

**Mines Division Practice Note No. 1 (MDPN 1)
Delivery of Blasting Explosives and Related Safety and Security Procedures**

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1. SCOPE

- 1.1 This Practice Note is intended primarily as information for blasting contractors who use the Government explosives delivery service provided by the Mines Division of the Geotechnical Engineering Office (GEO), Civil Engineering and Development Department (CEDD). It also provides useful information to Project Offices, Developers and their Consultants who wish to use explosives for rock excavation in their projects.
- 1.2 Any feedback on the content of this Practice Note should be directed to the Chief Geotechnical Engineer/Mines of the GEO, CEDD.

2. RELATED DOCUMENTS

- 2.1 Dangerous Goods Ordinance, Cap. 295
- 2.2 Dangerous Goods (General) Regulations, Cap. 295B
- 2.3 Dangerous Goods (Government Explosives Depots) Regulations, Cap. 295D

3. DELIVERY OF EXPLOSIVES

- 3.1 The Kau Shat Wan Government Explosives Depot is situated at a remote location on Lantau Island, with only marine access. As conveyance of explosives across the harbour using road tunnels is prohibited by law, explosives are delivered daily in the morning by Government explosives delivery vessel to designated barging points, one each in the New Territories, Kowloon, and Hong Kong Island, at specific times. Government explosives delivery vehicles are then used for delivery of the explosives to the blasting sites. At the moment, Cyber Port barging point is the only one in Hong Kong Island which is designated for the Hong Kong West Drainage Tunnel (WDT) Project only.
- 3.2 The blasting contractor should provide a designated parking area on site for unloading of explosives from the Government explosives delivery vehicles. The location of the area should be agreed with the Mines Division prior to the commencement of the blasting works. Depending on the site conditions, the blasting contractor may be

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required to provide additional safety and protective measures at the designated parking area for the Government explosives delivery vehicles.

- 3.3 Waiting time of Government explosives delivery vehicles for unloading should be kept to a minimum. Therefore, before commencement of blasting works for a project, the blasting contractor should establish with Mines Division the expected arrival time of the explosives to site and plan the blasting work accordingly. If it is necessary for explosives to be delivered to site at a time beyond the normal delivery hours (11:00 am to 2:00 pm), the blasting contractor should approach Mines Division as early as possible to make a special request. Whether Mines Division can accommodate such special requests depends on the current number of active blasting sites, and the resources available at the time, but every endeavour will be made to meet special requests when these are necessary. For tunnel blasting works and other sites with special requirements, the blasting contractor may apply to the Mines Division for the setting up of a site magazine for temporary storage of the delivered explosives, which may subsequently be used at a time to suit the blasting cycles. However, this is subject to the availability of land at a sufficiently safe distance from residential or commercial buildings, and public facilities. Submission of details on safety, security and supervision arrangements for storage and transportation of explosives into and out of the site magazine to support the application is required.
- 3.4 In planning for projects where use of explosives is anticipated, the Project Office or Developer and their Consultants should consider the excavation rate required with reference to the project duration, the number of daily blasting cycles, explosives delivery time to site, and the availability of land for a suitable unloading area for explosives delivery vehicles and/or for a site magazine. Advice from the Mines Division on these matters should be sought at the project planning stage to ensure smooth and safe delivery of explosives to site and to avoid delay to the blasting works.
- 3.5 The charges for storage of explosives in Government's explosives depot and for delivery of explosives from the depot to blasting site or site magazine can be found in the Schedule to the Dangerous Goods (Government Explosives Depots) Regulations, Cap.295D (website address: www.legislation.gov.hk/eng/home.htm). If for any reason the blasting contractor cannot consume, or store in an approved site magazine,

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the explosives on the same day as the day of delivery, he should take the necessary actions in accordance with contingency plan given in the Method Statement which forms part of the Blasting Permit conditions, to ensure security and safety. Depending on the practicality, Mines Division may be able to provide temporary storage of the unused explosives in original packing in a Government's Explosives Depot at the request of the blasting contractor. However, the blasting contractor shall bear the cost for the storage, and for the necessary transportation to and from the Government Explosives Depot.

