more critical than PM) is presented in the **Table 4-7** below:

Table 4-7 Probability of No. of Vehicles Waiting at the Passing Bays at L3

Passing Bay ⁽¹⁾	Critical Traffic Flow (pcu/hr) ⁽²⁾	Averaged Service Rate (veh/sec) ⁽³⁾	No. of Vehicles Waiting at the Passing Bay	Probability (%)	Accumulated Probability (%)
At point A	115	0.1	0	68.1	68.1
			1	21.7	89.8
			2	6.9	96.7
At point B	109	0.1	0	69.7	69.7
			1	21.1	90.8
			2	6.4	97.2

Notes:

(1) Passing bays location refers to Figure 2-2.

(2) Averaged arrival rate adopted in multi-servers queuing (M/M/N) assessment would be Critical Traffic Flows / 3600 (sec)

(3) Averaged Service Rate adopted in multi-servers queuing (M/M/N) would be 1 veh / 10 (sec) of travelling time = 0.1 (veh / sec)

4.5.5 The assessment result in **Table 4-7** indicates that the probability of more than 2 vehicles waiting at the each of the passing bays (Point A and B in **Figure 2-2**) along the critical section of access road L3 would be less than 4%, with length of both of the passing bays > 12m (i.e. 6m x 2 = 12m), they are considered to be adequate and shall be able to accommodate the waiting vehicles.

4.5.6 With the proposed road improvement scheme in place, the results in the above indicate that all the key road links would be operating satisfactorily in the design year of 2028.

4.6 Construction Traffic Impact Assessment

4.6.1 There would be no more than 4 construction vehicles per day for the construction and demolition materials to/from the proposed development as confirmed by the developer. It is anticipated that the traffic impact induced by the construction traffic would be minimal.

5 SUMMARY AND CONCLUSION

5.1 Summary

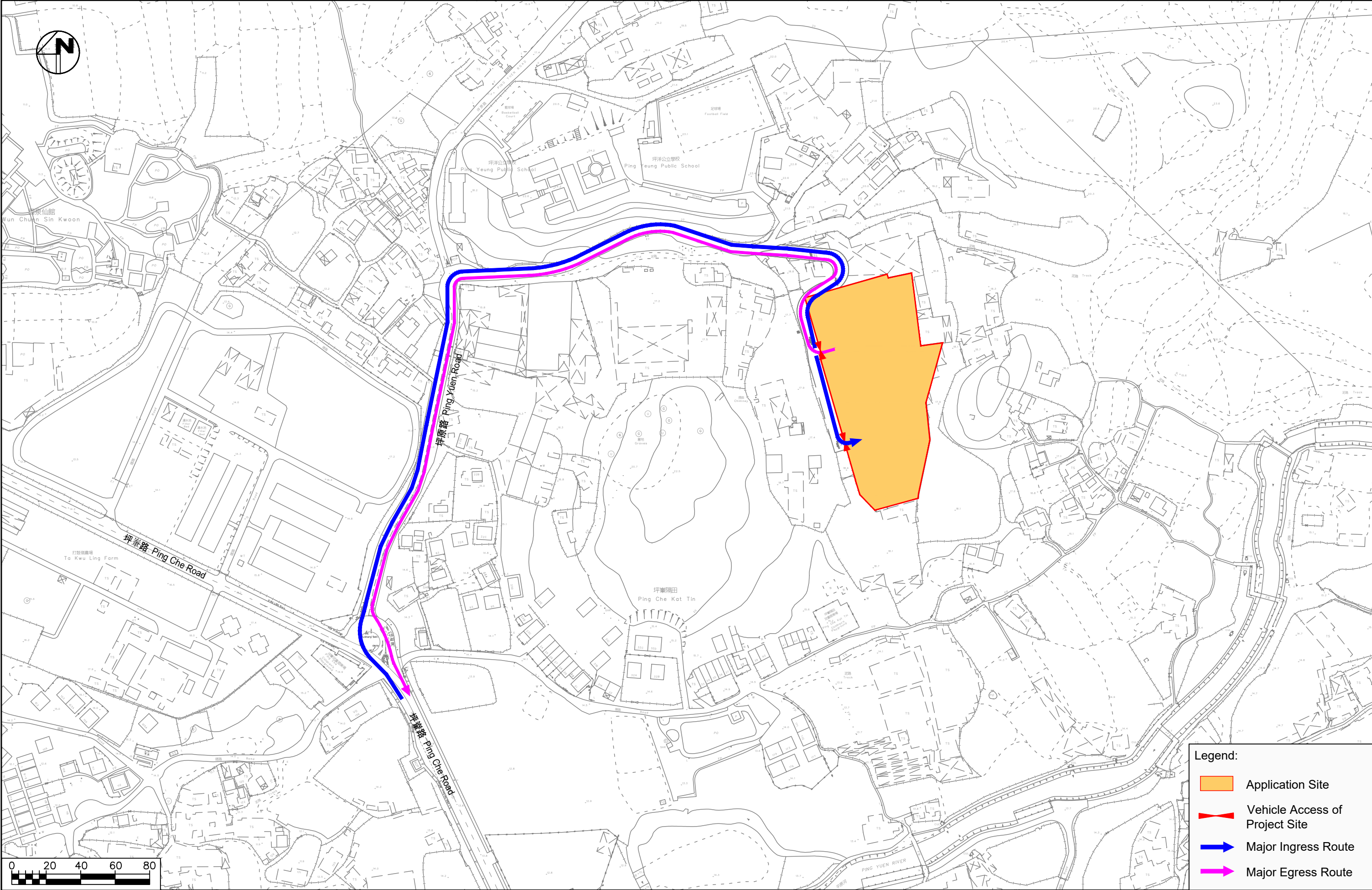
- 5.1.1 Ozzo Technology (HK) Limited is commissioned to undertake this Traffic Impact Assessment (TIA) Study to assess the traffic impact to be induced by the concrete batching plant on the nearby road network.
- 5.1.2 A S16 application (application no.: A/NE-TKL/681) was approved for this concrete batching plant and the applicant intends to submit a new S16 application with updated traffic figures and revised layout.
- 5.1.3 The committed road improvement scheme proposed in previous approved S16 application A/NE-TKL/681 will also be carried out by the application in the application.
- 5.1.4 Capacity assessments are undertaken to reveal the AM and PM peak hour traffic conditions for year 2025 and 2028 in the vicinity of the Application Site. The assessment results indicate that all the key junctions and road links perform satisfactorily during the AM and PM peak hours on a normal weekday.


5.2 Conclusion

- 5.2.1 The impact assessment results indicate that the Application Site would not induce significant traffic impacts and considered acceptable from traffic engineering viewpoint.


Figures

X:\Ozzo\82758_Proposed Temporary Concrete Batching Plant for a Period of 5 Years in Industrial (Group D) Zone, Lot 153 (Part) in DD77, Ping Che\DWG\82758_Figure 2-1_20250228.dwg Figure 2-1_20250228 09:48:44

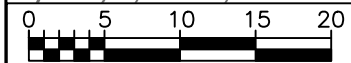
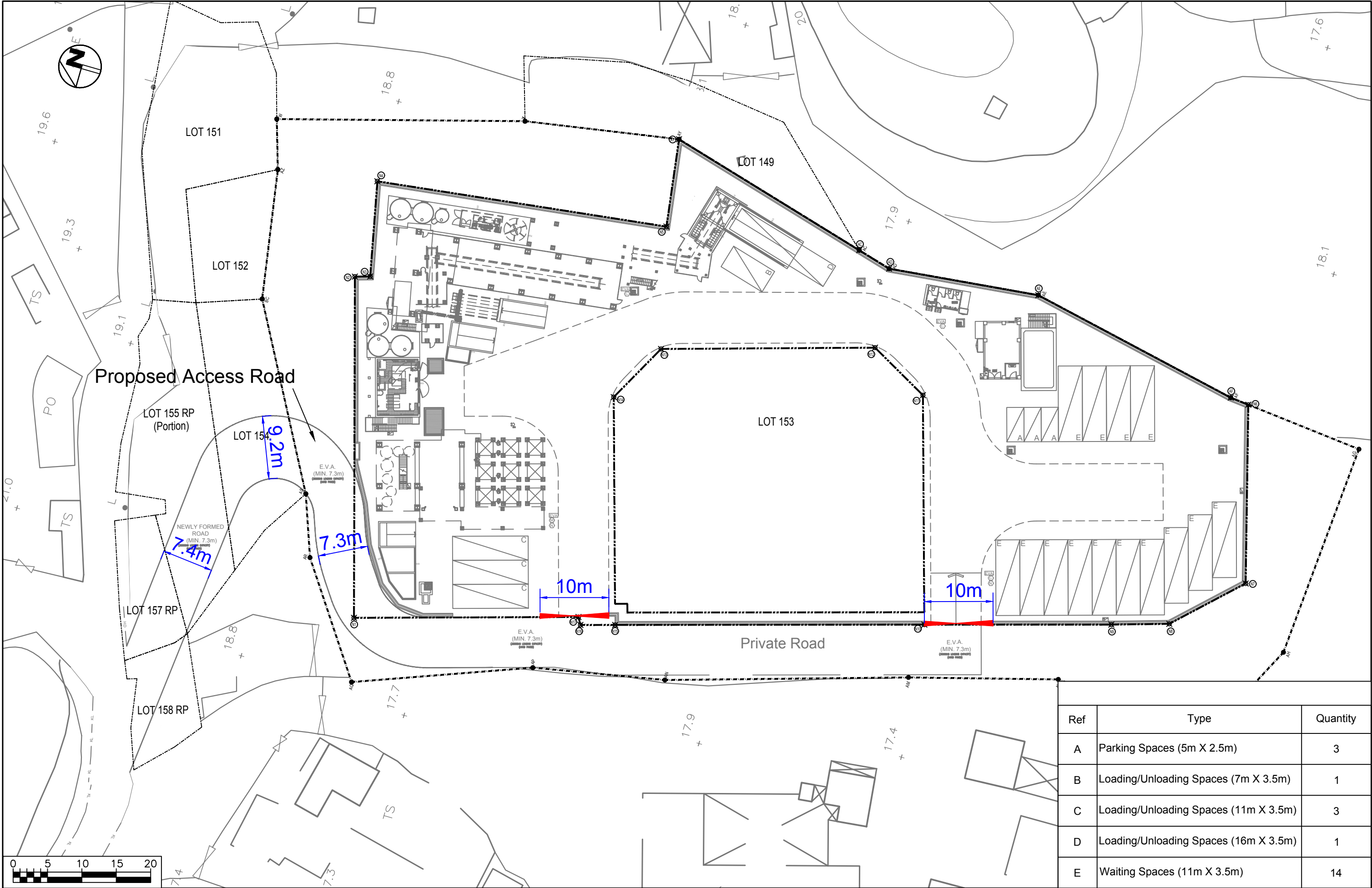


Project Title		Proposed Temporary Concrete Batching Plant for a Period of 5 Years in Industrial (Gropu D) Zone, Lot 153 (Part) in DD77, Ping Che			
Date	Scale	Major Ingress / Egress Route		Project No.	Rev.
28/02/2025	1:2000			82758	-
				Dwg No.	Figure 2-1



		Project Title <u>Proposed Temporary Concrete Batching Plant for a Period of 5 Years</u> <u>in Industrial (Gropu D) Zone, Lot 153 (Part) in DD77, Ping Che</u> Committed Road Improvement Scheme in Previous S16 Application	 Project No. 82758 Dwg No. Figure 2-2	Rev. -
Date 28/02/2025	Scale 1:1000			

X:\Ozzo\82758_Proposed Temporary Concrete Batching Plant for a Period of 5 Years in Industrial (Group D) Zone, Lot 153 (Part) in DD77, Ping Che\Data\Dwg\82758_Figure 2-3.dwg 2025/03/05 16:58:32



Project Title	
Date	Scale
28/02/2025	1:500

Proposed Temporary Concrete Batching Plant for a Period of 5 Years in Industrial (Gropu D) Zone, Lot 153 (Part) in DD77, Ping Che	
Layout Plan (Phase 1)	

Ref	Type	Quantity
A	Parking Spaces (5m X 2.5m)	3
B	Loading/Unloading Spaces (7m X 3.5m)	1
C	Loading/Unloading Spaces (11m X 3.5m)	3
D	Loading/Unloading Spaces (16m X 3.5m)	1
E	Waiting Spaces (11m X 3.5m)	14

Project No. 82758	Rev. -
Dwg No. Figure 2-3	

Ref	Type	Quantity
A	Parking Spaces (5m X 2.5m)	3
B	Loading/Unloading Spaces (7m X 3.5m)	1
C	Loading/Unloading Spaces (11m X 3.5m)	3
D	Loading/Unloading Spaces (16m X 3.5m)	1
E	Waiting Spaces (11m X 3.5m)	14

Project Title

**Proposed Temporary Concrete Batching Plant for a Period of 5 Years
in Industrial (Gropu D) Zone, Lot 153 (Part) in DD77, Ping Che
Layout Plan (Phase 2)**



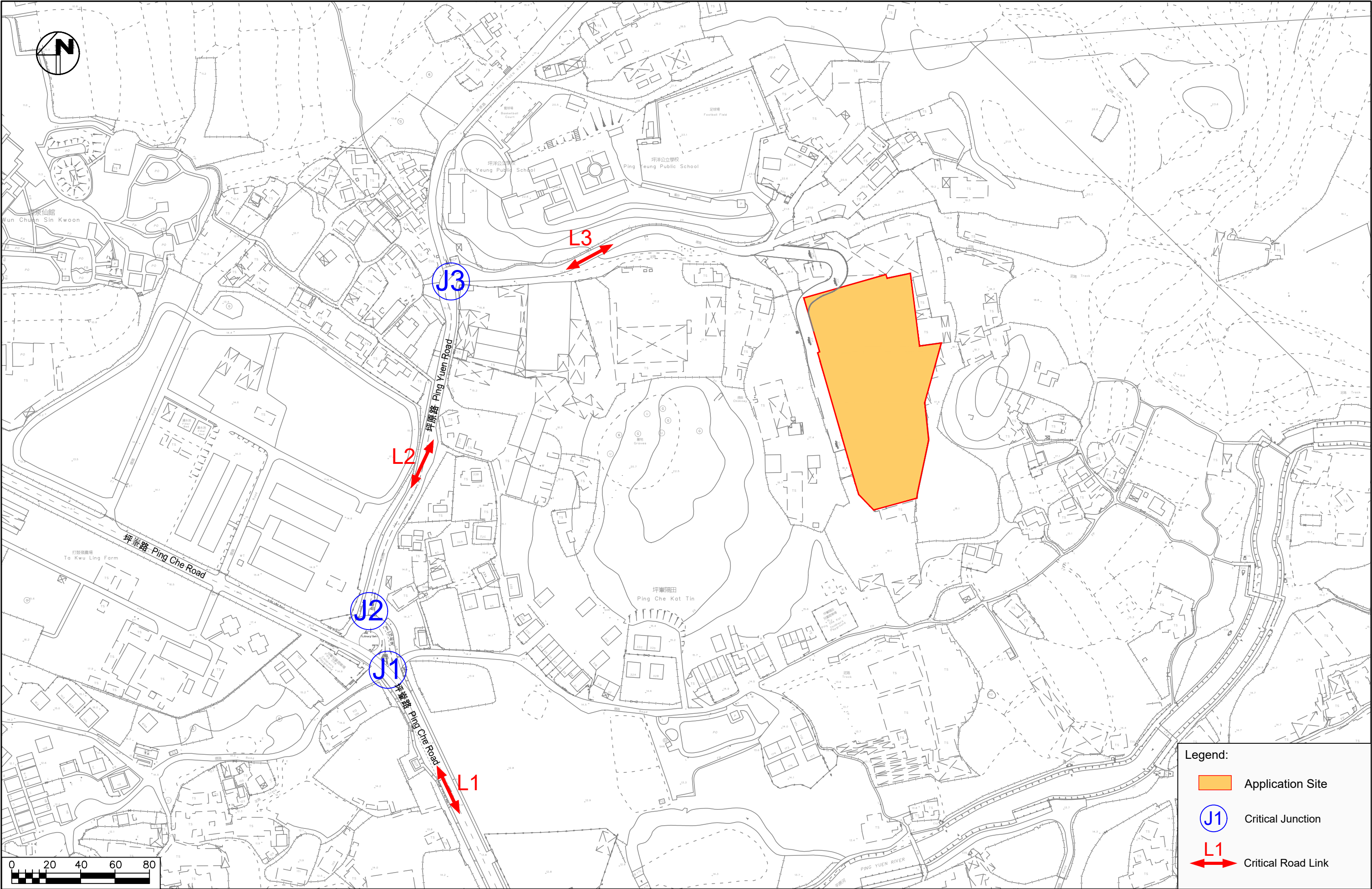
Project No. 82758

Rev.


