

# 4th Canadian Division Support Base Petawawa



## Range Standing Orders

(Supersedes 4 CDSB Petawawa Range Standing Orders dated 2017-10-12)

OPI: Range Control Officer

Dated: 08 February 2019

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**RECORD OF AMENDMENTS**

Identification of Amendment		Date Entered	Signature & Rank
Amendment #	Date of Amendment		

4th CANADIAN DIVISION SUPPORT BASE PETAWAWA  
RANGE STANDING ORDERS

FOREWORD

6 February 2019

1. 4th Canadian Division Support Base Petawawa is an entity of 4th Canadian Division Support Group that encompasses all the infrastructure and training facilities located within the geographical boundaries of the garrison.
2. The officer appointed as Commander 4th Canadian Division Support Group is also appointed as Officer Commanding 4th Canadian Division Support Base Petawawa. 4th Canadian Division Support Base Petawawa Range Standing Orders are issued under the authority of Commander 4th Canadian Division Support Group.
3. This version of the Range Standing Orders is effective upon receipt. All previously issued versions of the Range Standing Orders are to be destroyed.
4. Amendments to this publication will be issued as required. Suggestions for amendments are invited and should be forwarded through normal channels to 4th Canadian Division Support Base Petawawa Operations and Services Attention: Range Control Officer. Only the Range Control Officer, who is designated as the OPI for these orders, shall make any modifications or changes to these orders for official publication.
5. These orders are published to ensure the safe and efficient use of the ranges and training areas. It is the responsibility of commanders at all levels to ensure that they are enforced. Disregard for published regulations can impose a serious safety concern and will not be tolerated.
6. Range Control personnel represent Commander 4th Canadian Division Support Group during the execution of their duties and as such should be afforded that respect regardless of their rank.



M.L. Lapointe  
Colonel  
Commander

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## **CHAPTER 1 - GENERAL REGULATIONS**

### **SECTION 1 - INTRODUCTION**

References: A. B-GL-381-001/TS-001 Training Safety  
B. B-GL-381-002/TS-001 Range Construction and Maintenance  
C. B-GL-381-003/TS-000 Range and Unexploded Explosive Ordnance (UXO) Clearance Handbook  
D. C-07-010-011/TP-000 Canadian Forces Air Weapons Ranges  
E. C-09-008-002/FP-000 Destruction of Dud and Misfired Ammunition on CF Ranges and Training Areas  
F. C-71-005-000/AG-000 Procedures for Reporting Weapons Incidents (Small Arms)  
G. [4 CDSG Administration Instructions](#)  
H. [4 CDSG Technical Service Instructions](#)

Superseded Orders: CFB Petawawa RSO dated 12 Oct 2017

Applicable to: All Range Users

Date of Issue: February 2019

Effective Date: On Receipt

File No: 4500-1

Responsible Agency: Range Control

### **GENERAL**

1. The 4 CDSB Petawawa Range Standing Orders (RSOs) are established to assist the 4 CDSG Commander in implementing B-GL-381-001/TS-001 Training Safety (B-GL-381-1) with respect to the geography, local rules and restrictions particular to the 4 CDSB Petawawa Ranges and Training Area (Petawawa RTA).
2. This publication does not replace B-GL-381-1 but rather it augments that publication. Users shall be completely familiar with B-GL-381-1 and these orders before commencing training in the Petawawa RTA.

### **CONTACTS**

3. The contact numbers for key positions at Range Control are:
  - a. Range Control Officer (RCO) local 5477;
  - b. Range Control Sergeant Major (RCSM) local 5181;
  - c. Booking and Templating Commissionaire WOs (B&T WOs) local 5403 and 2856;
  - d. Stores and Transport NCM local 4729;
  - e. 24/7 Duty Centre local 5203;
  - f. Geomatics Analysts locals 5134 / 6336;
  - g. Fax number 613-588-5464 or local 5464; and



- h. Email address: [+Ops Svcs Range Control@4\\_CDSB Petawawa Ops Svcs@Petawawa](mailto:+Ops Svcs Range Control@4_CDSB Petawawa Ops Svcs@Petawawa).

## TRAINING AREA MAP

4. The 4 CDSB Petawawa, Canada MCE132 Edition 12-MCE 1:50,000 scale map is the only authorized map for use in the RTA.

## DEFINITIONS

5. **Live Training.** Live Training is training in which service or practice ammunition is used.
6. **Dry Training.** Dry Training is training in which no live ammunition other than blank ammunition or pyrotechnics is used.
7. **Live Ammunition.** Live ammunition is ammunition that contains functional explosives or other compounds, regardless of quantity, which includes service, practice and blank ammunition and pyrotechnics.
8. **Service Ammunition.** Service ammunition is all ammunition in service in the CAF, whether live or inert.
9. **Pyrotechnics.** Pyrotechnics are items of ammunition that produces light, smoke, heat, noise or marking. These items are used for signaling, illumination, simulation of battlefield effects, warning, marking, screening, igniting, and incendiary effects.
10. **Danger Area Overlay (DAO).** A design drawn manually on a clear plastic overlay or constructed electronically by the Canadian Forces Range Information System (CFRIS) sub-program Base Safety Map at 1:50,000 scale, showing the total weapon danger areas within which one or more targets can be engaged by one or more weapons from stipulated firing areas. The terms Restricted Impact Area Overlay (RIO) and Restricted Area Overlay (RAO) are synonymous with DAO.
11. **Areas.** There are four types of areas within the confines of the Petawawa RTA. They are defined as follows:
- a. **Training Area.** Is an area primarily utilized for Dry Training but does not preclude the use of pyrotechnics, blank ammunition, simulators, hand illuminating flares, smoke canisters or smoke hand grenades (except white phosphorous). There are ten areas (Areas A, B, C, D, E, H, I, J, K and L), which are bordered in Green. These areas may also be used for live firing on approval of 4 CDSG HQ. Other restrictions may apply to the training areas;
  - b. **Impact / Training Area.** Is an area, which may be used as a live firing Impact Area or as a dry Training Area. Simultaneous use of these areas for live firing and Dry Training is permitted only when the Danger Area Overlay for the weapon(s) in use does not overlap the area(s) utilized by the other units and coordination has been completed. There are nine areas (Areas 1, 2, 3, 4, 5, 6, 7, 8 and 9) which are bordered in Red. Other restrictions may apply to individual impact / training areas;

NAME	TYPE OF WEAPON	LOCATION
Artillery and Mortar Impact Areas	Indirect wpns up to 155mm	Areas 7 and 8
Field Firing Areas	SA, Gren, HE, Direct Fire Wpns (MG, A/Tk, Tank). No UXO producing	Areas 1, 2, 3, 4, 5, 6, 7, 8 and 9

	ammunition in Areas 1, 2, 3, 4, 5, 6 and 9 unless auth by CO Ops Svcs, 4 CDSB	
Direct Fire Target Integrated Targetry System (DFT-ITS)	See Chapter 6	Areas 2, 6 and 9

- c. **Range.** Is an area equipped for practice shooting at targets, which have fixed firing point(s), line(s), or lane(s). Live ammunition is normally fired or exploded, provided all regulations pertinent to that particular range are followed. Ranges in the Petawawa RTA are:

NAME	TYPE OF WEAPON	LOCATION
A Range	66mm and 84mm HEAT, C6 and C9 MG	GR 156 956
B, C, and D Gallery Ranges	Small Arms (SA) Ranges	GR's: 162 948, 168 948 and 172 949
E and Q Gallery	Pistol and Shotgun Ranges	GR's 198 852 and 179 955
X and Y Gallery	SA Ranges	GR's 199 857, and 198 858
Gas Hut	CS Gas	GR 214 885
Grenade Range	Grenades	GR 189 886
M203 Grenade Range	M203A1 40mm Grenades	GR 191 883
Known Distance Range (KDR)	SA (Repetition Fire only)	GR 185 889
Mechanical Target Range (MTR), F Range (CSOTC)	SA	MTR at GR 200 872 and F Range at GR 192 968
Urban Ops Shoot	SA	GR 215 884

- d. **Petawawa Research Forest Area (PRF).** The PRF is split into three separate areas:

- (1) Training Area F;
- (2) Training Area G; and
- (3) The Montgomery Triangle, which is located in the North West corner of Impact Area 7. This specific PRF area is not labeled on the current Petawawa TAM and is considered a part of Impact Area 7 WRT bookings and usage. The complete PRF area has been assigned to Natural Resources Canada (NRC). No training or entry is permitted in Areas F or G unless prior approval has been obtained from Ops Svcs 4 CDSB Petawawa. See Chapter 4 for details on PRF use for military training.

12. **West RTA.** The portion of the RTA that lies West and South of Hwy 17.
13. **East RTA.** The portion of the RTA that lies East and North of Hwy 17.
14. **Main Supply Route (MSR).** The MSR is Messer Trail, Orange Road, Survey Lake Road and Paquette Road (from GR 163 839 to GR 201 851 only). This route runs in a roughly shaped oval pattern around Areas 1, 2, 3, 4, 5, 6, 7, and 8.

#### **RTA ACCESS AND USE POLICY**

15. **General.** Since 1905, 4 CDSB Petawawa has been used to test ammunition and train Canada's Army for war fighting operations and more recently peacekeeping / peacemaking operations. To train efficiently and effectively, dud producing ammunition has and will continue to be fired to ensure that personnel are prepared as best as possible for operations. Balancing the need for realistic training while remaining safety and environmentally conscious is a difficult task. Any shortcuts taken can lead to disastrous results. In the past, there has been a high incident rate of duds / blinds. These Unexploded Ordnances (UXOs) are, for the most part, unidentifiable due to their age. Modern production practices have reduced the incidents of ordnance failing to function. Despite this, there will always be blinds and some weapons, such as the 40mm grenades and AT rockets will always have a high failure rate. Since it may be impossible to identify older ammunition, all shells, projectiles, bombs and the like must be considered Live Ordnance unless proven 100% to be inert.

16. Past activities in the RTA have not always taken the risk of UXO into account. Forestry operations, firefighting operations and military training, in the past, have placed personnel in severe danger. After reviewing the history of the RTA, UXO records, federal environment policies and consulting with 4 CDSB Petawawa staff and the range users, 4 CDSB Petawawa has developed the RTA Access and Use Table. This includes a map trace which details the use of the RTA including vehicle and troop movement, digging, civilian access, contractor access, recreational use, forestry operations, firefighting and range clearance requirements.