- 3.6 In case of a significant delay in explosives delivery, e.g. due to adverse traffic or weather conditions, the Mines Division delivery team will maintain close telephone contact with the Contractor throughout the delivery journey. If the delay is such that the blasting contractor considers it impossible to complete loading and discharging of all the ordered explosives on the same day and there is no site magazine to store the explosives, he may choose to postpone the blast to the next working day and inform the Mines Division delivery team accordingly. Mines Division will arrange for another delivery of the ordered explosives to site on the next working day at no extra charge.

4. APPLICATION FOR EXPLOSIVES DELIVERY

4.1 Application for "Removal Permit" for Immediate Use

- 4.1.1 The Mines Division will make explosives deliveries from a Government Explosives Depot to a blasting site only upon the issue of a "Removal Permit" by the Commissioner of Mines. Only a blasting contractor (hereafter referred to as the Applicant) holding a valid "Licence to Possess Category 1 Dangerous Goods" and a "Permit to Use Category 1 Dangerous Goods" is permitted to apply for a "Removal Permit". The application shall be submitted to the Mines Division electronically, together with the following information:

- (a) List of explosives and accessories, including, full description of type, size and quantity of the products required,
- (b) Name of the Registered Shotfirer, and
- (c) Technical information: site plan, blast location (plan and sections), blast design including: depths and patterns of drillholes, charge loading details, delay and

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connection details, protective measures and evacuation, and road closure requirements etc., specific to the blast.

4.1.2 All the information as stated in Section 4.1.1 should reach Mines Division by 5:00 p.m. two working days in advance of the intended blast. Mines Division will check the information supplied, particularly the blasting design and the protective measures specific to the proposed blast, for compliance with the approved Method Statement under the relevant “Blasting Permit”. The Applicant shall satisfactorily answer all queries raised by Mines Division on such information before 11:00 a.m. Mondays to Fridays and 9:30a.m. on Saturdays one (1) working day in advance of the intended blast before the “Removal Permit” can be issued. Failure to supply any of the above information or to satisfactorily answer the queries raised by Mines Division by the time specified above will result in the application not being accepted.

4.2 Application for “Removal Permit” to Site Magazine (Mode A Store)

4.2.1 The Mines Division will make explosives deliveries from a Government Explosives Depot to a site magazine (Mode A Store) only upon the issue of a “Removal Permit” by the Commissioner of Mines. Only a blasting contractor holding a valid “Licence to Possess Category 1 Dangerous Goods” for Mode A Store is permitted to apply for such “Removal Permit”. The application shall be submitted electronically to the Mines Division, together with the following information:

- (a) List of explosives and accessories, including, full description of type, size and quantity of the products required, and
- (b) Daily Balance of the site Magazine (Mode A Store).

4.2.2 All the information as stated in Section 4.2.1 should reach Mines Division, and the Applicant shall satisfactorily answer all queries raised by Mines Division on such information before 11:00 a.m. Mondays to Fridays and 9:30a.m. on Saturdays one (1) working day in advance of the day of the intended delivery, before the “Removal Permit” can be issued. Failure to supply any of the above information or to satisfactorily answer the queries raised by the Mines Division by the time specified above will result in the application not being accepted.

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4.3 Application for Issue of Explosives from the Government Explosives Depot

Once the application for the “Removal Permit” is approved, the Applicant should also apply for the issue of explosives from the Government Explosives Depot by means of an Electronic Issue Voucher. The Applicant may also submit an application based on the design pending approval, but will need to revise the application in accordance with any amendments needed based on the approved design and “Removal Permit”. The details of the application procedure, cancellation or amendment for the issue of explosives from the Government Explosives Depot are given in the Mines Division Practice Notes No. 2 (MDPN 2).