Dwg No. Figure 2-4

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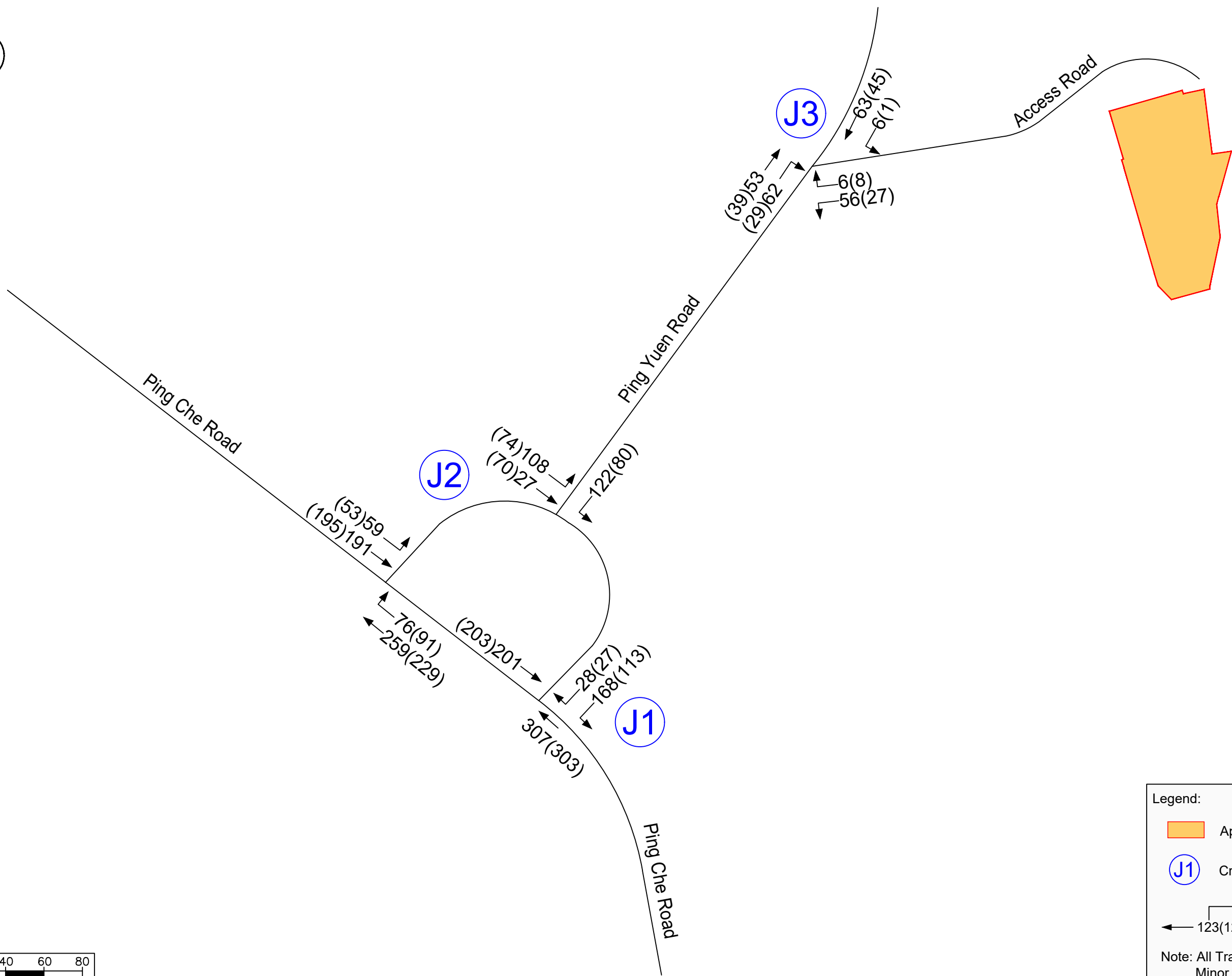
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- Legend:
- Application Site
 - Critical Junction
 - Critical Road Link

		<div>Project Title</div> <div>Proposed Temporary Concrete Batching Plant for a Period of 5 Years in Industrial (Gropu D) Zone, Lot 153 (Part) in DD77, Ping Che</div> <div>Critical Junctions and Road Links</div>	<div></div>	
Date	Scale		Project No. 82758 Rev.	
28/02/2025	1:2000		Dwg No. Figure3-1 -	

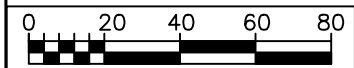
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Legend:

- Application Site
- Critical Junction
- AM Peak Hour Traffic Flow
- PM Peak Hour Traffic Flow

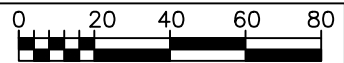
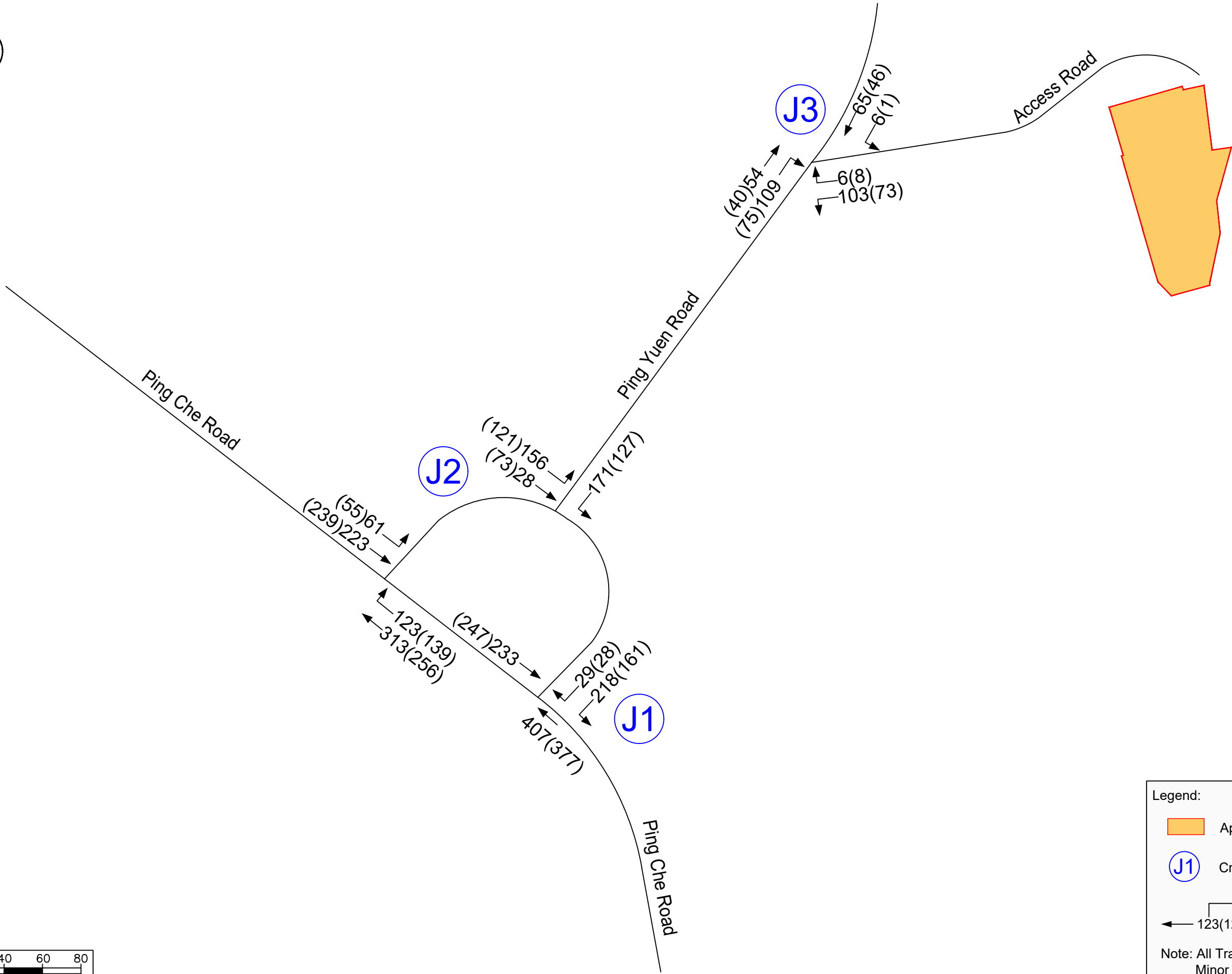
Note: All Traffic Flows in PCU Values
Minor Road Link not shown for clarity



		<div>Project Title</div> <div>Proposed Temporary Concrete Batching Plant for a Period of 5 Years in Industrial (Gropu D) Zone, Lot 153 (Part) in DD77, Ping Che</div> <div>2025 Existing Peak Hour Traffic Flows</div>
Date	Scale	
28/02/2025	1:2000	

Project No. 82758	Rev.
Dwg No. Figure 3-2	-

X:\Ozzo\82758_Proposed Temporary Concrete Batching Plant for a Period of 5 Years in Industrial (Group D) Zone, Lot 153 (Part) in DD77, Ping Che\Data\Dwg\82758_Figure 4-1.dwg 2025/02/28 10:01:00



Project Title	
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28/02/2025	1:2000

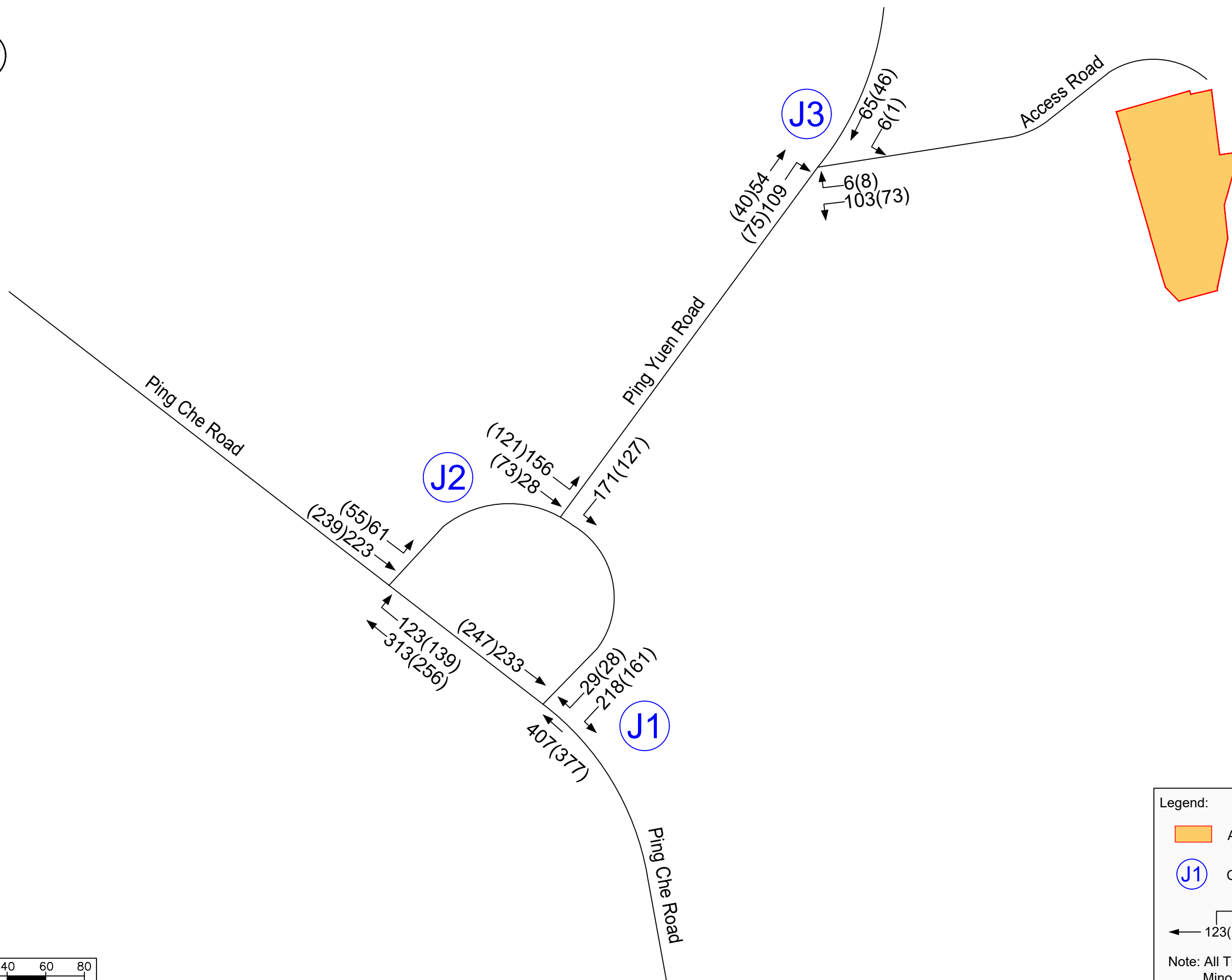
Proposed Temporary Concrete Batching Plant for a Period of 5 Years in Industrial (Gropu D) Zone, Lot 153 (Part) in DD77, Ping Che	
2028 Reference Peak Hour Traffic Flows	