17. RTA Access and Use Table and Map. The RTA Access and Use Table is located at Annex C and the associated map trace is located at Annex D. They are also available at the Range Control site.

#### **RTA BOUNDARY RESTRICTION ON AMMUNITION**

18. All Service Ammunition and any components of Service Ammunition, which are fired from within or from outside the boundaries of the RTA, which are specifically targeted to impact or function in the RTA, must remain or come to rest within the boundaries of the RTA. Service Ammunition will not be used in any situation where the agent or any components or parts of the ammunition could be transmitted outside the boundary of RTA either by the normal functioning of the ammunition or the destruction of any dud or blind ammunition.

#### **SECURITY GUARDS**

19. All Range Control personnel have been designated as Security Guards by the Commander 4 CDSG to enforce the Defence Controlled Access Area Regulations (DCAAR) in the Petawawa RTA. Therefore, all Range Control personnel have the authority to detain (only if it is considered absolutely essential to ensure safety), search or refuse entry to any person found on, in or attempting to gain access to the RTA.

## **DAILY RANGE SAFETY ORDERS**

20. **General.** The Daily Range Safety Orders (DRSOs) is the printed authority to use the RTA and/or the airspace above the RTA for the authorized purposes contained within it and is a daily statement of the activities in the RTA for the information of all users. It provides the unit, call sign, timings, type of trg, authorized ammunition, authorized areas or facilities to be used and general remarks about the daily trg activities and any restrictions to air and ground movement, if necessary. The DRSOs are comprised of two parts, the Cover Sheet and the Range Schedule. Units are reminded to print off both parts when accessing the electronic DRSOs, which are available to units based at Petawawa, at the M: Base/Range Control/Daily Schedules folder. A hard copy of the current DRSOs may be obtained from Range Control at Bldg RR-119 at any time.

## **WEEKLY RANGE SCHEDULE**

21. The Weekly Range Schedule, issued at the Range Control Weekly Coordination Conference mentioned below, is a planning guide only, issued to aid Range Control and the units in finalizing any coordination issues for that specific week. It also allows units who need to book last minute training resources the opportunity to see what is available for that specific week. The Weekly Range Schedule shall not be issued to sub-units for use in lieu of the DRSOs.

## **RANGE CONTROL WEEKLY COORDINATION CONFERENCE**

22. The control and allocation of the RTA is the responsibility of 4 CDSB Petawawa Ops Svcs. Units stationed at Petawawa wishing to use the RTA must have a representative at the Range Control Weekly Coordination Conference, which is conducted in Bldg RR-119 at 0815 hrs every Thursday. At this conference, unit representatives bid on a competitive basis for the RTA for the week starting on the Monday eleven days after the allocation conference. The Range Control B&T WO normally chairs this conference.

23. Unit representatives shall bring all pertinent information on any Training Support Request (TSR) for the RTA to the Weekly Coordination Conference.

24. Once the TSR is accepted by Range Control and entered into the Range Control Master Deconfliction Book at the Weekly Coordination Conference, local units will have 2 days (up to 1300 hrs the Friday immediately following the conference) to enter the deconflicted TSR into CFRIS TSR.

25. Failing to enter the deconflicted TSR data correctly may result in the CFRIS TSR request being rejected. Failing to enter the deconflicted TSR into CFRIS by this deadline may result in the complete TSR, including the data which is entered in the Range Control Master Deconfliction Book, to be cancelled. The local unit will then have to bring that particular TSR back "to the table" at the next Weekly Coordination Conference and recommence the deconfliction process again.

26. Units must do their utmost to bring as many TSRs "to the table" at the Weekly Coordination Conference so that any deconfliction required can be carried out in a timely and effective manner.

27. Units who abuse the weekly conference by both not attending the conference and just "calling in" their TSRs or units who make a habit of making "call in" requests, may have their TSRs refused until the next weekly conference sits. All long-range TSRs shall not be entertained by telephone or email.

28. By bringing the TSRs to the Weekly Coordination Conference, Range Control staff will have firsthand knowledge of any potential conflicts between local units before any data is entered into CFRIS TSR. This should economize the effort spent deconflicting TSRs. The more data that is included with all

TSRs submitted will provide a tremendous assistance to the successful and timely deconfliction for all parties concerned.

29. All units not stationed at Petawawa shall use CFRIS TSR in the normal manner.

30. **Basic Booking Request Information.** Bookings will not be authorized unless the following information is made available when originally requesting any training resources:

- a. Start and end date and time of training;
- b. type of training to be conducted;
- c. weapons and ammunition to be used;
- d. ranges and/or areas required for the training; and
- e. unit or sub-unit conducting the training.

### **CFRIS TSR DATA ENTRY**

31. All units shall follow the following procedures when entering their TSR data into CFRIS TSR for training in the 4 CDSB Petawawa RTA:

- a. all entries are to be in UPPERCASE only;
- b. enter as many Training Events that you require on the TSR Event Booking page;
- c. Dry Trg activities shall not be combined with Live Trg activities when building a Training Event;
- d. ensure each Training Event is appropriately titled so that the actual type of training is clearly indicated;
- e. ensure that the RTAs, Facilities and applicable Weapons/Ammo buttons/boxes that are actually required for the training activity you are conducting are selected for that particular training event;
- f. only select the facilities you actually require in the RTA(s), do not use the "Select All" button unless it is applicable. Remember that you must select at least one Facility (normally the actual area itself);
- g. under Range Type Usage select either Dry Training or Live Training only;
- h. attach all applicable targetry or DFT-ITS documents in the TSR Documents box on the TSR Details panel, do not use the Targetry panel located beside the Weapons/Ammo panel;
- i. if you must add remarks to your training event use the Remarks panel located underneath the AGL Restriction panel;
- j. if the Range Safety Map (RSM) containing the appropriate DAOs is ready for submission, add the applicable RSMs in the appropriate Training Event; and
- k. if you are not sure on how to proceed then call Range Control for guidance.

32. **CFRIS TSR Recalls.** CFRIS will not allow any event from a recalled TSR to be printed on the DRSOs. Therefore any TSR recalled by the unit or formation for whatever reason must be re-proposed to Range Control ASAP to ensure the DRSOs reflect the correct data. It is the responsibility of the unit and formation to expedite the affected TSR as Range Control can do nothing with a Recalled TSR or a TSR that has been proposed to a Higher HQ.

### **FAST BALL TSRs**

33. It is recognized that TSRs may be required after the conference has finished for the week (for example: due to last minute priority trg requirements or higher HQ orders) and the TSR falls inside the eleven day limit as stated in para 22 above. In that event units shall email the Range Control Officer stating why the proposed Fast Ball TSR is critical and needs to be actioned outside of the normal 12 day booking timeline. The Range Control Officer (or his designate) shall decide if the request is warranted or not. This procedure shall be the exception rather than the norm.

34. **Fast Ball TSR Timelines.** All Fast Ball TSRs shall respect the following timelines:

- a. Live Fire bookings - minimum 72 hour notice;
- b. Dry Trg bookings - minimum 48 hour notice; and
- c. Recce / single vehicle type bookings - minimum 24 hour notice.

35. **Weekend or Statutory Holidays.** These minimum timelines do not include the weekend or any Statutory holiday hours, therefore, as an example, a unit sending a Dry Trg request on a Friday for the following Monday does not meet the minimum 48 hr notice.

36. **1300 Hour Deadline.** All TSRs must be received NLT 1300 hours so the appropriate changes can be reflected in the upcoming Daily Range Schedule. Failing to meet the 1300 hour deadline may result in the postponement of the TSR. As an example, a unit sending a Dry Trg request on Wed at 1250 hours for a trg event that starts on the Fri meets the timeline.

37. **Waiving of Fast Ball TSR Timelines.** Range Control staff may waive the above mentioned timelines only if any new DAO does not affect any other units training, no new coordination is required with other units who may be using the same areas and Range Control staff have the resources available to meet the short timeline. The waiving of the timelines shall be considered the exception rather than the norm.

### **AMENDMENTS TO AUTHORIZED BOOKINGS**

38. Any small amendments (such as adding pyrotechnics, changing a start time or end time, etc.) to authorized bookings shall be considered as long as no new DAO is required or the small amendment does not affect any other unit whatsoever. Range Control requires a minimum of 24 hours prior notice in these cases.

### **COORDINATION OF AIRSPACE**

39. **General.** Range Control and 4 CDSB Petawawa Military Flight Advisory Unit (MFAU) work together to coord all elms that will work in the airspace above the RTA (CYR 511). Range Control is the responsible agency to authorize the use of the airspace above the RTA. Range Control will receive all booking requests; consult with MFAU and all airspace users; and when concurrence is achieved, the bookings will then be authorized or refused. Any booking conflicts that cannot be resolved between

Range Control and MFAU will be forwarded to 4 CDSB Petawawa Ops Svcs Senior Operations Officer. See Annex K Airspace Coordination for further details.

40. **Hand Held Flares, Para flares and Signal Projectors.** The intended use of any signal device that may project into the airspace must be indicated to Range Control when the Ranges and Trainings Areas are initially booked so that Safe flight routes can be coordinated. If these types of pyrotechnics are not initially requested but subsequently are required for the training, coordination between the unit, Range Control and MFAU must be completed prior to the firing of the pyrotechnic.

41. **Unmanned Aerial Vehicles Training.** Detailed coordination is mandatory to conduct UAV trg in the RTA. See Chap 4 Sect 4 for details.

### **PRIORITY FOR TRAINING**

42. The normal priority for training in the RTA is as follows:

- a. operationally tasked units (which includes all national courses);
- b. mandated training (normally on weekends) for Reserve units;
- c. Petawawa based units;
- d. 4 Div units;
- e. Cdn Army units;
- f. CAF units;
- g. other federal government agencies;
- h. non-federal government agencies; and
- i. civilian organizations.

These priorities may be changed on an as required basis and exceptions shall be addressed via the chain of command.

### **NO SHOW BOOKINGS**

43. If a unit does not show up or call Range Control by 1200 hrs on the day of their booking, that booking will be cancelled. If a unit does not show up or call Range Control by 1200 hrs on the first day of a multiple day booking, the complete booking will be cancelled. A No Show Booking is defined as a unit which does not occupy a Range, an Area, a facility, and/or the unit fails to join the Range Safety Net.