5. SAFETY AND SECURITY

- 5.1 On arrival of explosives to site, the blasting contractor’s designated representative should check, receive the explosives, and sign receipt on the “Removal Permit” in the presence of a Mines Division representative who has escorted the explosives to the blasting site. The Mines Division representative can be an Explosives Supervisor (ES), Escorting Security Guard (ESG) of Mines Division or a Resident Explosives Supervisor (RES) of the Resident Site Staff registered with Mines Division. They will check and countersign the “Removal Permit” upon handing over of the explosives to the blasting contractor’s representative. If the explosives are not for temporary storage in a site magazine, loading of explosives into the blast holes should commence immediately, and circuit connection and firing should take place soon afterwards.
- 5.2 For opencast blasting, firing of the blast should take place before sunset. Hence, the blasting contractor should allow adequate time and resources to put all the required protective measures properly in place before arrival of explosives on site. This will avoid postponement of firing of the blast to the next day caused by delay in placing all the required protective measures. Prior to commencement of blasting works, the blasting contractor should arrange for trials to assess the time and resources needed for placement of all the required protective measures.
- 5.3 The ES, ESG or registered RES will remain on site to check that all the explosives and blasting accessories delivered are either consumed, destroyed, stored in a site magazine or returned to a Government Explosives Depot for temporary storage.

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5.4 Unused explosives, e.g. small quantities of explosives left over from, or in excess of, a blast, may be destroyed on site by the Registered Shotfirer and witnessed by the ES, ESG or registered RES. Safety procedures recommended by the manufacturer should be followed in the destruction of the explosives.

5.5 When a misfire occurs, the blasting contractor should report it immediately to the Mines Division, providing a brief description of the event, and the explosives products, including the brand names, and quantities involved. The blasting contractor should then take appropriate remedial actions. For opencast blasting, when the remedial actions cannot be completed on the same day before sunset, the blasting contractor shall be responsible for the safety and security of the explosives that has not been fired, and shall take appropriate measures such as cordoning off the affected area, erecting red flags around its perimeter, and providing lighting and security guard(s) to guard the area, until all the explosives and accessories have been consumed or destroyed.

6. INCLEMENT WEATHER

6.1 During inclement weather, e.g. widespread thunderstorm, the Chief Explosives Officer (CEO), the Senior Explosives Officer (SEO) or the Depot Manager of Kau Shat Wan Explosives Depot (DM/KSW) of the Mines Division will decide by 9:00 a.m. whether or not delivery of explosives to blasting sites for that day is to be postponed, and then inform the blasting contractor accordingly. If in doubt, the blasting contractor should check with the CEO, SEO or DM/KSW by telephone after 9:00 a.m. In the event that the Tropical Cyclone Warning No. 3 Signal or higher is issued by the Hong Kong Observatory, or when the Red or Black Rainstorm Warning is in force, delivery of explosives for the day is automatically postponed to the next working day after the cancellation of such signal.

6.2. When the blasting site is locally affected by inclement weather, e.g. thunderstorm or heavy rain, the blasting contractor is permitted to postpone the delivery of his explosives order for one working day, by informing the CEO, SEO or DM/KSW by phone before 9:00 a.m.

6.3 When postponement of explosives delivery is due to inclement weather as described in

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Sections 6.1 and 6.2, the “Removal Permit” shall remain valid for the subsequent delivery of the same explosives order.

7. ENQUIRIES ON EXPLOSIVES DELIVERY

Queries on matters related to the issue of a “Removal Permit” and the Government explosives delivery service may be directed to the following officers:

Chief Explosives Officer	Tel. no. 2716 8680
Senior Explosives Officer	Tel. no. 2716 8690
Depot Manager (Kau Shat Wan)	Tel. no. 2984 0855

(H N Wong)
For Commissioner of Mines