Project No. 82758	Rev.
Dwg No. Figure 4-1	-

Legend:

- Application Site
- Critical Junction
- AM Peak Hour Traffic Flow
- PM Peak Hour Traffic Flow

Note: All Traffic Flows in PCU Values
Minor Road Link not shown for clarity



← 123(123) — AM Peak Hour Traffic Flow
— PM Peak Hour Traffic Flow

Date 28/02/2025	Scale 1:2000

Project Title

**Proposed Temporary Concrete Batching Plant for a Period of 5 Years
in Industrial (Gropu D) Zone, Lot 153 (Part) in DD77, Ping Che**
2028 Design Peak Hour Traffic Flows



Project No. 82758

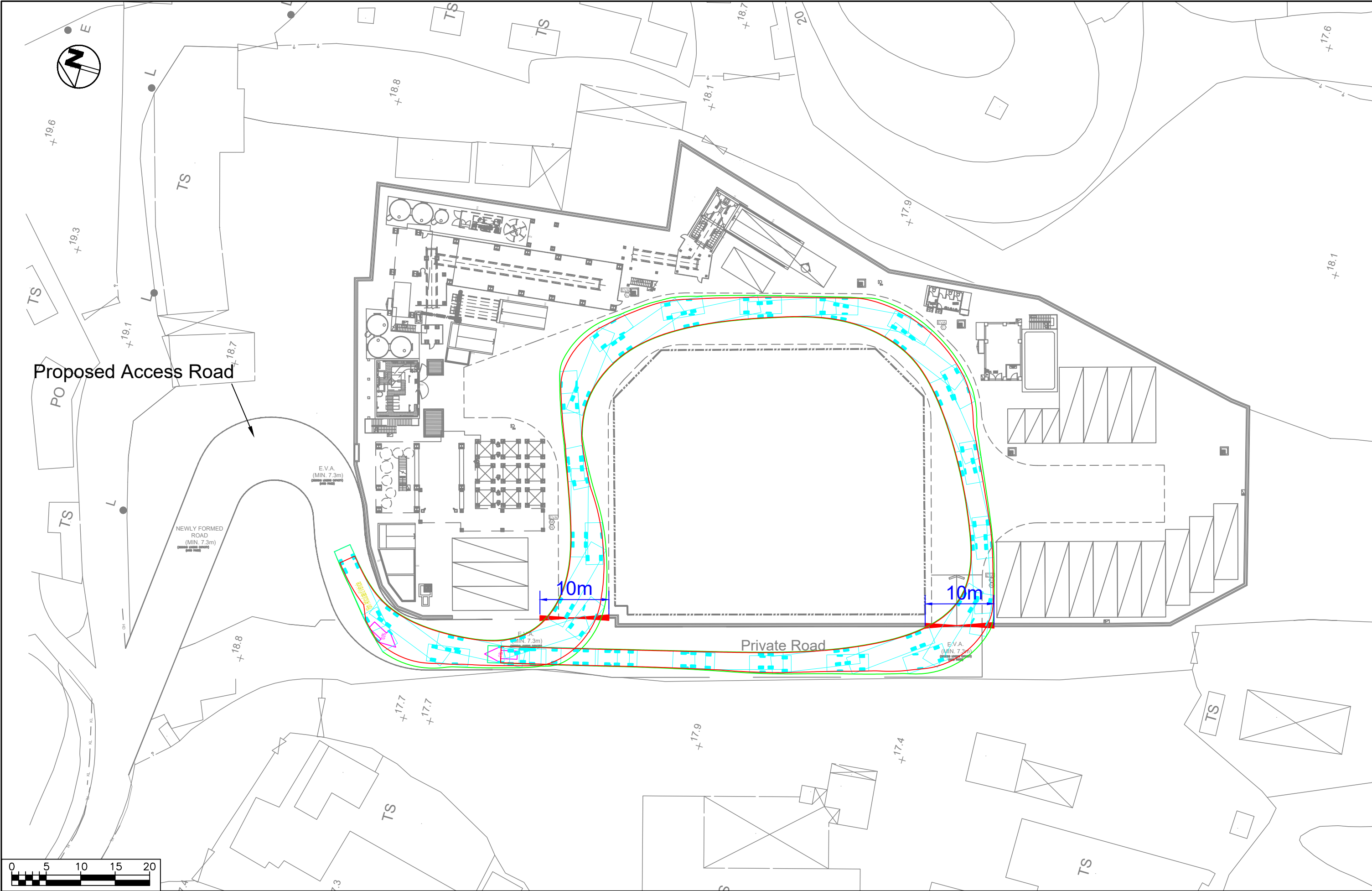
Dwg No.	Figure 4-2
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Rev.

Appendix A

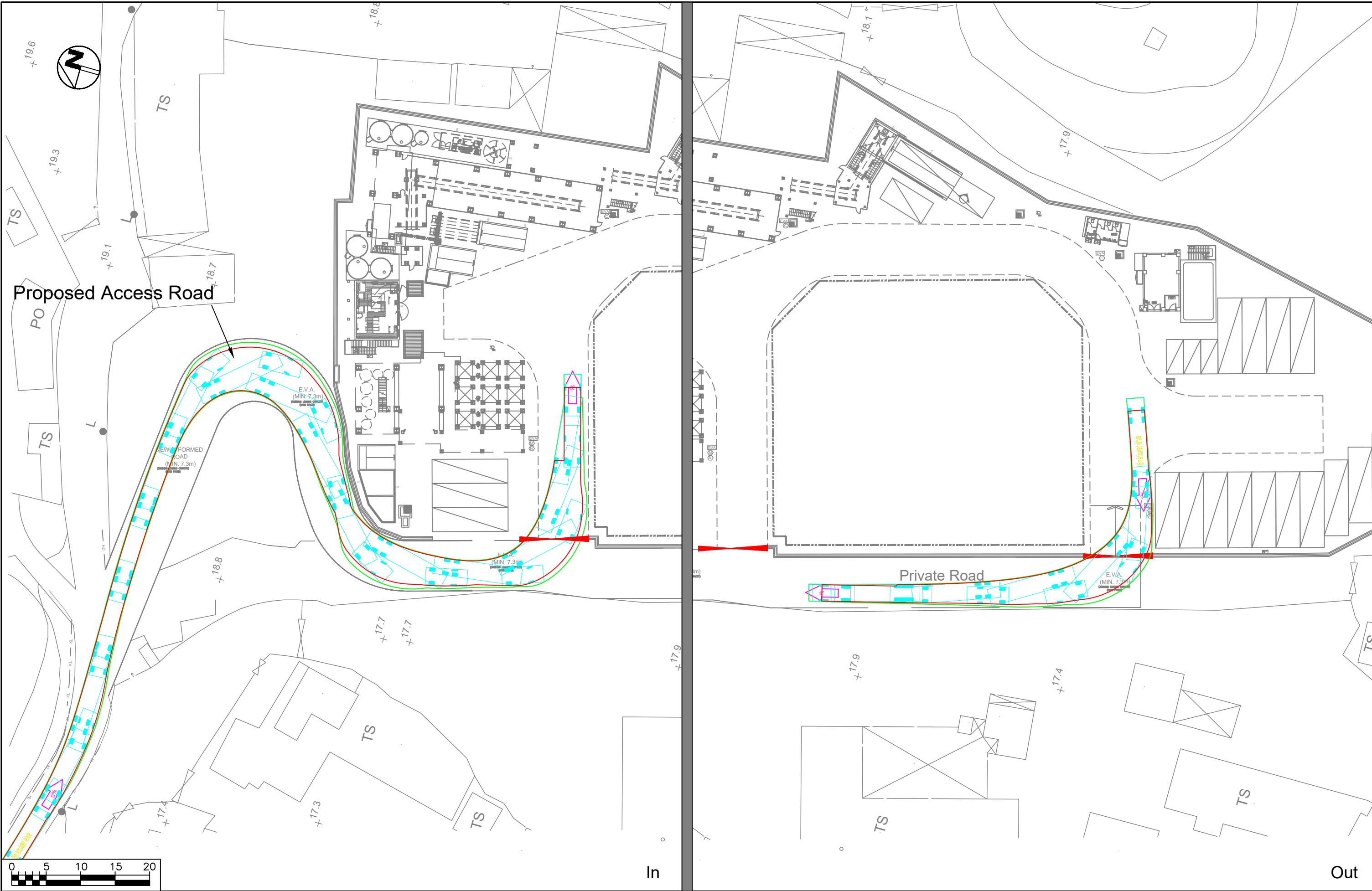
Swept Path Analysis

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Project Title		Proposed Temporary Concrete Batching Plant for a Period of 5 Years in Industrial (Gropu D) Zone, Lot 153 (Part) in DD77, Ping Che Swept Path Assessments 16m Articulate Vehicle (Phase 1)			
Date 28/02/2025	Scale 1:500			Project No. 82758	Rev. -
				Dwg No. GF-SP1	

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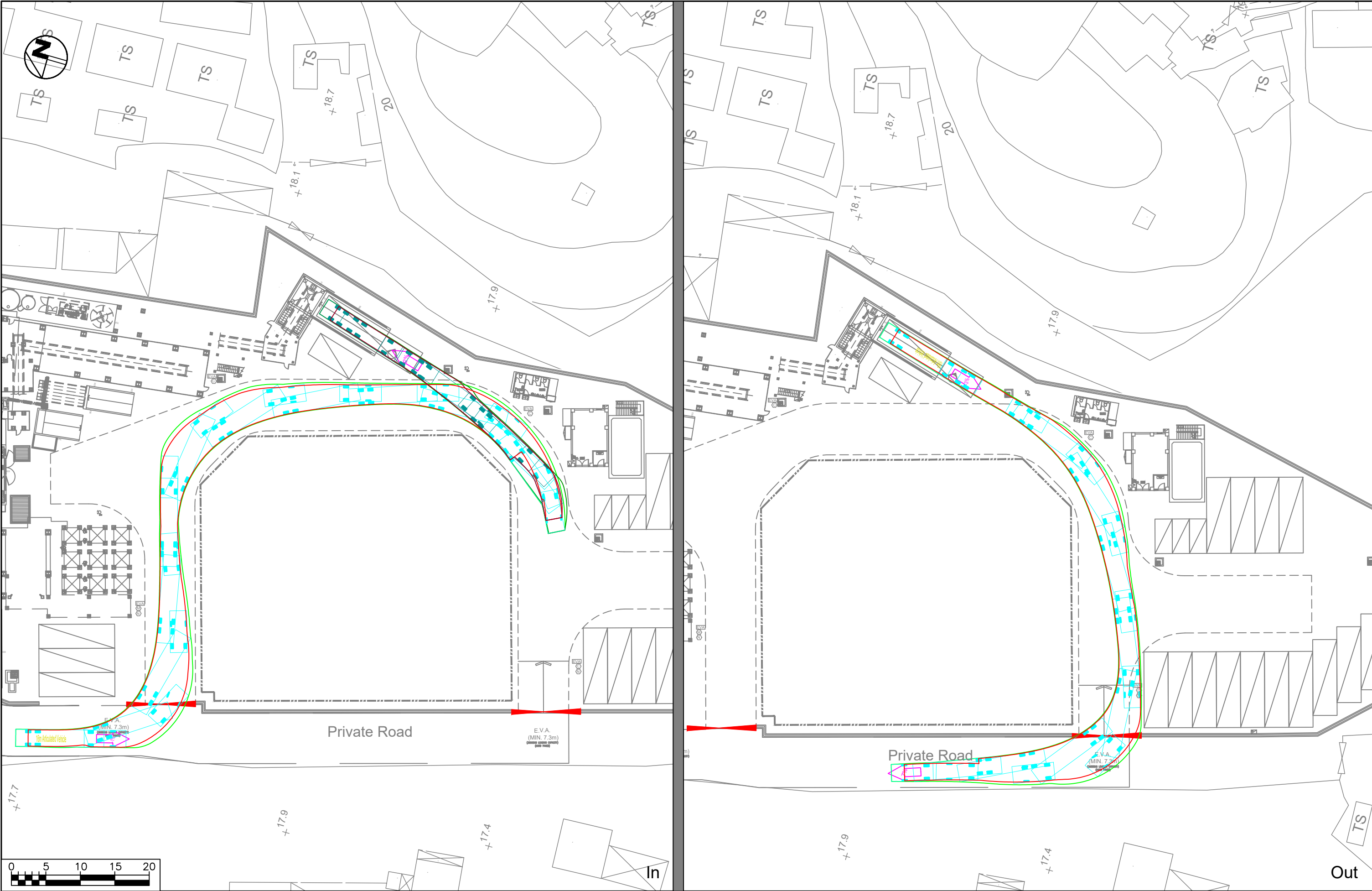