## SECTION 2 - GENERAL INSTRUCTIONS

### AUTHORIZATION TO ENTER THE RTA

44. **General.** The RTA, which is comprised of all Ranges, Training Areas, Impact / Training Areas, the PRF and any facilities in the Base Administrative Area (Admin Area) of 4 CDSB Petawawa controlled by Range Control, are OUT OF BOUNDS to all persons both military and civilian unless authorized.
45. **Access by DND Personnel.** Within the RTA, military units listed on the DRSOs are only authorized to enter the specific areas or facilities listed in the DRSOs for that specific unit. DND personnel requiring entrance to the RTA who are not listed in the DRSOs, must obtain permission to enter the RTA by contacting Range Control staff, in person, at the Range Control Main office, Bldg RR-119.
46. **Access By Civilian Personnel.** All civilian personnel who require access to the RTA must make prior arrangements with 4 CDSB Petawawa Ops Svcs **before** entering the RTA. Access for recreational purposes is covered in Section 3 of this Chapter and access for dependents to watch a parachute descent is covered in Section 3 of Chapter 4.
47. Units who wish to bring civilian personnel, for whatever reason, into the RTA must ensure that any regulations and/or orders that pertain to civil access to DND controlled lands are followed and that Range Control is informed. Safety briefings are mandatory for all civilians who require access to the RTA. See Annex C the RTA Access and Use Table.
48. **Access by Civilian Contractors.** All arrangements for civilian contractors to access the RTA shall be made in advance, by the agency (Defence Contracting Canada, Real Properties Operations Unit, Environment Services, etc.) that is responsible for that specific contract. Entry to the RTA may be refused unless proper coordination is completed. Range Control will conduct a short briefing on access and control issues for these contractors but the onus is on the responsible Grn agency to coordinate these access briefings and any safety briefings if required. Safety briefings are mandatory for all civilians who require access to the RTA. See Annex C, the RTA Access and Use Table.

### ACCESS BY PRIVATELY OWNED MOTOR VEHICLES

49. **General.** The RTA is out of bounds to all Privately Owned Motor Vehicles (POMVs), which includes cars, trucks, vans, ATVs, motorcycles, bicycles and snowmobiles.
50. **Access by Rental Vehicles.** Rental vehicles, which are rented for official DND use only, are considered to be a military vehicle. All DND rental vehicles must be identified to Range Control, either in advance or by presentation of the rental agreement.
51. **Vehicle Passes.** Authorization for POMVs to enter the RTA must be obtained from Range Control, utilizing a pass system. POMVs will only be allowed in the RTA from first light until last light unless authorized by 4 CDSB Petawawa Ops Svcs. The vehicle pass must be turned into Range Control Bldg RR-119 upon leaving the RTA.
52. Certain 4 CDSG units have been issued permanent civilian vehicle passes that allow the use of POMVs to access the RTA for official DND business. This pass is not authorized for any recreational purposes. This pass shall not be loaned to or used by any other individual other than the intended DND user. Range Control monitors these passes via an authorization number and master list held by the RCO.



## **DERELICT VEHICLES**

53. **Definition.** The term derelict vehicle applies to any vehicles that are not in proper running condition and are used as:

- a. targets;
- b. props or adornments; and
- c. training aids.

54. Derelict vehicles shall not to be brought into the RTA unless authorized by 4 CDSB Petawawa Ops Svcs. The request to bring a derelict vehicle into the RTA shall be sent to Range Control, who will in turn send a recommendation to the Sr Ops O.

55. As a rule of thumb, all POL, complete engine and transmission, cooling system, and all glass shall be removed from the derelict vehicle.

56. Any derelict vehicles that may be used as targets shall have the tires removed and at the end of the trg the vehicles must be inspected by an Ammunition Technician and must be free from explosives before being removed from the RTA.

## **ACCESS POINTS INTO THE RTA**

57. **Main Access Points.** Entrance to the RTA shall normally be through three electronically controlled gates:

- a. GR 199 879 on Messer Trail;
- b. GR 199 850 Paquette Road; and
- c. GR 200 895 Middle Road.

58. The electronic gates are controlled by Range Control personnel located at Centurion Gate, Bldg RR-119, on Centurion Road. All single vehicles or the lead vehicle in all packets must stop and a representative must alight from the vehicle. Utilizing the communication system located at the gate, that person must identify themselves and indicate to Range Control staff the unit they represent and the area of training the unit is proceeding to before gaining access to the RTA.

59. There are times when the Paquette and Messer electronic gates are left in the open position and Range Control shall control access to the RTA through Centurion Gate and Middle Rd Gate. During these periods Pipeline Rd will be closed between Centurion Gate and GR 193 892 on Brindle Rd by locked swing gates so units must travel down Centurion Rd and access Crest Rd to move between the East and West RTA.

60. In the event of all the remote electronic gates failing, all access for the RTA shall be through Centurion Gate.

61. **Secondary Access Points.** To gain access to the RTA from any of the twenty-two secondary access points listed in paras 64 - 67 below or any other point of entrance, all units must coordinate with Range Control prior to the event. Units should include the request to gain access through any of the locked gates with the initial Training Support Request. Range Control personnel shall only issue the key on the actual date the key is required, with prior approval either by the DRSO indicating so or on verbal

approval from the Range Control chain of command. Any key that is expected to be signed out for greater than 14 days shall be returned to Range Control on the 14<sup>th</sup> day for verification and if authorized to do so the unit may sign that key out again.

62. Units utilizing these secondary access points must ensure that the gate is locked at all times or the gate is manned at all times to prevent access to the RTA from unauthorized personnel. No copies of the keys shall be made whatsoever.

63. There are five locked gates that access Areas 2, 3 and K from Messer Trail and Paquette Road:

- a. entrance to the Area K Biv (GR 201 851);
- b. entrance to Q Rge in Area 3 (GR 200 852);
- c. entrance to X and Y Rge in Area 3 (GR 199 856);
- d. entrance to the MTR in Area 2 via Baelstadt Road at Gate 2H (GR 201 872); and
- e. entrance to D Tower / Area 2 via Brennan Road at Gate 2J (GR 200 870).

64. There are seven locked gates that access the RTA from Hwy 17:

- a. Paquette Swing Gate (GR 202 851)
- b. Brindle Crossing (GR 191 891);
- c. Stewart Crossing (GR 179 908);
- d. Duke Crossing (GR 166 925, West RTA only);
- e. Landry Crossing (GR 157 940, West RTA only);
- f. Gate C1 (GR 154 945, East RTA only); and
- g. the Fire Road in Area 9 (GR 146 957, East RTA only).

65. There are seven locked gates along Orange Rd:

- a. Gate Z1 (GR 139 916);
- b. Gate Z2 (GR 131 913);
- c. Gate Z3 (GR 094 917);
- d. Gate Z4 (GR 065 923);
- e. Gate Z5 (GR 055 922);
- f. Gate Z6 (GR 041 918); and
- g. Gate H1 (GR 998 882).

66. There are three locked gates that access the East RTA:

- a. the gate located at GR 198 893 the T Junction of Brindle Road and Bostwick Trail;

- b. the gate located at GR 206 924 on River Road; and
- c. the gate located at GR 194 892 on Crest Road.

67. **Security of RTA.** Units who have authority to use any of the above mentioned locked gates must ensure that all gates associated with that particular entrance are secured or guarded at all times so that unauthorized personnel cannot gain access to the RTA. Failure to maintain this security measure shall result in removal of this privilege.

68. **Highway 17.** Units are warned that movement onto and off of or across Hwy 17 should be strictly controlled due the speed of the civilian traffic on the highway. MP and civilian police coordination may be required for large vehicle movements.

69. **Tracked Vehicles Crossing Highway 17.** Steel or metal tracked vehicles shall only use Centurion Gate or Brindle Crossing to cross Hwy 17. Rubber tracked vehicles are not restricted.

### **CRASH ROUTE**

70. Centurion Road, Messer Trail and Orange Road between Range Control and the Ammunition Compound (GR 141 917) is designated a Crash Route and shall not be blocked or intentionally obstructed at any time. All traffic must be prepared to give way to emergency vehicles at all times.

### **SPEED LIMITS**

71. The maximum speed limit on all roads within the RTA is 50 Kmph or as posted. The speed limit on Deluthier Rd, between E Rge (GR 181 952) and Chalk River Rd (GR 194 966), is 30 Kmph. Maximum speed on all bridges is 10 Kmph. Reduce speed when necessary, drive defensively and drive according to road conditions. Maximum speed on all waterways and lakes is 10 Kmph. Watercraft of any style shall not create a wake of any sort near any shoreline.

### **BRIDGE CLASSIFICATIONS**

72. Mountbatten Bridge, located at GR 141 851 is a class 55 bridge. Montgomery Bridge, located at GR 021 894 is a class 30 bridge. Race Horse Bridge, located at GR 084 878 is a class 30 bridge. These classifications may change without notice so units who plan to use heavy eqpt or vehicles should contact the Real Property Operations Unit (Ontario) Detachment Petawawa (RPOU (O) Det Petawawa), Ranges and Training Area (RTA) cell, local 5570, in advance to verify the current classification.

### **BLACK OUT DRIVE POLICY**

73. **West RTA.** Black out drive is in effect in all the interior roads and interior areas of the West RTA. The MSR will be white light at all times. Authorization for black out drive on or in any other road or area of the RTA must be obtained from Range Control a minimum of forty eight hours prior to the event.

74. **East RTA.** The East RTA is a WHITE LIGHT area only, unless a specific area is authorized by Range Control.

### **HATCHES DOWN DRIVING**

75. To ensure the safety of all users of the RTA, hatches down driving may be conducted in the RTA as long as one hatch, i.e. either the driver or the crew commander, is open and that particular crew member has their head completely clear of the vehicle. 100% hatches down trg can be conducted but that

particular unit must have sole use of the area to be used for the trg and sentries may have to be placed to ensure other units do not accidentally stray into the area.

76. The MSR shall remain “Hatches Open” for both the driver and the crew commander at all times unless the safety of the driver is compromised.

### **VEHICLE CHAINS AND GROUSERS**

77. It is recommended that during the winter months, chains and grousers be installed on all wheeled vehicles and tracked vehicles, where applicable, while in the RTA.

### **SNOW AND ICE CONTROL**

78. The Snow and Ice Control (SNIC) plan is coordinated through RPOU (O) Det Petawawa RTA Cell, local 5570. Plowing and winter maintenance on routes in the RTA is on a Priority system. User units should contact the RPOU (O) Det Petawawa RTA Cell for the current SNIC policy.

79. DFT-ITS SNIC. Ploughing of the complete DFT-ITS system is not a viable option at this time. The DFT-ITS at J Tower in Area 2 is the preferred location for winter use. See Chapter 6 for more details on DFT-ITS use.

80. Consult with the RPOU (O) Det Petawawa RTA Cell on any other ploughing requirements. Units must be prepared in case SNIC crews cannot fulfil the request. Alternate plans should be in place (i.e. Engineer resources, shoveling by hand, snow blowers) to ensure the SNIC requirements for the training are met. Range Control does not have the eqpt to provide SNIC in the RTA.

### **FLAGS AND BARRIERS**

81. When a barrier is closed and/or flag is raised, the area beyond the barrier and or flag shall be considered a Live Area. Only personnel from the unit conducting the Live Training are authorized to pass through with the concurrence of the OIC Practice/RSO. In most instances the areas are shared in the RTA and close co-ordination between units must be established. Common sense and proper safety briefings on safe routes shall be the norm rather than the exception.

### **COMMUNICATIONS**

82. **General.** All users of the RTA, both air and ground elements, conducting Live or Dry Training shall be in communication with Range Control on the Range Safety Net. Exceptions to this policy may be granted by the RCO or the RCSM. Range Control holds a small quantity of handheld radios, primarily for civilian contractor use, but can be used by military units if military radios are not available. The Range Safety Net shall not be used by units for testing their radios while in the Grn proper.

83. The Control Station located at Centurion Gate, remotely operates the radios located at Bldg B-16 in the Admin Area. The Radio Rebroadcast (RRB) radios are located on Montgomery Hill in Area 7. The Range Safety Net is a RRB / Remote Net, so user units must transmit at least 3 seconds prior to talking. Range Control operates on the following nets / frequencies:

- a. the Range Safety Net, freq 49.90 MHZ, and 48.70 MHZ;
- b. the Range Admin Net, freq 49.10 MHZ and 48.10 MHZ (manned on request from user unit);

- c. the Petawawa Air Advisory Net, freq 126.4 MHZ (control of this net is split with 4 CDSB Petawawa MFAU);
- d. the Range Control Hi Band, freq 173.16 MHZ;
- e. telephone locals 5203 / 5403 / 2856 / 5181 / 5477;
- f. the emergency telephone system in the RTA;
- g. the three electronically controlled gates comms system listed in para 57; and
- h. the Emergency Telephone Conference Line.

84. All communications with Range Control shall be conducted in English. All radio operators must be able to communicate and comprehend English.

85. Annex B, Call Signs – Range Safety Net indicates the fixed call signs used on the Range Safety Net. Appendix 1 to Annex B, Basic Radio Procedures for Civilian Contractors gives a basic overview of radio procedure to be used by civilians manning the Range Safety Net.

86. **Establishing Comms.** Communications shall be established and maintained with Range Control prior to the unit entering the RTA. When requesting to join the Range Safety Net, units shall identify themselves and indicate their intended area of training using the following format:

- a. Range Control this is 21, Reporting into Net, Radio Check, Over;
- b. Range Control, Loud and Clear (Weak but Workable, Broken but Workable...etc.), verify unit and area of training, Over;
- c. 21, Broken but Workable, CFJSR, Areas B, C, D, E and L, Over;
- d. Range Control, send LOCSTATE when in location, Over;
- e. 21, Roger, Over; and
- f. Range Control, Join Net Now, Out.

87. **Reporting Unit Location.** A Location State (LOCSTATE) in the form of a six figure Grid Reference, shall be sent to Range Control once a unit and its applicable sub-units if not co-located, is deployed in the RTA. Updates to the LOCSTATE shall be sent if there is any change in the unit or sub unit locations.

88. **Radio Checks.** All radio check shall be conducted every sixty minutes, at the top of the hour, by all user units. All units will remain in radio contact with Range Control until all members of their unit are out of the RTA.

89. **Maintaining Communications in RTA.** Radios shall be manned continuously, until permission is given to leave the Net. The control of sub-units in the RTA is the responsibility of the unit using the RTA. To assist in unit command and control and to minimize the amount of traffic on the Range Safety Net, one CP from the unit shall maintain contact with Range Control on the Safety Net and shall maintain communications with their subunits on a unit frequency. All normal reports and requests shall be passed between the applicable outstations and Range Control. The following procedure has been used successfully in the RTA:

- a. Bn Dry Trg – the Bn CP is responsible for maintaining communications with Range Control and the individual Coy's;
- b. Coy Dry Trg – the Coy CP is responsible for maintaining communications with Range Control and the individual Pl's;
- c. Pl Dry Trg – the Pl CP is responsible for maintaining communications with Range Control and the individual Sect's;
- d. Live Firing - all Live gallery ranges shall join the Range Safety Net as an outstation except when prior arrangements have been made with Range Control;
- e. Bn/Coy Live Trg - when a Bn/Coy is conducting Live Trg one CP from that unit can join the Range Safety Net as long as that CP has communications with all the sub units that are conducting the Live Trg; and
- f. Aircraft – all aircraft operating in CYR 511 providing direct support to ground units (airmobile or air drop) shall maintain radio contact with 427 SOAS Flight Advisory or Range Control when Flight Advisory is closed on the air advisory net mentioned above and the ground unit they are supporting. Aircraft operating in CYR 511 not in direct support to any ground unit shall maintain radio contact with 427 SOAS Flight Advisory or Range Control when Flight Advisory is closed.

90. **Frequencies.** It is recommended to use Freq 48.70 MHZ while training in the East RTA and in Areas K, L, 1, 2 and 3. Use Freq 49.90 MHZ while training in the remaining West areas.

91. **Loss of Communications.** If a unit conducting Live Training loses communications at any time, with Range Control or the subunit conducting the Live Training loses communications with the control CP, they shall place themselves in CHECK FIRING until communications are re-established.

92. **Administrative Traffic.** All unit administrative traffic can be passed to Range Control on the Range Admin Net or through telephone communication and NOT on the Range Safety Net. Units must request for Range Control to flick to the Admin Net to pass this administrative traffic.

93. **Termination of Unit Training.** Failure to monitor the Range Safety Net or conduct radio checks on more than two occasions will result in the training being terminated and the offending unit will leave the RTA.

94. **Flight Emergency.** Whenever a pilot declares an emergency, MFAU may order a CHECK FIRE on the Range Safety Net, or request Range Control to institute a "CHECK FIRE". The following format is normally used:

- a. "All Stations this is Flight Advisory (Range Control), CHECK FIRE, CHECK FIRE, CHECK FIRE, OVER";
- b. Range Control will then verify to ensure all out stations concerned have acknowledged the CHECK FIRE in order to allow MFAU to deal with the emergency; and
- c. When the emergency has passed, MFAU will advise Range Control. Range Control will then CANCEL CHECK FIRE when appropriate to do so.

## EMERGENCY TELEPHONE COMMUNICATIONS

95. An emergency telephone system operates within the confines of the RTA. These telephones are for EMERGENCY USE ONLY. The emergency system connects the following points with the Range Control Duty personnel:

<u>Location</u>	<u>Grid Ref</u>	<u>Mag</u>
Near Gate 2F	196 882	5A
Brindle Crossing	190 890	5B
Stewart Crossing	178 907	5C
Duke Crossing	166 925	5D
Orange Rd & Tucker Rd	150 920	6A
Orange Rd & Racehorse Rd	087 909	6C
Orange Rd & By-Pass	065 923	7A
Near Fish & Game Club	020 909	7B
Scout Camp	021 895	7C
The Capes (Area H)	009 900	7D
East of Paquette Landing (Area K)	170 841	8A
Paquette Rd & Racehorse Rd	085 882	8B
Racehorse Rd	079 858	8C
Brindle Rd & Mattawa Rd	211 899	2A
Middle Rd & Black Bear Rd	185 915	3A
Middle Rd	199 897	3B
Clement Trail	185 935	3C
Near Gate C1	155 945	4A
Deluthier Rd between B & C Rge	165 948	4B
Deluthier Rd and River Rd	182 957	4C
Deluthier Rd and Chalk River Rd	193 967	4D

96. Damage to any telephone, telephone line or telephone pole shall be reported immediately to Range Control, stating the telephone location, line or pole location and Mag identifier if applicable, and then to 4 CDSG Sigs Sqn at local 7777.

## REPORTING OF ACCIDENTS AND SAFETY VIOLATIONS

97. All accidents and or safety violations of any nature or consequence in the RTA or at a facility controlled by Range Control shall be reported to Range Control via the quickest means available.

98. All visiting units must designate a responsible individual to act as the Liaison Officer with 4 CDSB Petawawa Ops Svcs in case a Significant Incident occurs.

## SAFETY RESPONSIBILITIES

99. **Related Publications.** All training that is conducted in the RTA must be conducted IAW B-GL-381-1 and these orders. All personnel in charge of any training shall be conversant with and follow all applicable orders, restrictions, publications, regulations, training publications, ammunition restrictions, and any other local restrictions that relate to training safety, weapons handling and/or ammunition use and safety. Chapters 1, 2, and 3 of these orders shall be reviewed in conjunction with any other chapter of these orders that are applicable before any range or training area is used.

100. **CANSOFCOM Safety.** CANSOFCOM have issued B-GX-050-000/TS-001 CANSOFCOM Operational Training Safety which shall be used for reference as part of their training requirements. All training conducted by CANSOFCOM units shall be conducted in such a manner as to keep safe all other units who are using the RTA.

101. **Danger Area Overlays.** Danger Area Overlays (DAOs) shall be constructed and verified by Range Control staff prior to any unit going Live and all ammunition to be used in the RTA shall be authorized by Canadian Army Doctrine Training Center (CADTC) and Director Ammunition and Explosives Management and Engineering (DAEME) 5-3-3.

### **KNOWLEDGE OF ORDERS**

102. Each person in charge of Live or Dry Training to be conducted in or over the 4 CDSB Petawawa RTA shall ensure that he or she is conversant with these orders and B-GL- 381-1. They shall have a copy of B-GL-381-1, current RSOs, the current DRSOs, a current Petawawa TAM and all applicable weapon pamphlets. Before firing commences the person in charge shall conduct a safety briefing to all staff and firers which shall include, at a minimum, reference to sections of this order that apply to their range.