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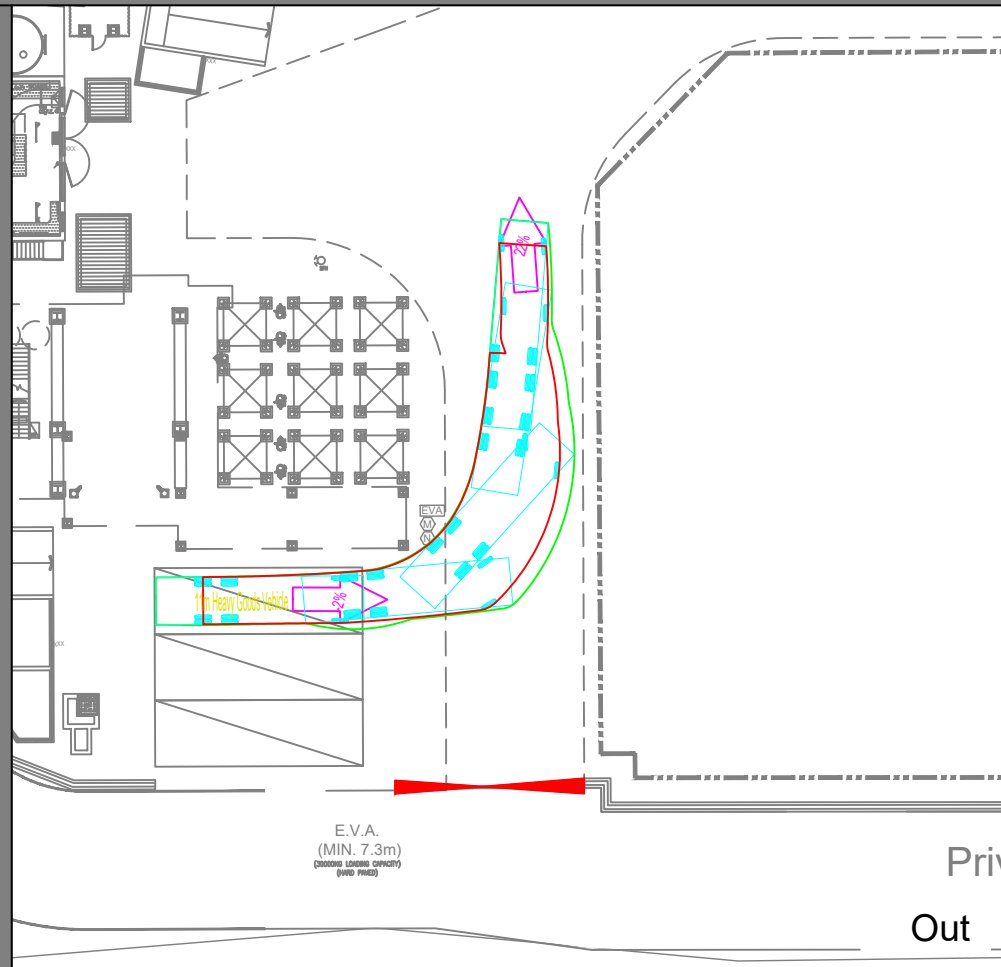
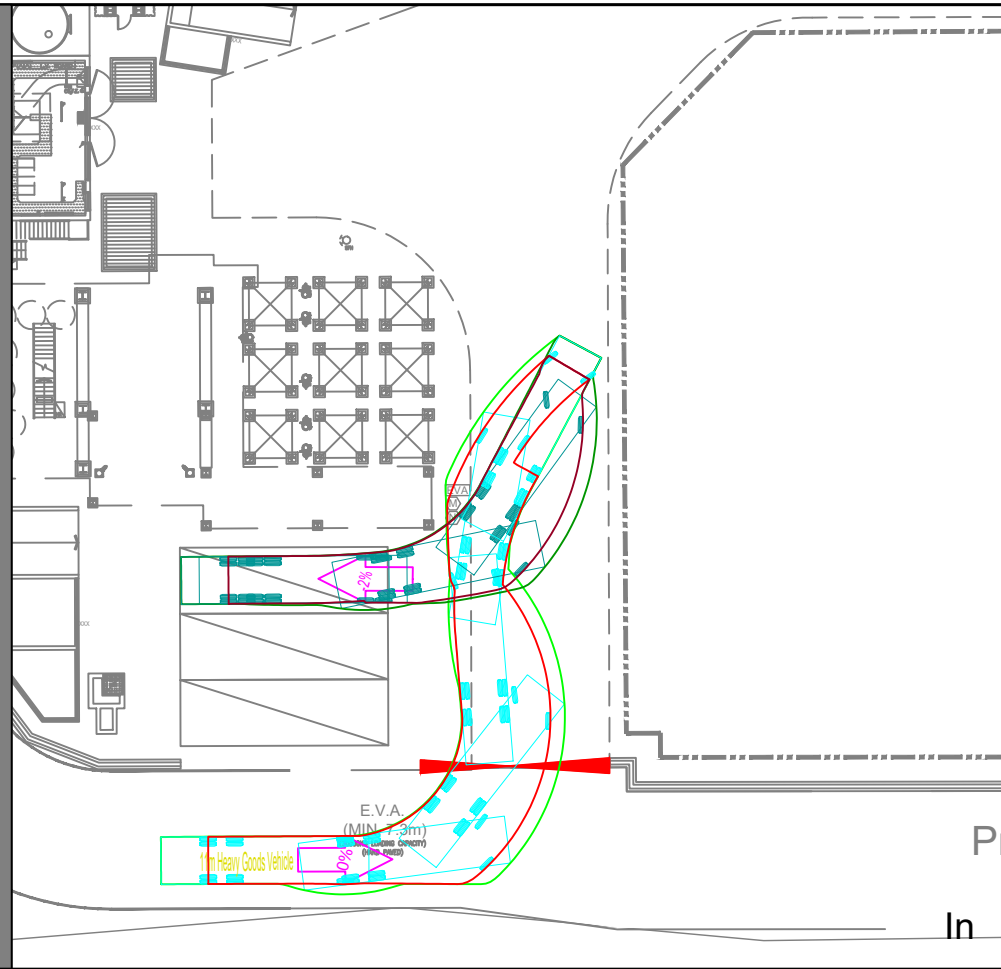
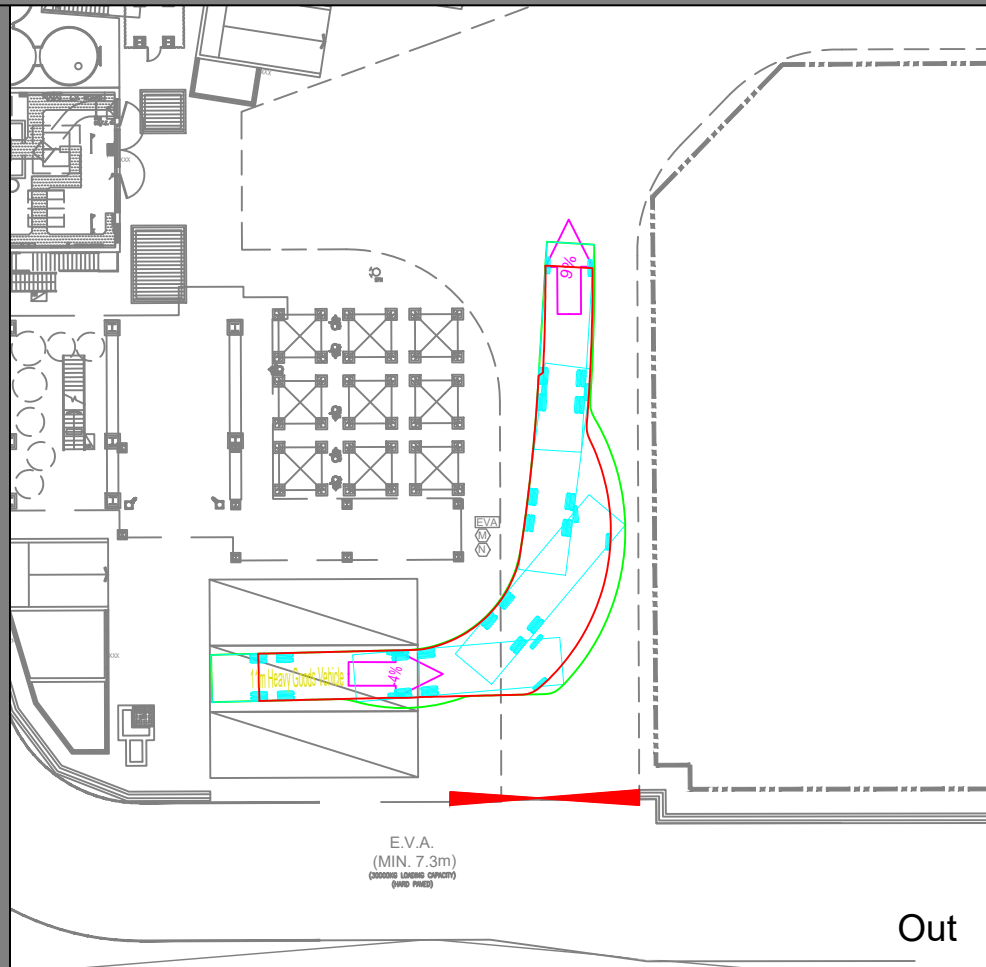
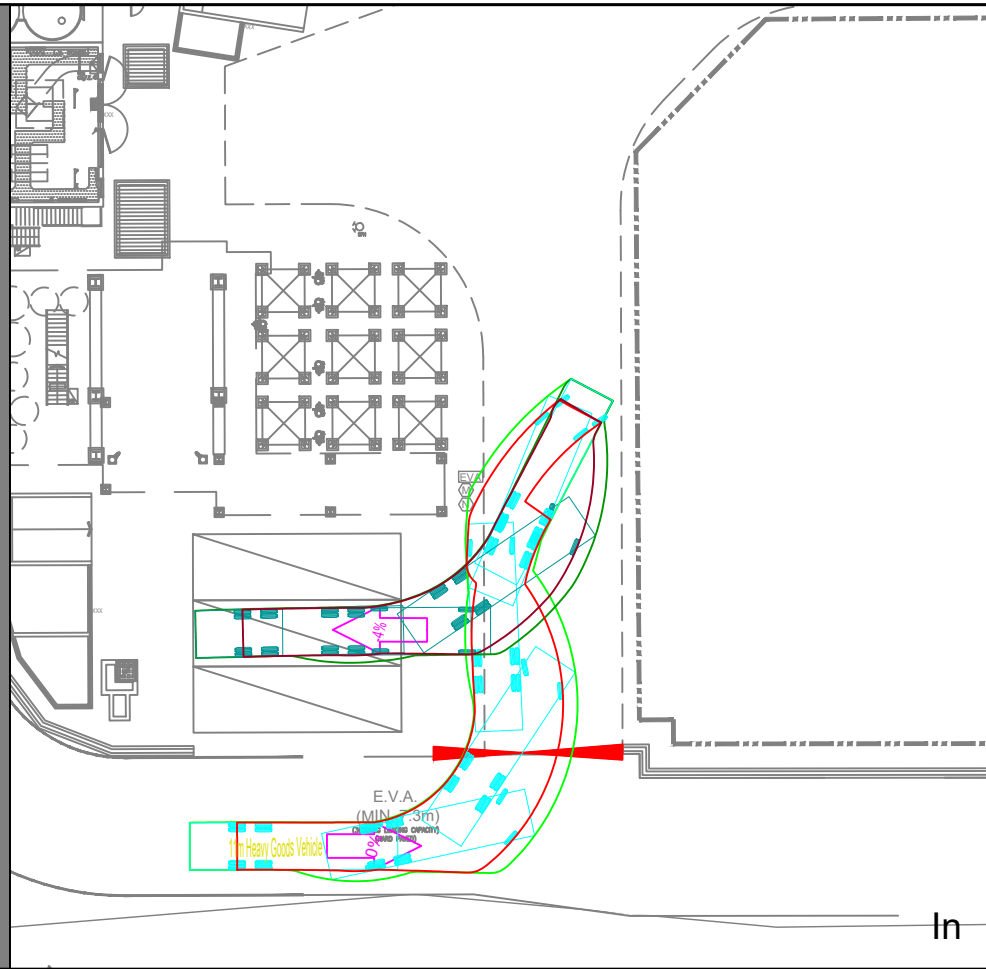
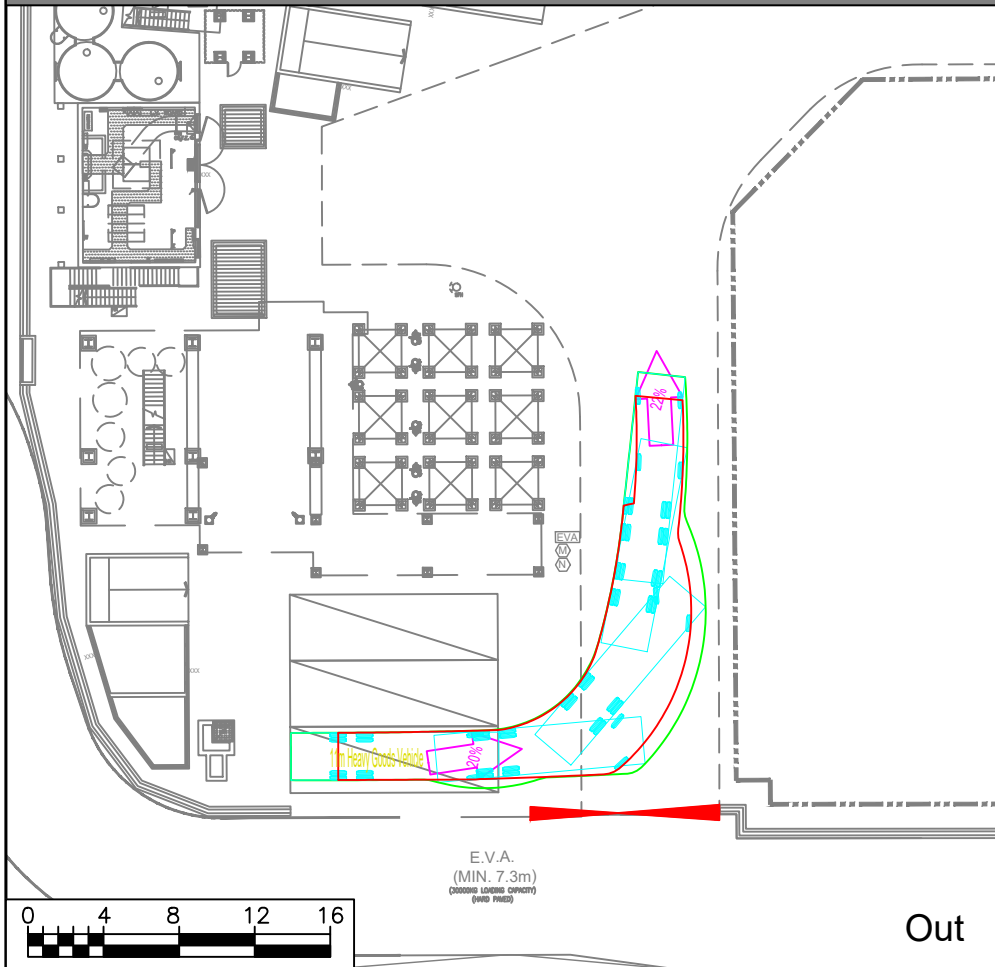
Project Title Proposed Temporary Concrete Batching Plant for a Period of 5 Years in Industrial (Gropu D) Zone, Lot 153 (Part) in DD77, Ping Che Swept Path Assessments 16m Articulate Vehicle (Phase 1)	
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OZZO TECHNOLOGY	
Project No. 82758	Rev. -
Dwg No. GF-SP2	

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Date 28/02/2025		Scale 1:500		Project Title Proposed Temporary Concrete Batching Plant for a Period of 5 Years in Industrial (Gropu D) Zone, Lot 153 (Part) in DD77, Ping Che Swept Path Assessments 16m Articulate Vehicle (Phase 1)			
						Project No. 82758	Rev.
						Dwg No. GF-SP3	-

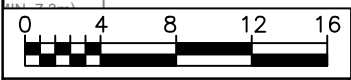
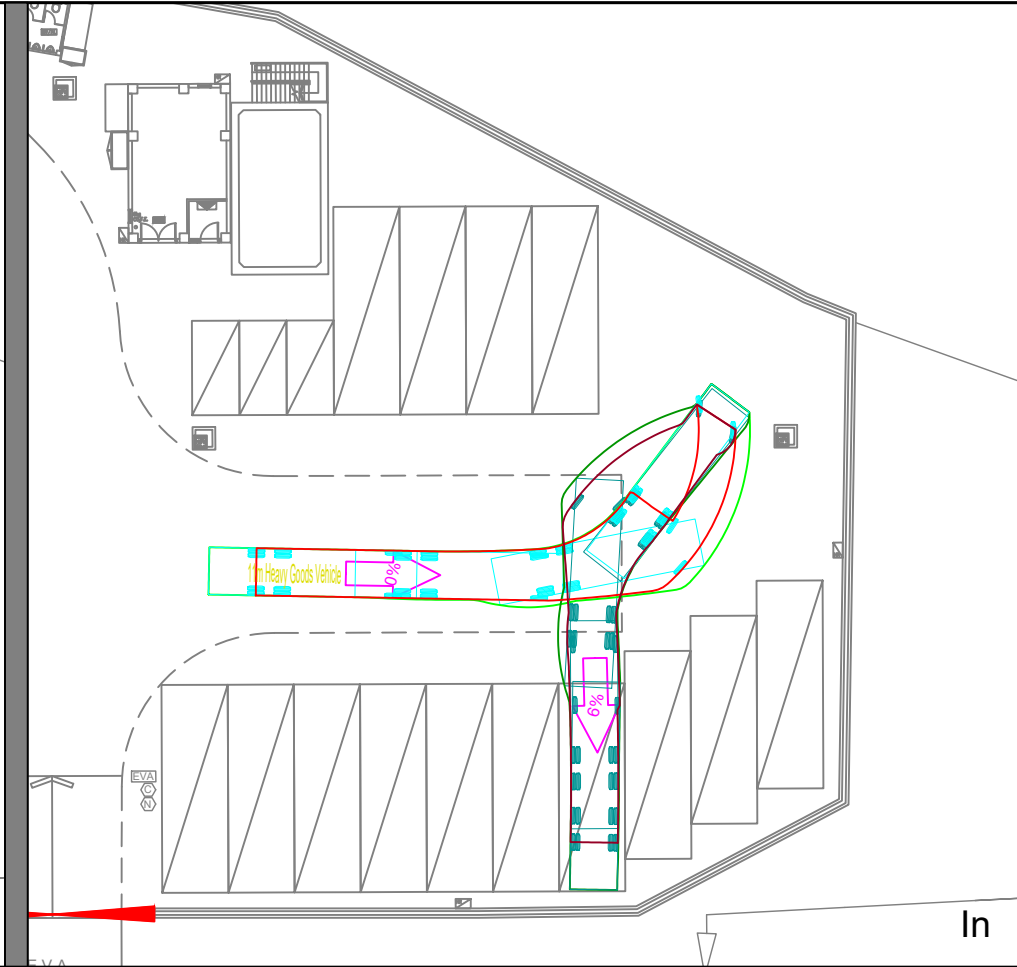
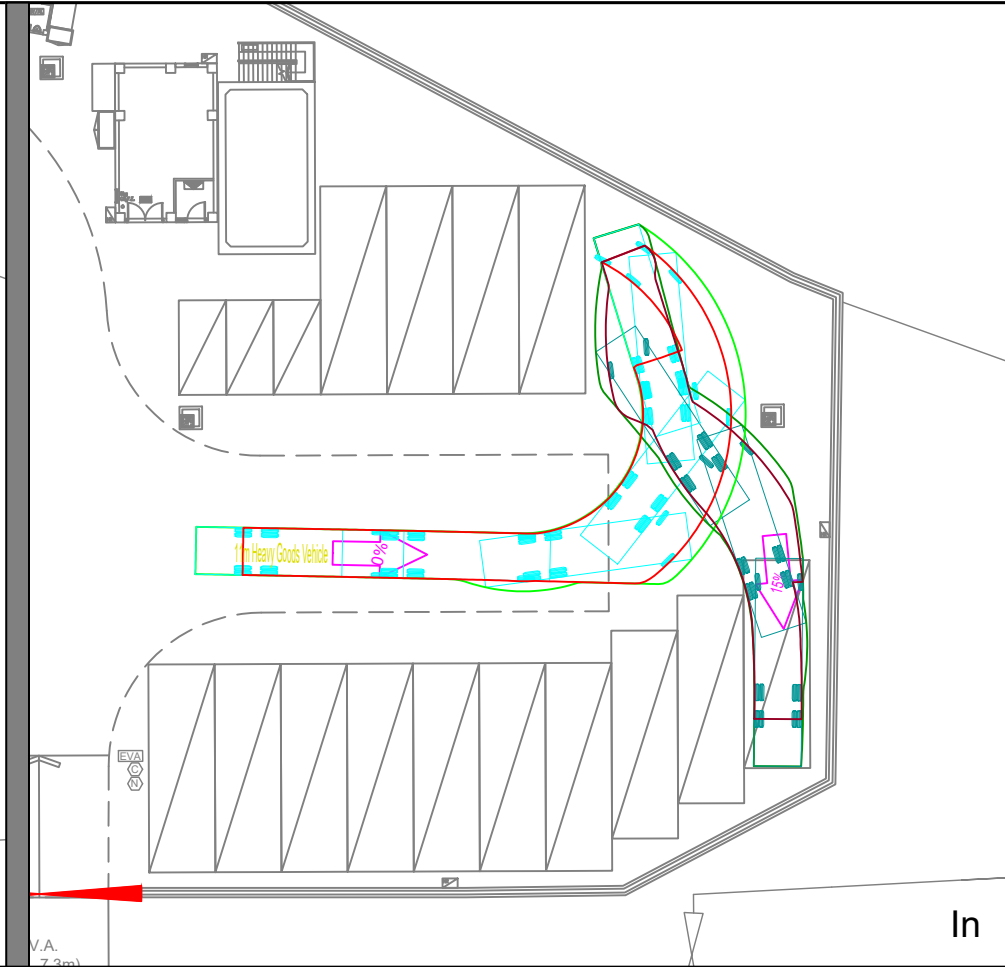


Date 28/02/2025	Scale 1:400

Project Title	<u>Proposed Temporary Concrete Batching Plant for a Period of 5 Years</u> <u>in Industrial (Gropu D) Zone, Lot 153 (Part) in DD77, Ping Che</u> Swept Path Assessments 11m Heavy Goods Vehicle (Phase 1)
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Project No. 82758		Rev.
Dwg No. GF-SP4		-

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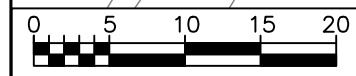
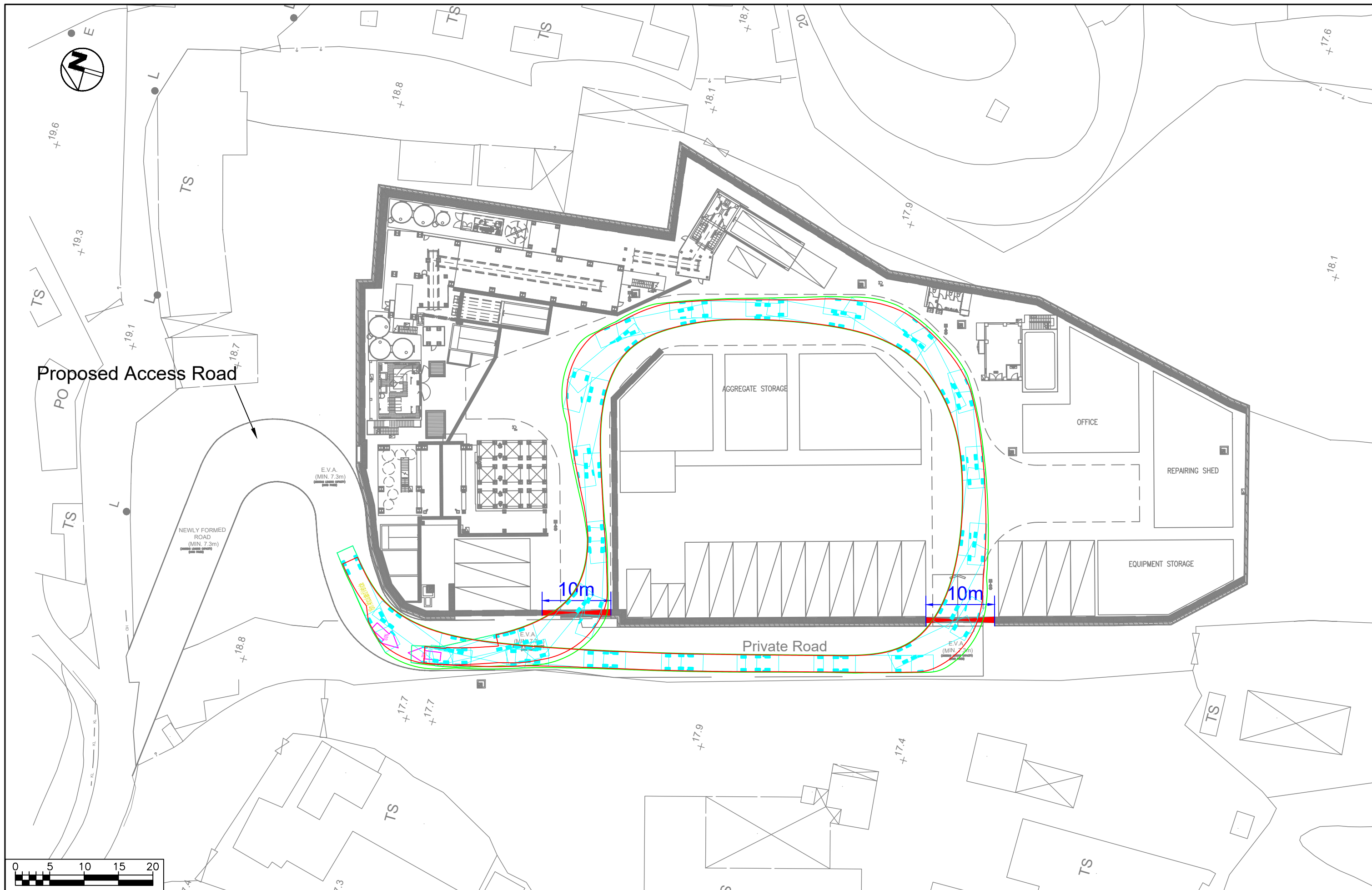
Project Title


Proposed Temporary Concrete Batching Plant for a Period of 5 Years
in Industrial (Gropu D) Zone, Lot 153 (Part) in DD77, Ping Che

Swept Path Assessments 11m Heavy Goods Vehicle (Phase 1)

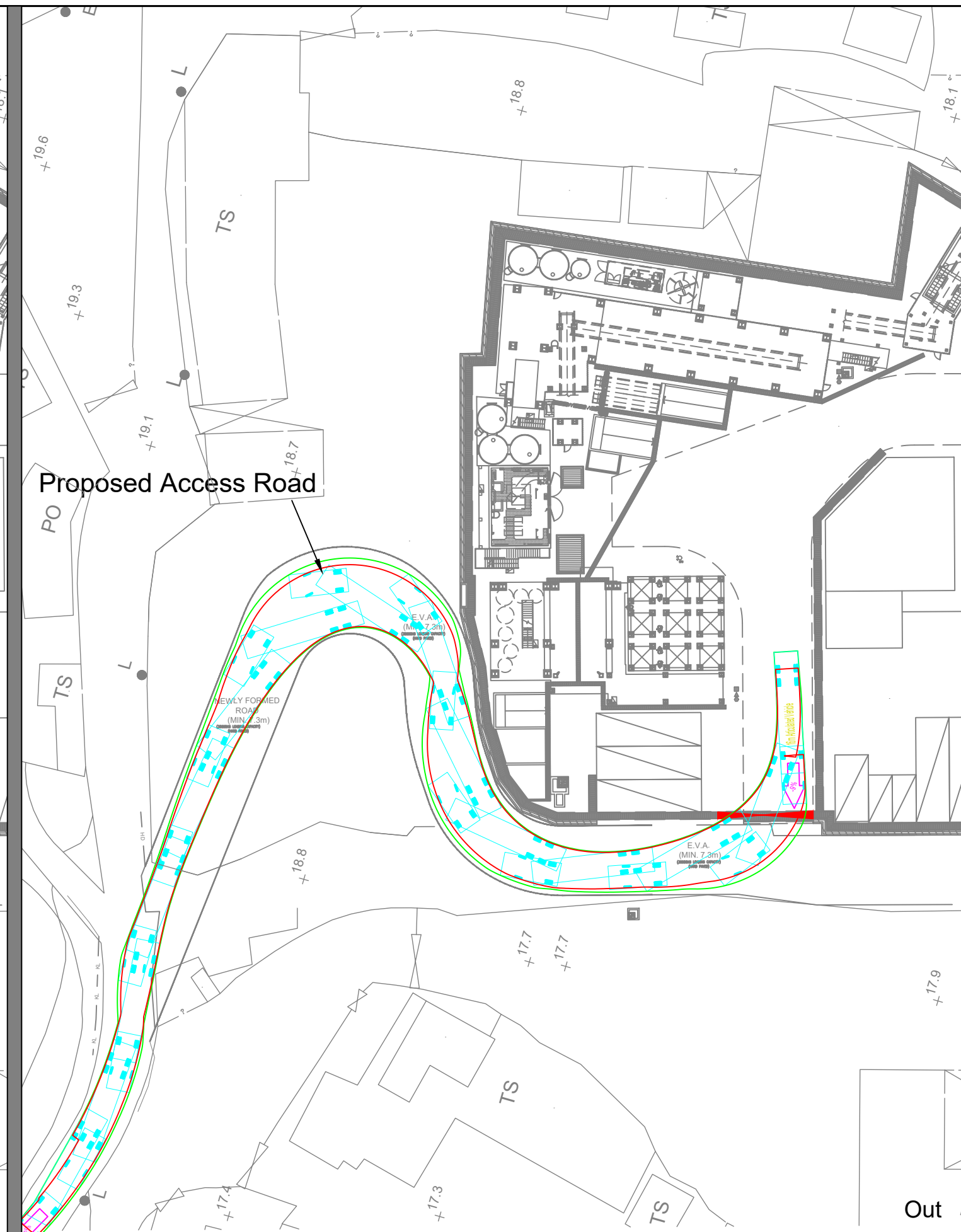
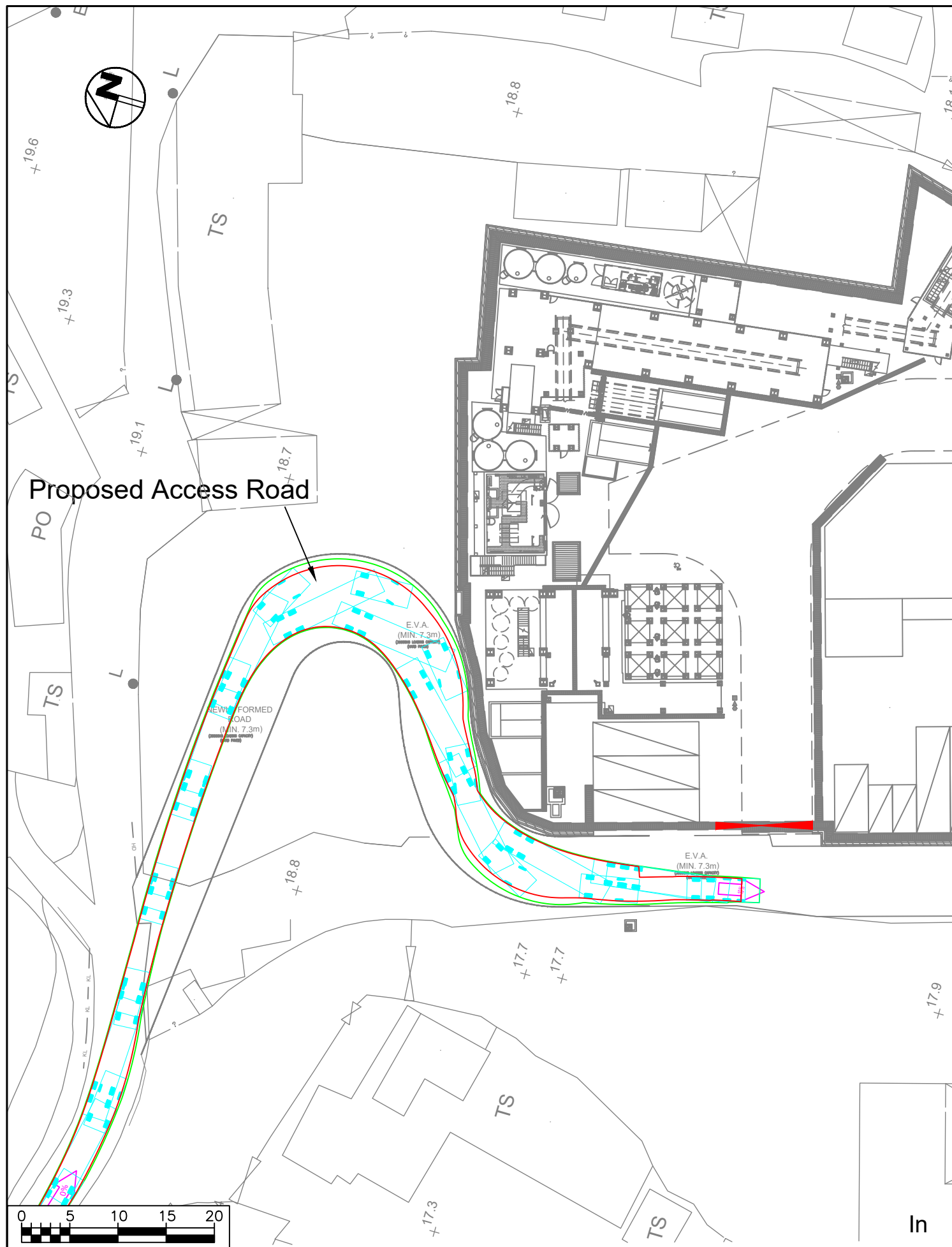
Project No. 82758	Rev. -
Dwg No. GF-SP5	