103. The Officer in charge of the firing practice shall be responsible for ensuring that all special regulations or restrictions affecting a specific weapon(s) or ammunition(s) are followed.

### **AUTHORIZED WEAPONS AND AMMUNITION**

104. Live ammunition shall be fired or exploded ONLY on Ranges and Impact/Training Areas specified for such purposes in the Range/Training Area Authorization Form (Range Licence) found in CFRIS for this specific RTA. Permission to deviate from this regulation must be authorized by 4 CDSB Petawawa Ops Svcs.

105. The use of live ammunition, blank ammunition, pyrotechnics and or simulators in the garrison built up area is not authorized. Units must seek authority through 4 CDSB Ops Svcs Petawawa to conduct this type of training on the garrison.

106. Weapons, ammunition, explosives and pyrotechnics that are not provided through the Canadian Forces Supply System (CFSS) shall not be used by CF units in the RTA unless authorized by CADTC and DAEME 3-3-5.

107. Certain civilian weapons are authorized for use on selected ranges in the RTA by the Garrison Petawawa Shooting Club. These weapons must have a Danger Area less than or equal to the CF weapons the range is licensed for. DAEME is the OPI for calculating these Danger Areas.

108. Paintball ammunition shall be treated in the same manner as Close Engagement Ammunition Simulation System (CEASS) as per Chapter 1 of B-GL-381-1.

### **QUALIFICATION OF UNIT OIC PRACTICES / RANGE SAFETY OFFICERS**

109. All units who use the Petawawa RTA shall submit to Range Control documentation that specifies the qualification of the unit's OIC Practices and Range Safety Officers (RSO) either through exercise specific documentation or a Unit OIC Practice / RSO List. Either form of documentation submitted to Range Control shall specify the name of the person, and the type and caliber of all specific weapons for which that person is qualified. All documentation tasking an OIC Practice or RSO, including the Unit OIC Practice / RSO List shall be signed by the unit CO. This signatory requirement shall not be delegated.



110. Email confirmation of a OIC / RSO List from a CO is acceptable as long as the OIC / RSO List is attached to the email chain and an email from the CO stating that he / she approves or authorizes the list is included in that specific email chain.

## **TRAINING OR SAFETY VIOLATIONS**

111. If any unit fails to follow any published safety regulations regarding the conduct of their training activity or the conduct of their training is creating a danger to themselves or other units in the RTA, Range Control shall order that offending unit either to CHECK FIRE, STOP TRAINING or in the case of an extreme violation, CEASE TRAINING and depart the RTA.

112. Once the safety infraction has been corrected, the offending unit may be allowed to continue to train but follow up restrictions may be enforced upon them. Examples of follow up restrictions are, but are not limited to:

- a. Suspension of qualification of the Range Safety Officer for that particular weapon system until the unit re-certifies that person;
- b. Recommendation to the Higher HQ of the offending unit for an investigation of the incident;
- c. Spot checks of the offending unit, conducted by Range Control personnel, to ensure compliance to published safety regulations; or
- d. Detailed safety inspection by Range Control personnel prior to the offending unit recommencing their training.

113. It is not the principal function of Range Control to conduct detailed inspections of unit training, ranges or the conduct of the units training. It is understood that spot checks and safety inspections will reduce the amount of time allocated for that particular training event, however, Range Control is responsible to the 4 CDSG Commander for the safe utilization of all RTA facilities.

## **MEDICAL COVERAGE AND PROCEDURES**

114. **General.** At a minimum, a person qualified to the standard level of first aid in accordance with CFAO 9-5, Annex A, with a first aid kit, stretcher and dedicated vehicle will be on duty during all training where live ammunition is employed. B-GL-381-1 Chapter 1 provides the medical requirements needed for specific types of training.

115. **Range Sweep after Live Training.** All Range Sweeps that a unit may conduct after a Live Training Exercise shall also have, as a minimum, the eqpt and personnel mentioned above.

116. **Grn Medical Clinic.** The Grn Medical Clinic provides emergency medical coverage from 0730 – 1600 hrs, Mon – Fri only. When the Grn Medical Clinic is closed, units must be prepared to transport any casualties to the Pembroke General Hospital, 705 Mackay St., Pembroke, telephone number 613-732-2811 extension 6023 / 6024 or the Deep River Hospital, 117 Banting Dr., Deep River, telephone number 613-584-3333, then press 2. Units may also request support through Range Control from 911 Emergency Services.

117. **Accident / Injury Procedure.** The following steps shall be followed should an injury occur in the RTA:

- a. the senior person present will:

- (1) apply or supervise the application of first aid to the injured;
  - (2) inform Range Control on the Range Safety Net or telephone local 5203 stating the nature of the injury, the cause of injury (if known), the location of the injured and if any additional assistance is req'd;
  - (3) if possible, evacuate the injured to a medical facility; and
  - (4) obtain statements from personnel who witnessed the injury.
- b. if additional assistance is required, the requesting unit will notify Range Control of the type of assistance required and establish a RV, for wheeled vehicles or a helicopter LZ for air evacuation; and
  - c. place a responsible guide at the RV or the helicopter pad to direct the additional assistance to the location of the injured.

118. Upon notification of injuries, Range Control will:

- a. dispatch the additional assistance if requested;
- b. establish a direct safe route for emergency vehicles;
- c. notify 4 CDSB Petawawa Ops Svcs HQ of the facts reported (the 5 W's); and
- d. notify the HQ of the Unit concerned of the facts reported.

119. **Wet Bulb Globe Thermometer Level.** When informed, Range Control shall broadcast the Wet Bulb Globe Thermometer (WBGT) level to all users of the RTA. Range Control will include in the message the actual WBGT level, a water intake recommendation and a recommended work / rest cycle.

#### **AMMUNITION ACCIDENT OR INCIDENT**

120. **Ammunition Accident.** An Ammunition Accident is any incident involving ammunition or explosives, including those arising from the use, misuse or attempted use or misuse of ammunition or explosives, which unintentionally results in death or injury to any person or damage to equipment or property, military or civilian, whether or not the ammunition or explosive is at fault. As well, any fires that occur when there is a possibility that ammunition has been affected or any incident arising from the transportation, handling, maintenance or destruction of ammunition or explosives which results in or has the potential to cause death or injury to personnel or damage to property or equipment. By definition a Negligent Discharge with Service Ammunition with injuries can be considered an Ammunition Accident however if a weapon (pistol, rifle, etc.) is involved without injuries occurring then it would be best to categorize the accident as a Weapons Incident.

121. **Ammunition Incident.** An Ammunition Incident is any occurrence or hazardous practice concerning ammunition suspected of arising either from an error or an apparent deficiency in regulations or any instance of theft or loss of a significant amount of ammunition materiel, or theft or loss of ammunition materiel of a classified or publicity sensitive nature. A Negligent Discharge with Service Ammunition with no injuries can be considered an Ammunition Incident.

122. When an ammunition accident / incident occurs, the following sequence shall be followed, where applicable:

- a. all firing ceases;
- b. all weapons on the firing point will be unloaded and made safe;
- c. if required, first aid will be given and evacuation of any casualties arranged;
- d. isolate the weapon and associated equipment;
- e. contact Range Control;
- f. contact the Ammunition Technical Officer / Wpns Tech;
- g. ensure no attempt is made to move, dismantle or clean the weapon unless ordered to do so by higher authority;
- h. search the area in order to locate ammunition fragments or parts of the weapon
- i. all items found will be left untouched and preserved for investigation purposes or removed from the site of the incident when circumstances dictate, but, before doing so, photograph or sketch the scene of the incident and identify the parts;
- j. obtain the lot number of ammunition used; and
- k. obtain written statements from all personnel involved.

123. The accident/incident shall be investigated and reported in accordance with A-GG-040-006/AG-002 Ammunition Accident, Incident, Defect and Malfunction Reports.

124. Further firing of that specific lot of ammunition shall be halted pending the outcome of the investigation.

### **WEAPONS INCIDENT**

125. A Weapons Incident is any incident arising from the use, attempted use or misuse of a weapon which results in death or injury to any person or damage to equipment or property, military or civilian, whether or not the ammunition is at fault. The reports as listed in C-71-005- 000/AG-000, Procedures for Reporting Weapons Incidents (Small Arms) shall be completed by the unit following the incident. By definition a Negligent Discharge with Service Ammunition with injuries can be considered both an Ammunition Accident and a Weapons Incident however if a weapon (pistol, rifle, etc.) is involved then it would be best to categorize the accident as a Weapons Incident.

126. All Weapons Incidents are to be investigated by a QL 6A Wpns Tech. If that particular unit does not have a QL 6A Wpns Tech then that unit should make prior arrangements for support and this fact shall be reported to Range Control. Range Control will contact the Garrison Duty personnel to attempt to get a qualified tech to support the investigation.

127. The procedures laid out in paras 122 to 124 above shall be used to investigate and report a Weapons Incident.

### **UNEXPLODED ORDNANCE (UXO) HAZARD**

128. CF Ranges and Trainings Areas are classified into the following four types, depending on the degree of UXO contamination:

- a. **Type 1 High Risk / Extremely Dangerous.** An extremely high probability of encountering live ordnance or munitions scrap exists where the use of dud producing munitions have been or are currently authorized and the existence of surface/sub-surface UXO is verified in records and where the type, location and status of UXO is unknown or unconfirmed; or surface/sub-surface UXO are not recorded and marked.
- b. **Type 2 Medium Risk / Dangerous.** A likely probability of encountering live ordnance or munitions scrap exists where the use of dud producing munitions have been or are currently authorized and the existence of surface/sub-surface UXO is verified in records and where the type, location and status of UXO is known and confirmed and surface/sub-surface UXO are marked;
- c. **Type 3 Moderate Risk / Moderately Dangerous.** An unlikely probability of encountering UXO exists on any RTA where the use of dud producing munitions have not been nor are currently authorized and the existence of surface/sub-surface UXO is not indicated in records but where no assurance can be given that the area is totally free of UXO or munitions scrap due to proximity next to a Type 1 or Type 2 dangerous area or an escapement event has occurred from an adjacent range and for the duration of time it takes to locate, identify and confirm the status of a dud. Once the dud is located, the type is confirmed and the UXO is subsequently destroyed, the type can revert to Type 3. In this case, only the probable location of the dud need be designated a Type 2 dangerous area, not the entire sector; and
- d. **Type 4 Low Risk / Limited Danger.** Areas in which it is extremely unlikely dud producing ammunition may have landed during range practices or exercises.

129. Annex C, The RTA Access and Use Table gives specific direction to potential users of the RTA with regard to UXO's and UXO contamination. B-GL-381-003/TS-000 Range and Unexploded Explosive Ordnance (UXO) Clearance Handbook gives specific direction WRT military range clearance procedures.

130. Range Control has a very limited UXO destruction capability; therefore user units must be self-sufficient in UXO destruction capabilities.

131. There are certain ranges, munitions and circumstances that if a blind or dud occurs, that blind or dud shall be destroyed prior to continuing with the firing practice or the training. Units shall not deviate from this immediate destruction policy. The rule of thumb shall be "if you use that type of ammunition you shall have a qualified Dud Destruction member available".

132. All UXO's, duds, blinds or misfires shall be destroyed strictly in accordance with B-GL-381-1 and C-09-008-002/FP-000 Destruction of Dud and Misfired Ammunition.

## **DEMOLITION KITS**

133. Demolition Kits shall be taken to the ranges whenever explosive ammunition is used. If this is not possible then that unit must make prior arrangements with 2 Svc Bn Ammunition Pl or 2 CER to carry out any possible dud destruction task. Do not expect Range Control to coordinate this arrangement or significant delays may be encountered.

134. Only qualified personnel, as listed in C-09-008-002/FP-000, shall use these kits to destroy a dud. CO's are responsible for detailing the qualified personnel in writing to the 2 Svc Bn Ammunition Pl. The list must be updated annually as a minimum.

## REPORTING OF DUDS

135. Units shall report all duds or suspect ordnance found in the RTA to Range Control by radio, telephone or in person. The unit will include in the report the Grid Reference of the dud, what type of ammunition, if known, and how it is marked. Units shall report ALL duds that occur during their training by completing paragraphs 3 and 4 of Appendix 7 to Annex A, 4 CDSB Petawawa Ammunition Control Certificate. Range Control maintains a list of all duds reported.

## REPORTING OF AMMUNITION DISCOVERED IN THE RTA

136. Any individual or unit who discovers any Service Ammunition left / discarded in the RTA shall report the find immediately to Range Control. The location, the type of ammunition and how the ammunition is marked shall be included in the report.

## PYROTECHNIC SAFETY

137. Pyrotechnics are used to produce noise, light, heat, smoke, delay timing, gas pressure and marking. The following local restrictions apply:

- a. to ensure that Highway 17 is not obscured by smoke, no smoke of any type shall be fired within 500 meters of Highway 17;
- b. all para flares shall be fired in such a way as to ensure they come to rest in the RTA. Regardless of the weather conditions and circumstances no para flares shall be fired towards the boundary of the RTA when the user is within 500 metres of that boundary;
- c. para flares SHALL NOT be fired in a small portion of Area K, which is bounded on the north by Paquette Rd, on the west by the Area K Biv Access Gate (GR 201 851) on Paquette Rd, the access trail as it leads down to and includes the east side of the Area K Biv (GR 203 844) the south boundary of the RTA along the Petawawa River and the east boundary of the RTA along Hwy 17;
- d. at the end of all training in which pyrotechnics have been used, the officer in charge will ensure that all unused munitions are returned to the ammunition compound;
- e. modifying the handling drills or the firing drills for any pyrotechnic is not permitted; and
- f. Units must ensure that all components from a pyrotechnic come to rest in the RTA.

138. **Hexachlorothane (HC) Smoke.** HC Smoke is one of the principal smoke generating systems currently in use by the CAF and may be a significant health hazard to anyone inhaling this smoke. The following safety measures will be adhered to when using any HC Smoke producing device:

- a. if any doubt exists as to a munitions content, it should be assumed that the device produces HC Smoke;
- b. soldiers will mask prior to the use of HC Smoke and remain masked until the smoke has dissipated;
- c. HC Smoke will not be directed into any military or civilian installation or trench works where personnel are unprotected or unable to mask;

- d. Smoke will not be directed into FIBUA or OBUA Sites, bunkers or vehicles where dissipation is impeded;
- e. Prior to the use of HC Smoke, the trg area shall be cleared of all personnel not involved; and
- f. Soldiers taking part in exercises where HC Smoke will be used shall be briefed on the health hazards and safety precaution prior to the start of each exercise.

### **IRRITATING VAPOURS AND PYROTECHNICS IN PROXIMITY OF AIRCRAFT**

139. Pyrotechnic devices are not to be activated within 60 metres of an aircraft. Projectile or corrosive damage, which would be negligible for other types of equipment, is serious for an aircraft. Therefore:

- a. no smoke of any type will be fired that trails smoke across the intended landing spot or parking area;
- b. no chemical or simulated chemical agent will be used on or near an aircraft;
- c. no personnel or equipment which have been exposed to irritating vapors will be presented for carriage on an aircraft within two hours of exposure;
- d. the firing of para flares and signaling pistols can also constitute a serious flight safety hazard to aircraft. The firing of para flares, pen flares and or signaling pistols **SHALL CEASE IMMEDIATELY** on the approach of any aircraft; and
- e. the firing of para flares during combined ground/air operations will not be undertaken unless positive communications exist between all aircraft and ground parties engaged in this activity. Positive communications implies verbal confirmation from the aircraft captain(s) that it is safe to proceed with the firing of the ammunition.

### **FLIGHT SAFETY WIRES AND MAST ANTENNAS**

140. **Ontario Hydro High Tension Wires.** Ontario Hydro has high tension wires strung across the Barron River near GR 1205 8279 which run northwest through Area 6 into Area 8 which then turns north and crosses the Petawawa River at GR 0725 8739 and continues in a north-easterly direction through Area 7 and then continues through Area G of the PRF and crosses Corry Lake at GR 1100 9700 and then cuts through the north western corner of Area F of the PRF near GR 1205 9830. These wires are marked on the Petawawa TAM.

141. **Communication Wires.** Wires that have been strung across a clearing, which could constitute a hazard to flight safety shall be conspicuously marked at 6 metre intervals with .75 metre streamer of reflective orange tape in daytime and glow sticks at nighttime. Such wiring will be removed as soon as it is no longer required. Approval from Range Control must be obtained to suspend cables or wires across gorges, chasms, ravines or rivers within the RTA. Approval must be sought at least 48 hours in advance of the exercise so that the proper aircraft advisories can be issued.

142. **Mast Antennas.** Units shall consider any flight hazards when siting mast antennas further than 10 metres away from vehicles. The marking of such antennas and guy wires shall be in the same manner as stated above.

## **TRANS CANADA PIPELINE RIGHT-OF-WAY**

143. All wheeled and tracked vehicles are prohibited from traveling on the Pipeline Right-of-Way. Travel across the Pipeline Right-of-Way on Deluthier Road, Black Bear Road, Brindle Crossing and at Centurion Crossing, is allowed, with the exception of tracked vehicles which must cross at Centurion Crossing or Brindle Crossing, which are reinforced crossings. LOSVs and ATVs are not restricted.

## **ALCOHOL/MESSES/CANTEENS**

144. The dispensing or consumption of alcohol in the RTA is not permitted without the express authority of the CO 4 CDSB Petawawa Ops Svcs.

## **WATER POINTS**

145. Water Points are located at:

- a. the corner of Kandahar and Centurion Road GR 205 874 (open all year); and
- b. Crest Rd GR 211 880 (closed during winter).

## **BIVOUAC SITES**

146. There are seven austere bivouac sites located within the RTA:

- a. Area A Biv GR 188 908;
- b. Area C Biv (Clement Hill Biv) GR 178 936;
- c. Area E Biv GR 215 962;
- d. Area H Biv (The Capes Biv) GR 008 899;
- e. Area I Biv (Pioneer Cabin Biv) GR 049 818;
- f. Area K Biv GR 203 844; and
- g. Area 3 Biv (Paquette Landing Biv) GR 164 843.

147. The austere bivouac sites may be closed periodically to minimize any environmental impacts from overuse.

148. The Grey Water Holding Tanks and any Portable Toilets that are located at each site shall not be moved from or in and around the site unless authorized by Range Control and RPOU (O).

149. All bivouac sites established in the RTA, including the seven austere sites mentioned above, any troop shelters used for bivouacs or any other bivouac sites must be inspected by the Grn Fire Hall and the sites must conform to Grn Petawawa Fire Orders, Grn Petawawa Administration Instruction 6.005 and CAO 11-40. Contact the Grn Fire Hall at local 6111 to coordinate the inspections.

## **TROOP SHELTERS**

150. There are eight independent troop shelters located throughout the RTA as follows:

- a. Area 8 GR 027 871 West Lookout;

- b. Area 8 GR 058 826 Old Demo Rge;
- c. Area 8 GR 072 841 Excalibur Pad;
- d. Area I GR 048 817 Pioneer Cabin;
- e. Area 6 GR 1365 8481 near Gate 6F;
- f. Area 6 GR 1369 8482 near Gate 6F;
- g. Area 4 GR 145 893 Tucker Lake; and
- h. Area 1 GR 168 912 DZ Anzio.

151. The troop shelters at A Rge, B Rge, C Rge, D Rge, E Rge, Q Rge, Y Rge, MTR, the Bush Lane, the Grenade Range, the M203 Grenade Rge, Delta Tower, Juliette Tower, the Urban Ops Shoot House and the Urban Ops Village are for the use of units training/firing on the range as per B-GL-381-001/TS-002, Range Construction and Maintenance. If a unit requests to use the Troop Shelter for other than the protection of troops conducting a range practice (i.e. CP's, Course Staff accommodation, etc.), these requests will be entertained on a first come, first serve basis. The priority for use of the Troop Shelter goes to the unit who is conducting the Range Practice, even if the Troop Shelter is booked prior to the Range Practice. Units may coordinate the sharing of the Troop Shelter, but in the end, the priority for use still remains with the unit conducting the Range Practice. If any doubt exists, contact Range Control for further clarification.