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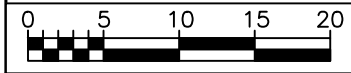
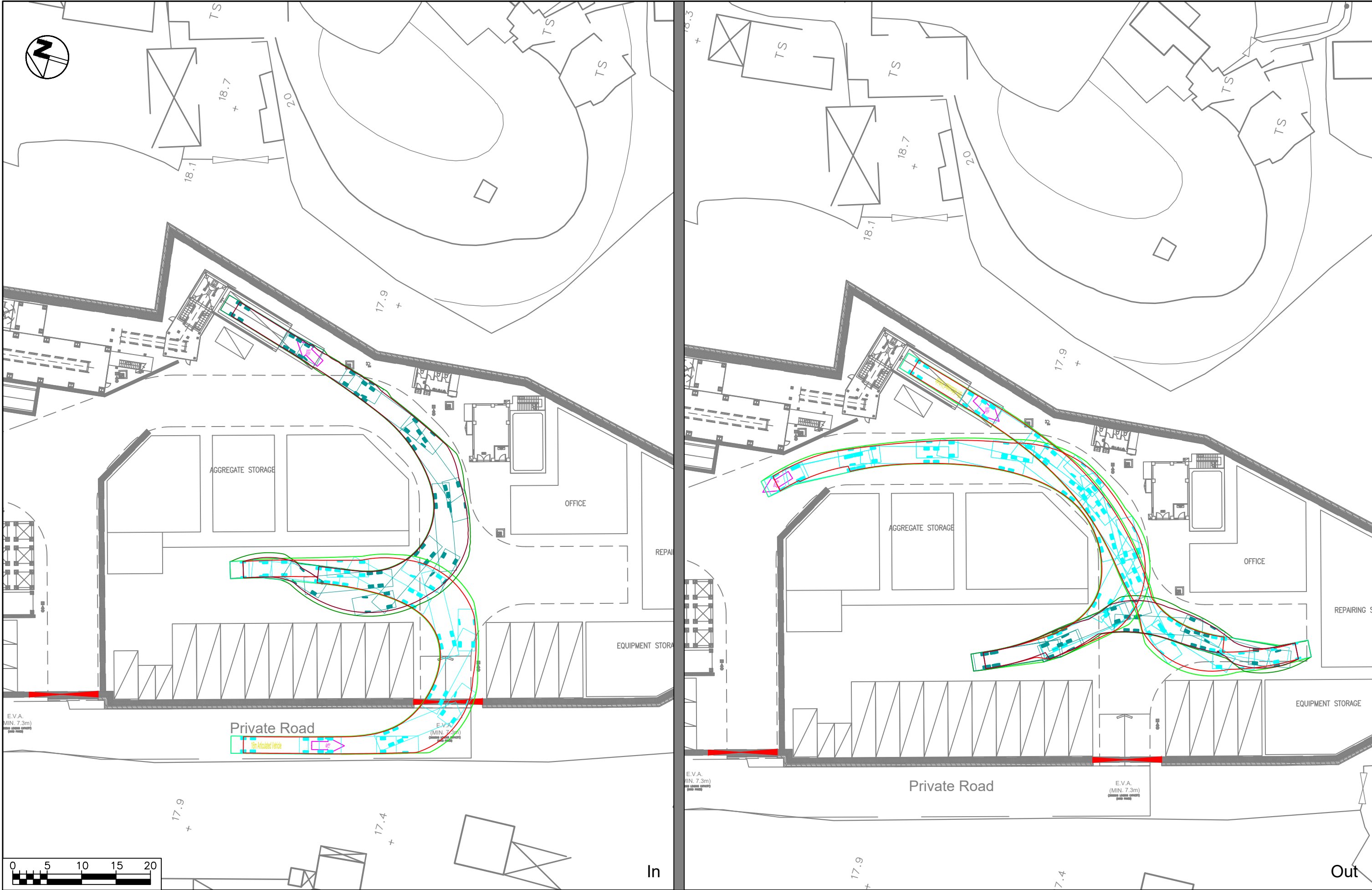
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Date	Scale				
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				Dwg No. GF-SP1	-

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Date 06/03/2025		Scale 1:500	Project Title Proposed Temporary Concrete Batching Plant for a Period of 5 Years in Industrial (Gropu D) Zone, Lot 153 (Part) in DD77, Ping Che Swept Path Assessments 16m Articulate Vehicle (Phase1+2)		OZZO TECHNOLOGY	
					Project No. 82758	Rev.
					Dwg No. GF-SP2	

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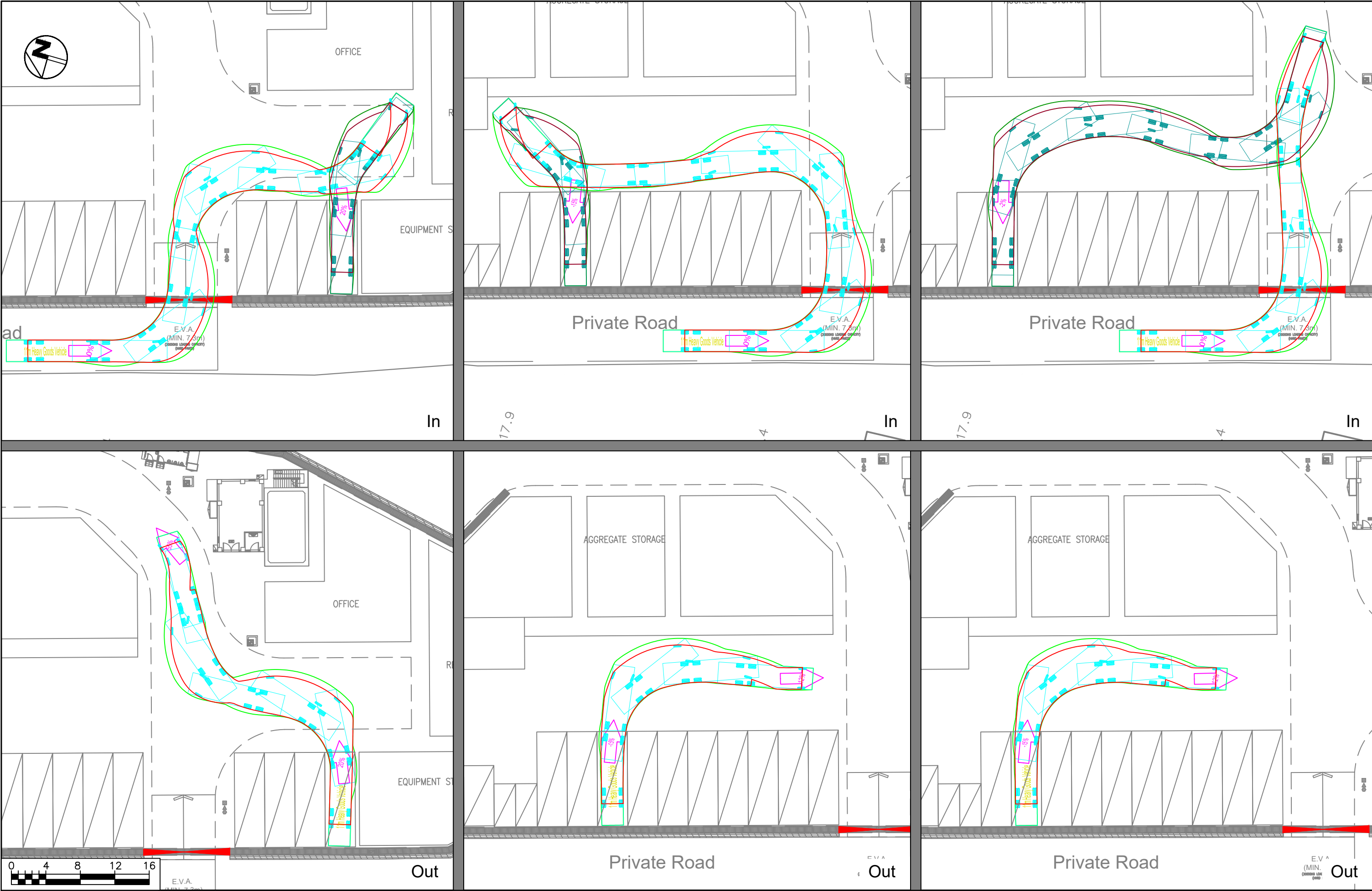


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Date	Scale
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Proposed Temporary Concrete Batching Plant for a Period of 5 Years
in Industrial (Gropu D) Zone, Lot 153 (Part) in DD77, Ping Che
Swept Path Assessments 16m Articulate Vehicle (Phase 1+2)

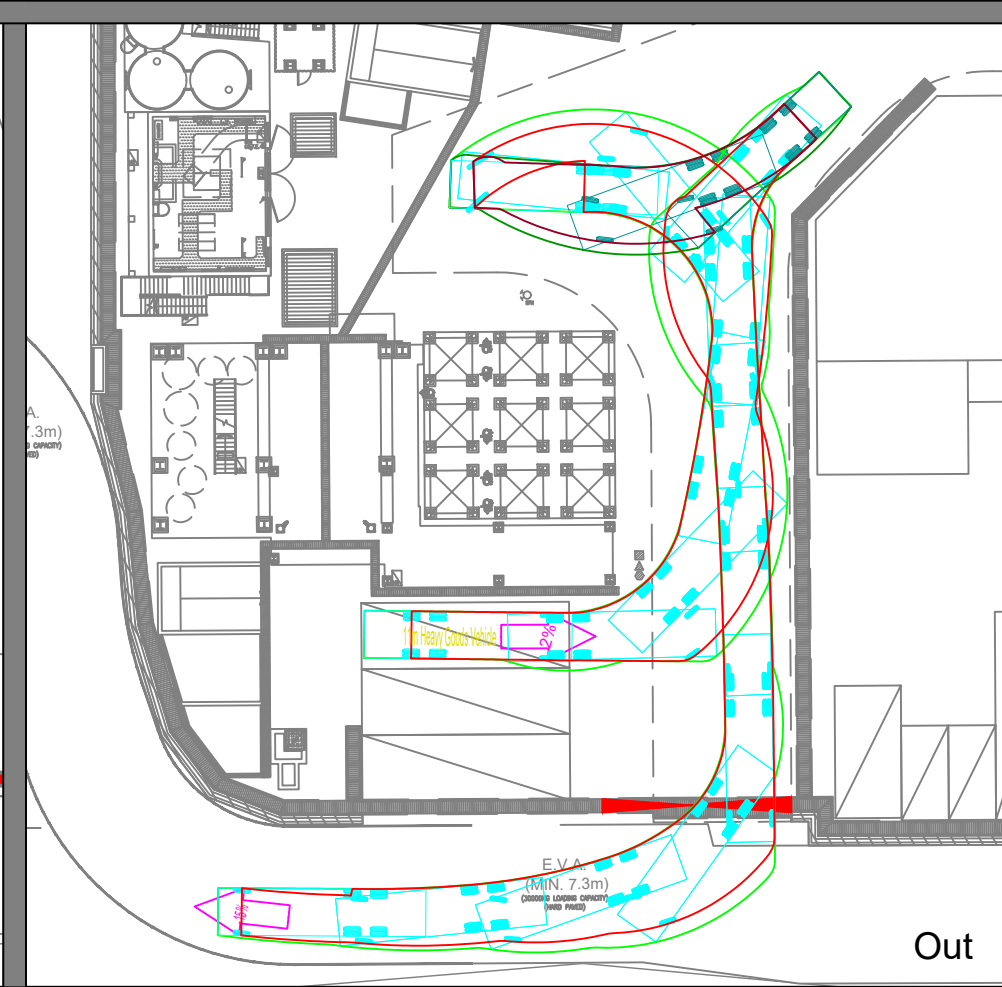
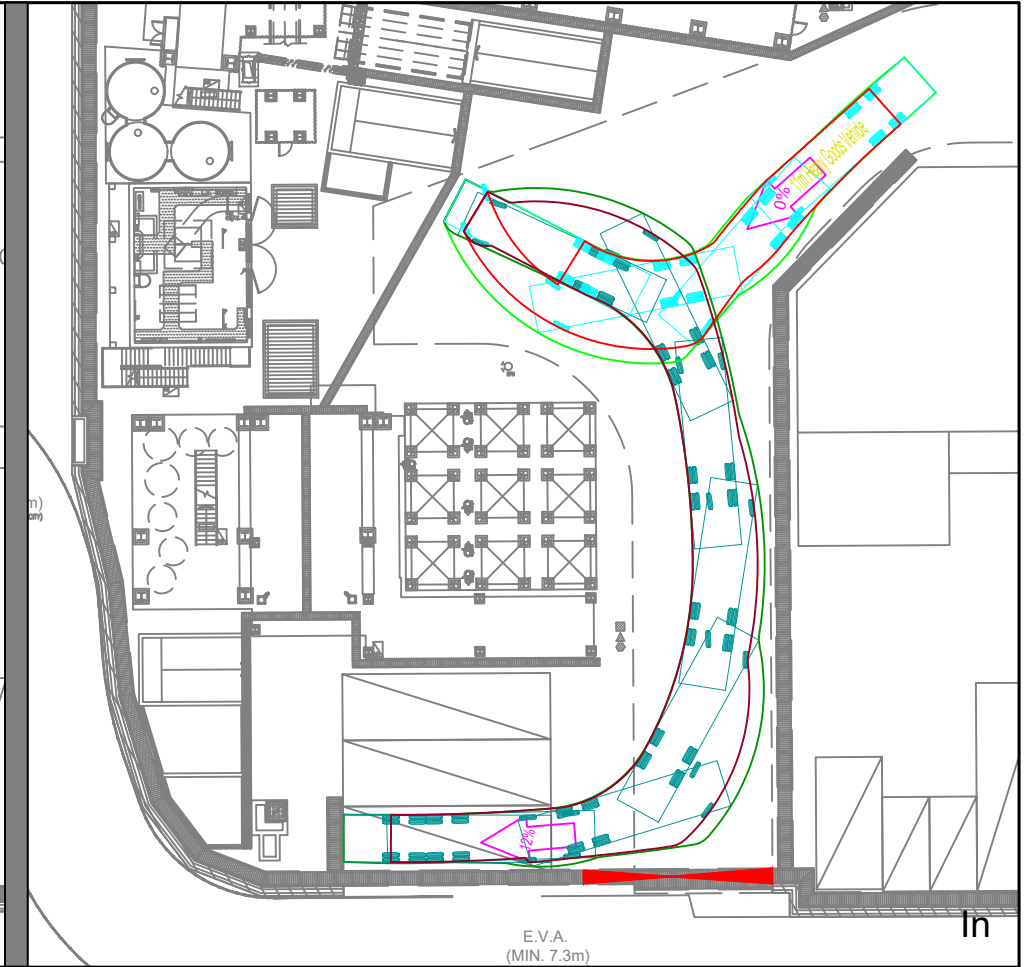
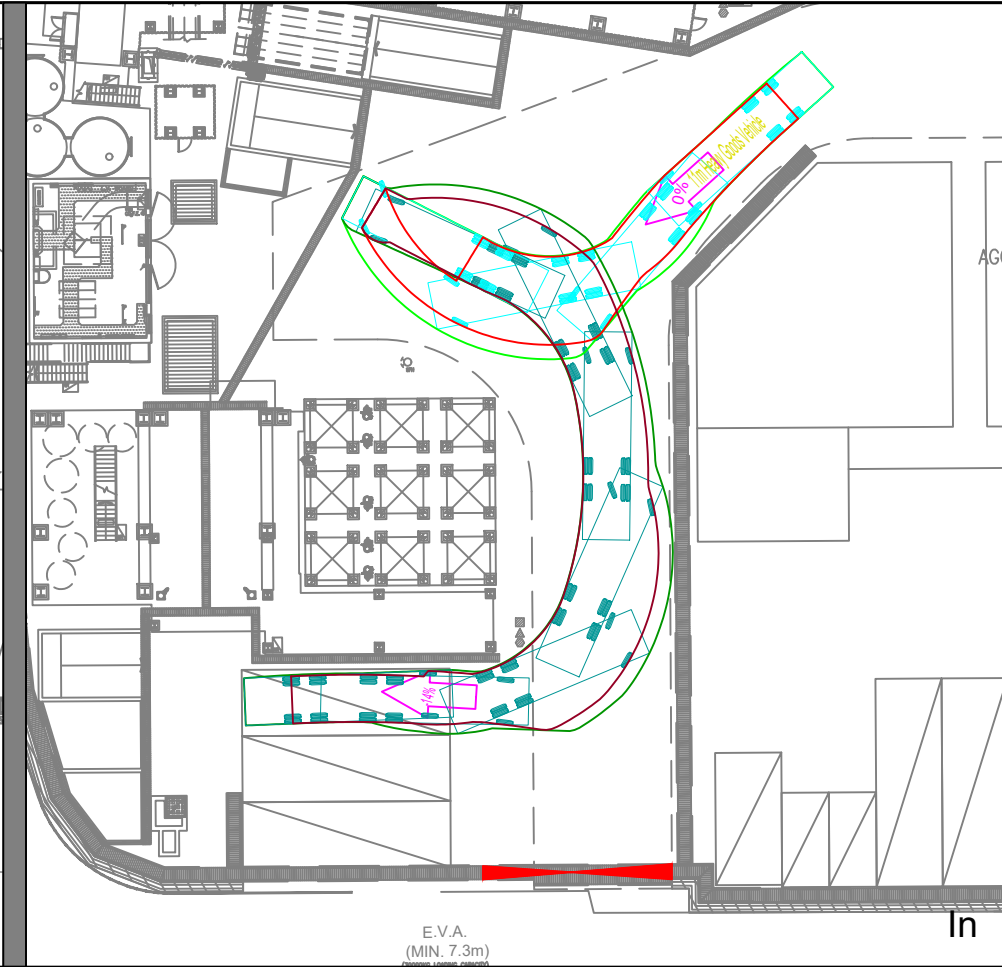
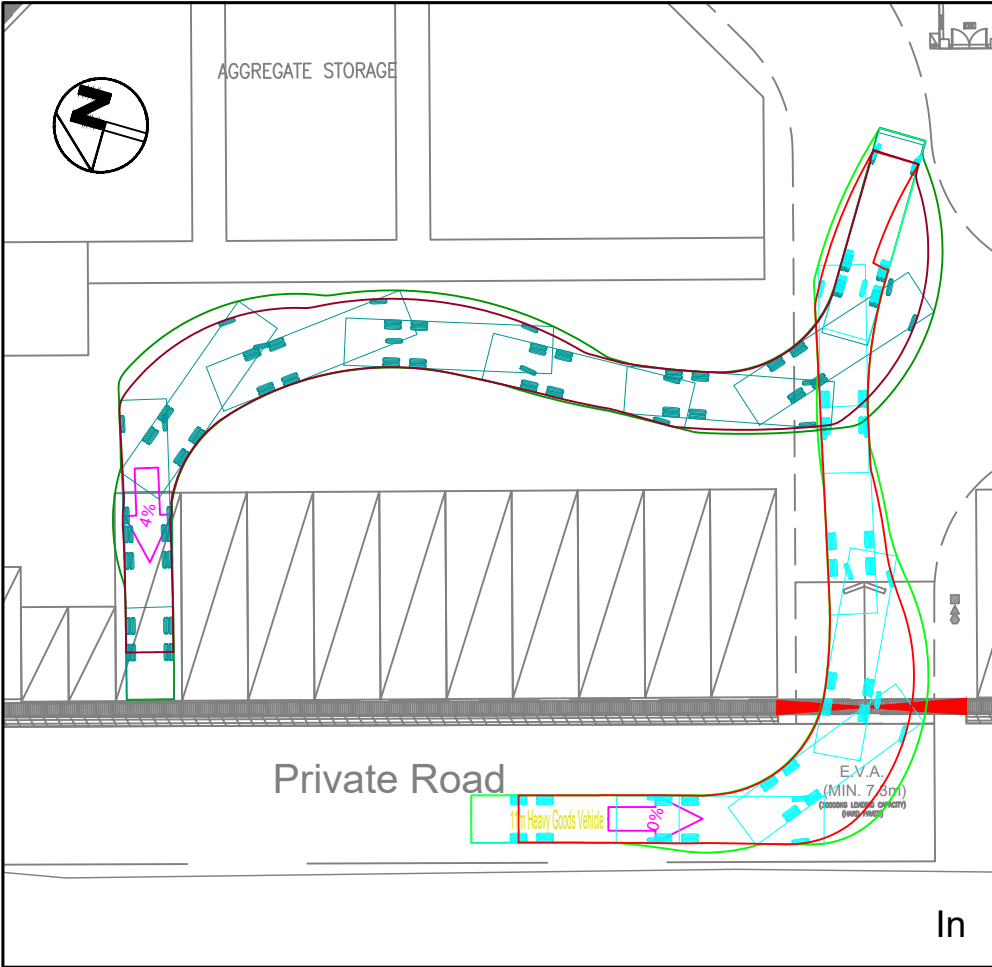
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Dwg No. GF-SP3	

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Date 17/02/2025		Scale 1:400	Project Title Proposed Temporary Concrete Batching Plant for a Period of 5 Years in Industrial (Gropu D) Zone, Lot 153 (Part) in DD77, Ping Che		Project No. 82758		Rev.	
			Swept Path Assessments 11m Heavy Goods Vehicle (Phase 1+2)		Dwg No. GF-SP4		OZZO TECHNOLOGY	

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Proposed Temporary Concrete Batching Plant for a Period of 5 Years in Industrial (Gropu D) Zone, Lot 153 (Part) in DD77, Ping Che	
Swept Path Assessments 11m Heavy Goods Vehicle (Phase 1+2)	

OZZO TECHNOLOGY	
Project No. 82758	Rev.
Dwg No. GF-SP5	

Appendix B

2025 Junction Calculations

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Section 16 Planning Application for Proposed Temporary Concrete Batching Plant for a Period of 5 Years in Industrial (Group D) Zone, Lot 153 (Part) in DD77, Ping Che	2025_AM	PROJECT NO.: 82758	PREPARED BY:	TC	Feb-25
J1: Ping Yuen Road / Ping Che Road (Southern)		FILENAME :	CHECKED BY:	DP	Feb-25
2025 Observed Weekday AM Peak Hour Traffic Flows		J1_ Ping Yuen Road Road_Ping Che Road (Southern)_P.xls	REVIEWED BY:	SC	Feb-25

Diagram illustrating the junction layout and traffic flows. The diagram shows Ping Che Road (ARM C) and Ping Che Road (ARM A) with traffic flows. Ping Che Road Roundabout (ARM B) is also shown. Traffic flows are indicated by arrows and numbers: 307 for the main flow, 201 for the roundabout flow, 168 for the roundabout flow, and 28 for the roundabout flow. A north arrow is present.

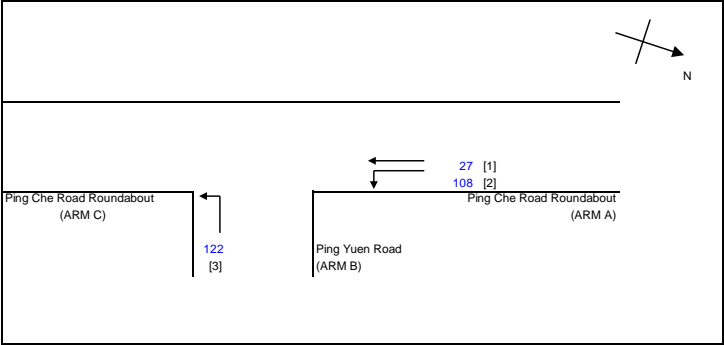
NOTES : (GEOMETRIC INPUT DATA)

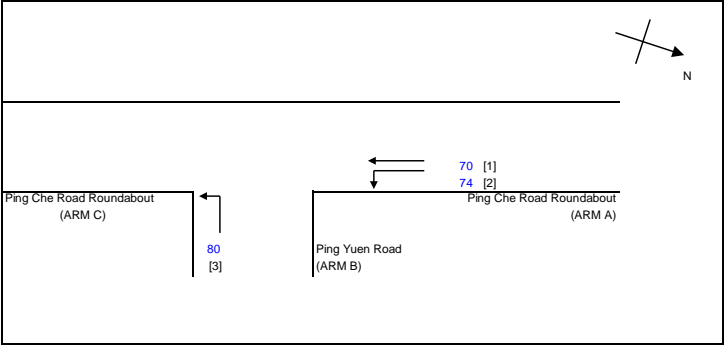
W = MAJOR ROAD WIDTH
W cr = CENTRAL RESERVE WIDTH
W b-a = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D = STREAM-SPECIFIC B-A
E = STREAM-SPECIFIC B-C
F = STREAM-SPECIFIC C-B
Y = (1-0.0345W)

GEOMETRIC DETAILS:		GEOMETRIC FACTORS :		THE CAPACITY OF MOVEMENT :		COMPARISION OF DESIGN FLOW TO CAPACITY:	
MAJOR ROAD (ARM A)		D = 0.89024		Q b-a = 461		DFC b-a = 0.0607	
W = 6.9 (metres)		E = 1.10662		Q b-c = 763		DFC b-c = 0.2202	
W cr = 0 (metres)		F = 0.87942		Q c-b = 606		DFC c-b = 0.0000	
q a-b = 0 (pcu/hr)		Y = 0.76178		Q b-ac = 698		DFC b-ac = 0.2809	
q a-c = 201 (pcu/hr)		F for (Qb-ac) = 0.85714		TOTAL FLOW = 704 (PCU/HR)			
MAJOR ROAD (ARM C)							
W c-b = 3.5 (metres)							
Vr c-b = 0 (metres)							
q c-a = 307 (pcu/hr)							
q c-b = 0 (pcu/hr)							
MINOR ROAD (ARM B)							
W b-a = 3.0 (metres)							
W b-c = 5.0 (metres)							
Vl b-a = 100 (metres)							
Vr b-a = 95 (metres)							
Vr b-c = 100 (metres)							
q b-a = 28 (pcu/hr)							
q b-c = 168 (pcu/hr)							

CRITICAL DFC

= 0.28

OZZO TECHNOLOGY (HK) LIMITED		PRIORITY JUNCTION CALCULATION		INITIALS	DATE																																
Section 16 Planning Application for Proposed Temporary Concrete Batching Plant for a Period of 5 Years in Industrial (Group D) Zone, Lot 153 (Part) in DD77, Ping Che		2025_AM	PROJECT NO.: 82758	PREPARED BY: TC	Feb-25																																
J2: Ping Yuen Road / Ping Che Road (Northern)			FILENAME :	CHECKED BY: DP	Feb-25																																
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Section 16 Planning Application for Proposed Temporary Concrete Batching Plant for a Period of 5 Years in Industrial (Group D) Zone, Lot 153 (Part) in DD77, Ping Che	2025_AM	PROJECT NO.: 82758	PREPARED BY:	TC	Mar-25
J3: Ping Yuen Road / Access Road		FILENAME :	CHECKED BY:	DP	Mar-25
2025 Observed Weekday AM Peak Hour Traffic Flows		J3_Ping Yuen Road Road_Access Road_P_20250226.xls	REVIEWED BY:	SC	Mar-25

Diagram illustrating the junction layout and traffic flow data:

- Ping Yuen Road (ARM C):** Inflows from the left: 53 (1 lane), 62 (1 lane). Outflows to the right: 56 (3 lanes), 6 (3 lanes).
- Access Road (ARM B):** Inflow from the left: 63 (1 lane), 6 (2 lanes).
- Ping Yuen Road (ARM A):** Outflow to the right: 63 (1 lane), 6 (2 lanes).