152. **120v Power.** DZ Anzio Troop Shelter and the majority of the troop shelters located at the facilities and ranges mentioned in para 150 above have 120v power, however the remaining seven of the eight independent troop shelters mentioned in para 149 above do not. The Urban Ops Shoot House and the Bush Lane troop shelter mentioned in para 150 are the only troop shelters without 120v power as well. All troop shelters without 120V power are equipped with a receptacle for connecting a generator.

153. If any troop shelter is to be used for sleeping accommodations the following fire safety precautions shall be in place:

- a. a 10lb A-B-C fire extinguisher, inspected by the Grn Fire Hall Fire Prevention Bureau, shall be available for ready use;
- b. a fire piquet shall be established;
- c. wood stoves or any other form of heating appliance shall not be left unattended;
- d. a minimum of forty eight inches of clearance shall be maintained around any heat source;
- e. no flammable liquids shall be stored inside the troop shelter;
- f. wood stoves shall be completely extinguished prior to vacating the troop shelter; and
- g. the Grn Fire Hall Fire Prevention Bureau, local 6111, shall be contacted prior to any unit occupying any troop shelter that is to be used for sleeping accommodations.

154. Wood burning stoves are located at the B, C, D and E Rge troop shelters only. RPOU (O) Det Petawawa RTA cell replenishes the fuel on a regular basis during the normal heating period. If the supply



of firewood is low, contact the Range Warden, Local 7465 or RTA Cell, Local 5570 for any replenishment.

155. User units are responsible for the cleaning of the complete bldg, ensuring the stove(s) are extinguished and the ashes are cleaned out.

### **CLEANLINESS OF RTA**

156. All personnel in charge of training shall ensure that the RTA is left in a clean, tidy condition. All ammunition, ammunition salvage, garbage, defensive stores, targetry, obstacles and wire shall be removed from the RTA. All trenches, craters, defensive field works and disturbed ground shall be filled in and / or repaired. Chapter 3 Environmental Orders gives detailed information on environmental issues. The rule of thumb is to leave the RTA in a better condition than you received it in.

### **REPORTING OF NON-SERVICEABLE RANGE EQUIPMENT, STORES AND FAULTS**

157. All non-serviceable range equipment, stores and any faults in the RTA such as, but not limited to, N/S target lifters, broken targets, ammunition salvage or garbage found in the RTA shall be reported to Range Control ASAP after the unit occupies a range or area.

### **RTA CLEARANCES**

158. All training in the RTA shall be cleared or “marched out” by a representative from Range Control. Range Control may allow a unit to forego the clearance procedure and that decision shall be made by Range control senior staff. All training that involves the use of Service Ammunition shall complete Appendix 7 to Annex A, 4 CDSB Petawawa Ammunition Control Certificate. If a unit does not use any ammunition that is indicated in the DRSOs for that specific training, that unit shall complete Appendix 1 to Annex A.

159. Dry Training. All units or sub-units who use the RTA must undergo a site clearance by Range Control. Appendix 5 to Annex A, Dry Training RTA Clearance Certificate shall be completed for all Dry Training. All march outs shall be conducted within the following guidelines:

- a. arrange with Range Control a time, daylight hours only, for the inspection of the area(s) used;
- b. the inspection shall take place after the movement of the main body from the position and a work party shall remain behind to carry out any final clean-up action, if necessary; and
- c. the unit representative (minimum rank MCpl) for the inspection signs the appropriate clearance forms with the Range Control representative.

160. **Bivouac / Hide Sites or Areas.** The same basic guidelines as stated in para 159 a - c above shall be followed and Appendix 2 to Annex A, Bivouac / Hide Site Clearance Form shall be completed for any Bivouac Sites or Areas used.

161. **Live Training.** The same basic guidelines as stated in para 159 a - c above shall be followed and Appendix 6 to Annex A, Live Fire Training RTA Clearance Certificate and Appendix 7 to Annex A, Ammunition Control Certificate shall be prepared, signed and turned into a Range Control representative by the OIC / RSO of that live practice.

162. **Ortona Urban Ops Site.** The same basic guidelines as stated in para 159 a – c above shall be followed and Appendix 3 to Annex A, Ortona Urban Ops Site Clearance Certificate shall be completed. If necessary, any other certificates shall be completed, depending on the scope of the training that was completed at the site. See Chapter 4 for more details on the Ortona Urban Ops Site.

163. **Urban Ops Village.** The same basic guidelines as stated in para 159 a – c above shall be followed and Appendix 4 to Annex A, Urban Ops Village Clearance Certificate shall be completed. If necessary, any other certificates shall be completed, depending on the scope of the training that was completed at the site. See Chapter 4 for more details on the Urban Ops Village.

## **WASH RACKS**

164. The Base Wash Racks, located on Pashmul Rd behind the 1 RCR lines in the Admin Area, are controlled through Range Control.

165. Units shall book the facility in the same manner as any other facility controlled by Range Control. Once booked to a unit, the keys will be signed for at Bldg RR-119 Centurion Gate. Units shall call Range Control once they are finished using the facility and a Range Control Patroller shall conduct a clearance inspection in the same manner as any other facility controlled by Range Control.

166. All Hazmat / garbage / cleaning materials / debris / foliage and other foreign materials shall be removed from the compound prior to the clearance. All mud shall be washed into the catch basins to drain into the system. Excess mud that cannot drain from the catch basins is to be considered Hazmat and shall be removed regularly by RPOU (O) through a contracted vacuum truck. See Chapter 3 Environmental Orders for details.

167. Units are responsible for all equipment and stores required for the cleanup of the facility. All hoses and wands will be cleaned and properly stored after use.

168. In the case of another unit taking over the facility directly after the unit who originally had signed for the facility, the gaining unit shall accept all responsibility for serviceability and cleanliness or that unit may wait until a Range Control Patroller properly clears the original unit from the facility.

169. All keys shall be handed over to the Range Control Patroller once the clearance is complete. User units may be held responsible for any damage to the facility.

170. The Wash Racks shall be open for use in Spring, usually after the 3rd weekend in May, and closed in the Fall, usually the Thanksgiving Weekend, to prevent freezing damage to the system.

## **WAIVERS**

171. Waivers are the authority for a temporary change to these regulations and are only applicable to the particular exercise or range practice for which they have been requested. Waivers shall be regarded as the exception rather than the rule.

172. Units requesting a waiver from any regulation promulgated in these Range Standing Orders shall staff the waiver through the Sr Ops O, 4 CDSB Ops Svcs Petawawa at least 14 days in advance.

173. Annex J 4 CDSG Trg Safety Waiver Approval Matrix indicates to what level certain waivers must be staffed for any training facility under the direct control of 4 CDSB Petawawa Ops Svcs.

174. The following information shall accompany the waiver request:

- a. the associated DAO if applicable;
- b. the TSR for the event shall be proposed to Range Control in CFRIS; and
- c. any other documentation that is required to support the request.

175. The 4 CDSG Training Waiver Request can be found on the 4 CDSB Ops Svcs ACIMS site: <http://acims.mil.ca/org/4CDSBPetOpsSvcs/default.aspx> .

176. B-GL-381-1 has specific directions with regard to the staffing of waivers for that particular publication.

177. 4 CDSB Ops Svcs Petawawa shall be sent a copy of all authorized waivers from any other regulation or publication that pertains to any training that will take place in the Petawawa RTA.

## **SECTION 3 – RECREATIONAL USE OF THE RTA**

### **GENERAL**

178. Annex C the RTA Access and Use Table gives specific direction on authorized recreational use of the RTA.

179. **Prohibition of Shooting.** Weapons, including firearms, crossbows, bows and arrows, pellet guns or similar weapons will not be loaded or discharged in the Admin Area, the North or South Townsites or the RTA except in areas specifically authorized for recreational shooting in conjunction with a club or activity. Offenders will be subject to prosecution and firearms will be confiscated pending disposal of charges.

### **PETS**

180. Pets are not allowed in the RTA unless authorized by 4 CDSB Petawawa Ops Svcs. If authorized, pets will be on a leash at all times while in the RTA.

### **HUNTING AND FISHING**

181. Hunting. Hunting is permitted in Area G only during the provincial deer hunting seasons at the discretion of the PRF Manager. There may be other restrictions placed on hunting by the PRF staff.

182. Hunting is not permitted in the remainder of the RTA.

183. Fishing. Fishing is permitted in all lakes and streams in Area G only, strictly in accordance with Provincial Fishing Regulations and subject to any territorial constraints imposed by the PRF staff.

### **OTHER RECREATIONAL USES**

184. **Grn Petawawa Shooting Club (GRNPSC).** The GRNPSC has the authority to use B, C, D, E, Q, and Y Ranges for the shooting activities of the club. These ranges shall be requested for in the same manner as others facilities that are controlled by Range Control or PSP. There are restrictions regarding what calibre and types of weapons which are authorized for use on these ranges. Contact Range Control for specific information on the Range Licenses.

185. **Grn Petawawa Archery Club (Archery Club).** The Archery Club uses a portion of the Grn proper centered on GR 215 883 to conduct static range practices and a stalking trail. Flags and barriers are to be in place prior to going live.

186. **Cross Country Skiing.** Cross-country skiing is permitted in the PRF Area on authorized ski trails only. Cross-country skiing may be restricted when military training is being conducted in these areas.

187. **Camping.** Recreational camping in any part of the RTA is not authorized.

188. **Picnicking / Hiking.** Picnicking / hiking activities are permitted in designated areas of the PRF Area only.

189. **Recreational Vehicles and ATV's.** Recreational vehicles and ATV's are not permitted in the RTA without the approval of 4 CDSB Petawawa Ops Svcs.

#### **4 CDSB PETAWAWA SHORELINES**

190. The shorelines of the Petawawa River, Barron River and selected portions of the Ottawa River that are within the boundaries of the Petawawa RTA are part of the RTA and shall be treated as such. Therefore, the shorelines and beaches are not authorized for recreational use and may also present a hazard from Unexploded Ordnance (UXO).

191. A select portion of the RTA (Black Point to Antler Point in Area D) along the shoreline of the Ottawa River can be used for recreational purposes. This area is also bounded by a security fence on the Western edge of the shoreline. No personnel shall attempt to enter or bypass or climb this fence to gain access to the Petawawa RTA or the Petawawa Garrison Area.