NOTES : (GEOMETRIC INPUT DATA)

- W = MAJOR ROAD WIDTH
- W cr = CENTRAL RESERVE WIDTH
- W b-a = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
- W b-c = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
- W c-b = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
- Vi b-a = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
- Vr b-a = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
- Vr b-c = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
- Vr c-b = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
- D = STREAM-SPECIFIC B-A
- E = STREAM-SPECIFIC B-C
- F = STREAM-SPECIFIC C-B
- Y = (1-0.0345W)

GEOMETRIC DETAILS:	GEOMETRIC FACTORS :	THE CAPACITY OF MOVEMENT :	COMPARISION OF DESIGN FLOW TO CAPACITY:
MAJOR ROAD (ARM A) W = 5.3 (metres) W cr = 0 (metres) q a-b = 6 (pcu/hr) q a-c = 63 (pcu/hr)	D = 0.86464 E = 0.93901 F = 0.61552 Y = 0.81888	Q b-a = 494 Q b-c = 681 Q c-b = 446 Q b-ac = 657	DFC b-a = 0.0121 DFC b-c = 0.0822 DFC c-b = 0.1390 DFC b-ac = 0.0944
MAJOR ROAD (ARM C) W c-b = 0.0 (metres) Vr c-b = 50 (metres) q c-a = 53 (pcu/hr) q c-b = 62 (pcu/hr)	F for (Qb-ac) = 0.90323	TOTAL FLOW = 246 (PCU/HR)	
MINOR ROAD (ARM B) W b-a = 4 (metres) W b-c = 4 (metres) Vi b-a = 18 (metres) Vr b-a = 19 (metres) Vr b-c = 19 (metres) q b-a = 6 (pcu/hr) q b-c = 56 (pcu/hr)			

CRITICAL DFC

= 0.14

Appendix C

2028 Junction Calculations

OZZO TECHNOLOGY (HK) LIMITED		PRIORITY JUNCTION CALCULATION		INITIALS	DATE
Section 16 Planning Application for Proposed Temporary Concrete Batching Plant for a Period of 5 Years in Industrial (Group D) Zone, Lot 153 (Part) in DD77, Ping Che		2028 Ref_AM	PROJECT NO.: 82758	PREPARED BY:	TC Feb-25
J1: Ping Yuen Road / Ping Che Road (Southern)			FILENAME :	CHECKED BY:	DP Feb-25
2028 Weekday Reference AM Peak Hour Traffic Flows			J1_Ping Yuen Road Road_Ping Che Road (Southern)_P.xls	REVIEWED BY:	SC Feb-25

Section 16 Planning Application for Proposed Temporary Concrete Batching Plant for a Period of 5 Years in Industrial (Group D) Zone, Lot 153 (Part) in DD77, Ping Che

J1: Ping Yuen Road / Ping Che Road (Southern)

2028 Weekday Reference AM Peak Hour Traffic Flows

PRIORITY JUNCTION CALCULATION

INITIALS

DATE _____

2028 Ref AM

PROJECT NO.: 82758

PREPARED BY:

TC

Feb-25

FILENAME :

CHECKED BY:

DP

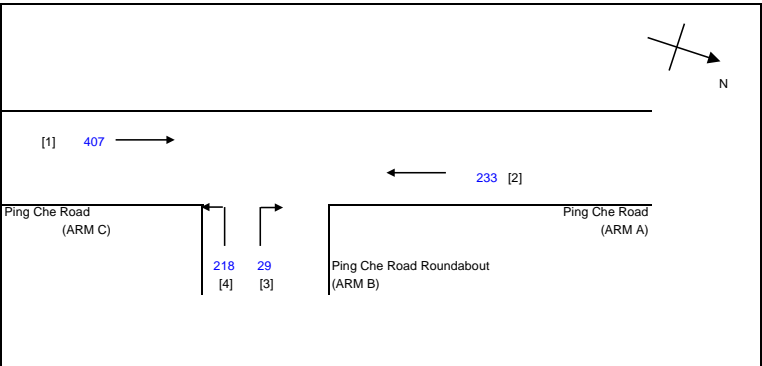
Feb-25

J1_Ping Yuen Road Road_Ping Che Road (Southern)_P.xls

REVIEWED BY:

SC

Feb-25



NOTES : (GEOMETRIC INPUT DATA)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

D	=	0.89024
E	=	1.10662
F	=	0.87942
Y	=	0.76178

F for (Qb-ac) = 0.88259

MAJOR ROAD (ARM C)

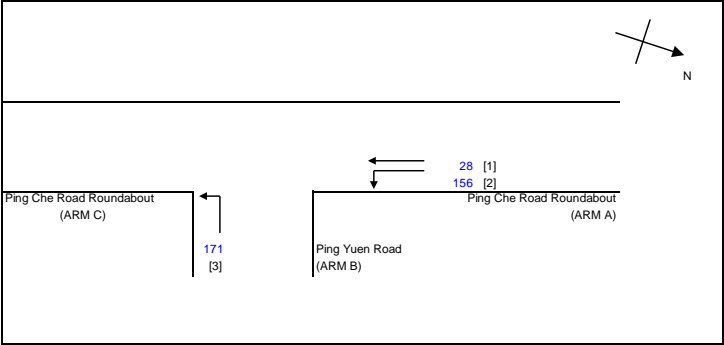
MINOR ROAD (ARM B)

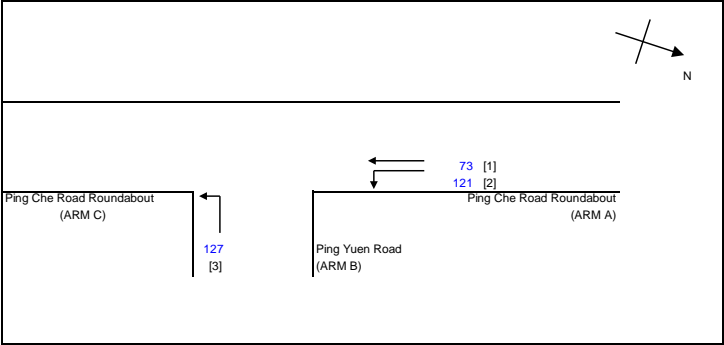
Q b-a =	437		
Q b-c =	753	Q b-c (O) =	740.5
Q c-b =	598		
Q b-ac =	694		

TOTAL FLOW = 887 (PCU/HR)

DFC b-a	=	0.0664
DFC b-c	=	0.2895
DFC c-b	=	0.0000
DFC b-ac	=	0.3559

CRITICAL DFC = 0.36

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OZZO TECHNOLOGY (HK) LIMITED		PRIORITY JUNCTION CALCULATION		INITIALS	DATE
Section 16 Planning Application for Proposed Temporary Concrete Batching Plant for a Period of 5 Years in Industrial (Group D) Zone, Lot 153 (Part) in DD77, Ping Che		2028 Ref_PM	PROJECT NO.: 82758	PREPARED BY: TC	Mar-25
J3: Ping Yuen Road / Access Road			FILENAME :	CHECKED BY: DP	Mar-25
2028 Weekday Reference PM Peak Hour Traffic Flows			J3_ Ping Yuen Road Road_Access Road_P_20250226.xls	REVIEWED BY: SC	Mar-25

Diagram showing the junction layout and traffic flows. Ping Yuen Road (ARM C) flows are 40 and 75. Ping Yuen Road (ARM A) flows are 46 and 1. Access Road (ARM B) flows are 73 and 8. A north arrow is present.

NOTES : (GEOMETRIC INPUT DATA)

W = MAJOR ROAD WIDTH
W cr = CENTRAL RESERVE WIDTH
W b-a = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D = STREAM-SPECIFIC B-A
E = STREAM-SPECIFIC B-C
F = STREAM-SPECIFIC C-B
Y = (1-0.0345W)

GEOMETRIC DETAILS:		GEOMETRIC FACTORS :		THE CAPACITY OF MOVEMENT :		COMPARISION OF DESIGN FLOW TO CAPACITY:	
MAJOR ROAD (ARM A)		D = 0.86464		Q b-a = 496		DFC b-a = 0.0161	
W = 5.3 (metres)		E = 0.93901		Q b-c = 687 Q b-c (O) = 684.2		DFC b-c = 0.1063	
W cr = 0 (metres)		F = 0.61552		Q c-b = 450		DFC c-b = 0.1667	
q a-b = 1 (pcu/hr)		Y = 0.81888		Q b-ac = 662		DFC b-ac = 0.1224	
q a-c = 46 (pcu/hr)		F for (Qb-ac) = 0.90123		TOTAL FLOW = 243 (PCU/HR)			
MAJOR ROAD (ARM C)							
W c-b = 0.0 (metres)							
Vr c-b = 50 (metres)							
q c-a = 40 (pcu/hr)							
q c-b = 75 (pcu/hr)							
MINOR ROAD (ARM B)							
W b-a = 4 (metres)							
W b-c = 4 (metres)							
Vl b-a = 18 (metres)							
Vr b-a = 19 (metres)							
Vr b-c = 19 (metres)							
q b-a = 8 (pcu/hr)							
q b-c = 73 (pcu/hr)							

CRITICAL DFC

= 0.17

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J1: Ping Yuen Road / Ping Che Road (Southern)		FILENAME :	CHECKED BY:	DP	Feb-25
2028 Weekday Design AM Peak Hour Traffic Flows		J1_ Ping Yuen Road Road_Ping Che Road (Southern)_P.xls	REVIEWED BY:	SC	Feb-25

Diagram of Ping Che Road Roundabout (ARM B) showing traffic flows. Arm C (left) has flow 377. Arm A (right) has flow 247. Arm B (bottom) has flows 161 and 28. A north arrow is in the top right corner.

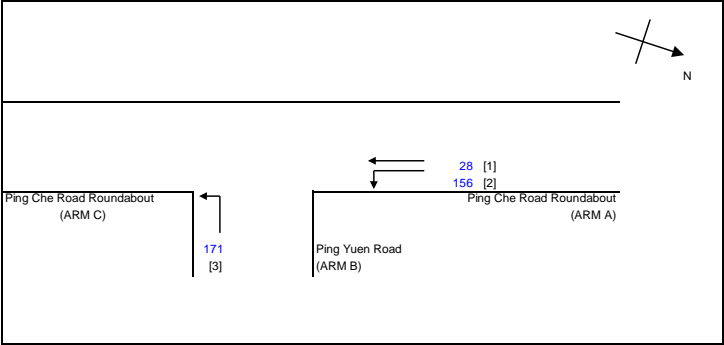
NOTES : (GEOMETRIC INPUT DATA)

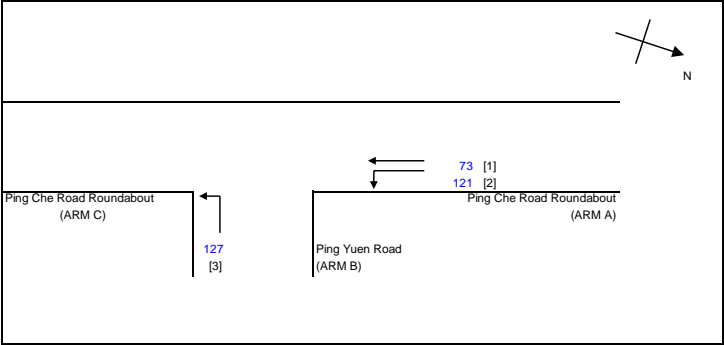
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D = STREAM-SPECIFIC B-A
E = STREAM-SPECIFIC B-C
F = STREAM-SPECIFIC C-B
Y = (1-0.0345W)

GEOMETRIC DETAILS:		GEOMETRIC FACTORS :		THE CAPACITY OF MOVEMENT :		COMPARISION OF DESIGN FLOW TO CAPACITY:	
MAJOR ROAD (ARM A)		D = 0.89024		Q b-a = 439		DFC b-a = 0.0638	
W = 6.9 (metres)		E = 1.10662		Q b-c = 749 Q b-c (O) = 737.1		DFC b-c = 0.2150	
W cr = 0 (metres)		F = 0.87942		Q c-b = 595		DFC c-b = 0.0000	
q a-b = 0 (pcu/hr)		Y = 0.76178		Q b-ac = 678		DFC b-ac = 0.2787	
q a-c = 247 (pcu/hr)		F for (Qb-ac) = 0.85185		TOTAL FLOW = 813 (PCU/HR)			
MAJOR ROAD (ARM C)							
W c-b = 3.5 (metres)							
Vr c-b = 0 (metres)							
q c-a = 377 (pcu/hr)							
q c-b = 0 (pcu/hr)							
MINOR ROAD (ARM B)							
W b-a = 3.0 (metres)							
W b-c = 5.0 (metres)							
Vl b-a = 100 (metres)							
Vr b-a = 95 (metres)							
Vr b-c = 100 (metres)							
q b-a = 28 (pcu/hr)							
q b-c = 161 (pcu/hr)							

CRITICAL DFC

= 0.28

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