## CHAPTER 2 - RTA FIRE ORDERS

### GENERAL

1. **Fire Types.** There are two types of fires that may be encountered in the RTA;
  - a. wildland fires (grass, slash, brush, timber); and
  - b. non-wildland fires (Buildings, structures, tents, vehicles, aircraft).
2. **Fire Season.** Fire Season is normally 01 Apr to 31 Oct however the season may start earlier or extend longer based on the recommendation of the Grn Fire Chief (GFC).
3. All fires occurring in the RTA will be considered an emergency. All fires, regardless of the type, shall be reported immediately to Range Control.

### REPORTING OF FIRES

4. Reports of wildland and non-wildland fires in the RTA shall be made to Range Control by the fastest possible means. The report should contain the following information:
  - a. the Grid Ref of the fire;
  - b. description of what is burning;
  - c. approximate size of the fire area (metre sq.);
  - d. rate and direction of spread of the fire;
  - e. values at risk (human life, buildings, close to PRF or civilian property);
  - f. firefighting resources on site (number of personnel, fire-fighting equipment);
  - g. action being taken (monitoring, recce, suppression, etc.);
  - h. name of onsite contact; and
  - i. the unit reporting the fire.

### FIRE WEATHER INDEX

5. During the Fire Season, utilizing the four weather stations located in Areas 2, 6, 7 and the Petawawa Research Forest (PRF), the Fire Weather Index (FWI) is a scale used to provide a numeric rating of the relative potential for wildland fire. The FWI at 4 CDSB Petawawa is broken down into five classes. The restrictions on training that are associated with each class are:
  - a. **Low.** No restrictions on training;
  - b. **Moderate.** No restrictions on training however units should take note that the index is rising and take reasonable caution with ignition sources;
  - c. **High.** Extreme caution is to be observed while conducting any training during High FWI indices. The use of all burning types of ammunition is restricted. These restrictions may be modified only on authority of Ops Svcs 4 CDSB Petawawa. The specific restrictions during High FWI indices are:

- (1) no tracer ammunition;
  - (2) no training ammunition that contains a tracer element;
  - (3) no smoke ammunition;
  - (4) no white or red phosphorous ammunition;
  - (5) no para flares;
  - (6) no trip flares;
  - (7) no illuminating ammunition; and
  - (8) all open fires are banned.
- d. **Extreme.** Extreme caution is to be observed concerning all heat sources, including combustion engines and hot exhaust gases. These restrictions may be modified only on authority of Comd 4 CDSG. The specific restrictions during Extreme FWI indices are:
- (1) Ball and Frangible ammunition on gallery ranges;
  - (2) CEASS ammunition with care taken to ensure hot casings are not ejected into combustible material such as dry grasslands and dry forest floor material;
  - (3) Blank ammunition with care taken to ensure hot casings are not ejected into combustible material such as dry grasslands and dry forest floor material;
  - (4) Thunder Flash and Artillery Simulator pyrotechnics with care taken to ensure they are used in vegetation free areas;
  - (5) Grenades (live and training);
  - (6) Basic demolition and breaching charges;
  - (7) 40 mm training ammunition; and
  - (8) Defensive Command Detonated Weapon (DCDW) C19 training ammunition.
- e. **Extreme Plus.** No firing of any ammunition of any type. In some instances, the RTA may be closed and units ordered to evacuate.

6. Small fires can quickly turn into major fires depending the weather and ground conditions. These FWI restrictions are broad based and cannot cover every exact square inch of the RTA. Restrictions may be lifted or a more stringent restriction imposed depending on type and quantity of current fires burning, firefighting resources available and predicted weather patterns. Units should plan very carefully when using any type of ammunition that by nature or function can cause a fire.

7. **FWI Calculations.** The FWI Index consists of 6 components that account for the effects of fuel moisture and wind on fire behavior. Questions on how the FWI levels are established should be directed to the 4 CDSB Petawawa Fire Hall who are the OPI for the data.

## **FWI WAIVERS**

8. **Training Within the Issued FWI Framework.** If a unit wishes to continue training within the bounds of the FWI restrictions outlined above, a FWI Waiver is not required. In this case, should a RTA fire occur, 4 CDSB Petawawa will take the lead role in expenditure management activities and any financial pressures will be reported to 4 CDSG as part of the quarterly review process.

9. **Training Outside of the Issued FWI Framework:**

- a. Despite the RTA Fire Risk Mitigation Strategy, given the weather in the Petawawa area it is acknowledged that FWI related training restrictions may apply to nearly all daytime activities that involve field firing or pyrotechnics from April until October. It also acknowledged that, given the severity of Petawawa's winter months, April to October also represents the best window of weather for training. However, given our responsibilities as custodians of our land, our people, our fiscal resources and our duty to be a good neighbour to those who border our property, there must be a careful examination as to whether accepting the risk of an RTA fire in order to conduct training is really the prudent decision;
- b. In matters of wildland fire risk and the requirement to employ 4 CDSB Petawawa Fire Department resources in support of training, the GFC and his S-300 Wildland Incident Commander qualified staff are considered Subject Matter Experts and the Chain of Command is expected to heavily weight their advice when making decisions regarding assumption of fire risk; and
- c. If a unit considers it imperative that training continue and the training is in contravention of the FWI restrictions imposed at the reference, a FWI Waiver is required.

10. **FWI Waiver Request Submission Process.** FWI Waiver requests are to be sent to the Sr Ops O 4 CDSB Petawawa Ops Svcs for furtherance to Comd 4 CDSG (or his delegated authority) for consideration. All unit waiver request must include:

- a. Exact type of ammunition that the waiver is requested for;
- b. Requested duration of the waiver;
- c. Exact locations or areas in the RTA in which the waiver is required;
- d. The unit fire suppression resources (equipment, personnel, etc.) available and the action the unit will take to prevent the spread of fire;
- e. The impact if the waiver is not supported (i.e. – unable to grant course qualification, will be required to cancel training, etc.); and

11. **Mandatory Requirements.** As part of the FWI Waiver request, the requesting element must include:

- a. **Elements of 4 Cdn Div.**
  - (1) L101 Operations and Maintenance (O&M) and L111 Salary Wage Envelope (SWE) financial coding with Section 32 authority to support cost recovery of any



4 CDSB Petawawa Fire Department support provided to the FWI Waiver related training; or

- (2) A 4 Div order tasking 4 CDSB Petawawa to provide fire service support to the FWI Waiver request. In this case, all waiver related expenditures will be captured by 4 CDSB Petawawa for reporting to 4 CDSG during the quarterly review process.
- b. **Non-4 Cdn Div Elements.** L101 and L111 financial coding with Section 32 authority to support cost recovery of any 4 CDSB Petawawa Fire Department support provided to the training; and
  - c. **CANSOFCOM Elements.** As outlined in the 4 CDSG / CANSOFCOM Service Level Agreement (SLA), CANSOFCOM is providing an annual baseline fund transfer to essentially “pre- pay” for Fire Department support to their training. As such, CANSOFCOM FWI Waiver requests do not require financial coding.

### **BURN BOXES IN AREA 7 AND 8**

12. Three burn boxes are established, one in Area 7 and two in Area 8 so that the spread of a fire caused by artillery or mortars can be contained.

13. During the Fire Season all illuminating ammunition, white or red phosphorous ammunition and smoke ammunition shall be fired so as to impact or function in or over a burn box. Special care should be taken so that canisters are not carried out of a burn box by winds or momentum.

14. The actual weather conditions i.e. heavy rains or late snow, may allow some flexibility with this restriction. During certain conditions, High Explosive ammunition may be restricted to these burn boxes as well. Authority to temporarily lift this restriction rests with Range Control.

15. The burn boxes are shown at Annex E. A copy of a 1:50,000 scale overlay of the burn boxes can be obtained from Range Control.

### **RESPONSIBILITIES**

16. Responsibilities in the RTA are:

- a. **All military and civilians** - when in the RTA they are responsible for the prevention and reporting of fires. 4 CDSB Petawawa, Ops Svcs through the 4 CDSB Petawawa Fire Hall may direct any unit in the RTA to assist in firefighting operations, strictly following the direction in Annex C, the RTA Access and Use Table with regard to firefighting.
- b. **OIC of Exercise / Training** - prior to entering the RTA:
  - (1) Must be fully aware of the Range Standing Orders Fire Orders and ensure members of his unit are also aware of SOP's regarding RTA fires;
  - (2) Ensure unit is briefed about and equipped with first line firefighting equipment;
  - (3) Ensure his unit is aware of the fire hazard level;

- (4) Ensure his unit strictly adheres to training restrictions as issued by Range Control;
  - (5) Promptly report all fire ignitions to Range Control by the fastest possible means;
  - (6) Be prepared to take the necessary action required to extinguish and/or control the spread of the fire; and
  - (7) Be prepared to rendezvous with and provide assistance to 4 CDSB Petawawa Fire Hall personnel on their arrival at the fire site.
- c. **Action to be Taken by Senior Rank Present** - when unit personnel cause or discover a fire:
- (1) Report fire to Range Control by the fastest possible means;
  - (2) Suspend live firing in the affected area;
  - (3) Establish a CP and maintain constant communications with Range Control;
  - (4) When possible take necessary action to extinguish and / or control the spread of the fire;
  - (5) Rendezvous with and provide assistance to firefighting personnel. 4 CDSB Petawawa Fire Hall personnel will assume authority in directing firefighting resources and operations;
  - (6) Unit will not leave the fire site until authorized to do so by the 4 CDSB Petawawa Fire Hall; and
  - (7) If there have been injuries or loss of equipment, submit a report to his/her unit and the 4 CDSB Petawawa Fire Hall as soon as it is practical.
- d. **Range Control Officer** - is responsible for providing a safe range environment for firefighting operations. He will ensure fire hazard level information is received and relayed to range users and will receive all fire reports and relay them to the 4 CDSB Petawawa Fire Hall; and
- e. **Range Control** - After the receipt of a fire report Range Control duty personnel are responsible for:
- (1) Immediately informing the 4 CDSB Petawawa Fire Hall via phone or radio;
  - (2) As necessary suspend live firing and / or training in the applicable areas to facilitate firefighting. Inform the responding fire crews on route when the area is safe to enter;
  - (3) Continue to gather updated information from person reporting the fire; and
  - (4) Continue to monitor firefighting operations by requesting SITREPS from the fire boss on scene.

## **FIRST LINE FIRE FIGHTING EQUIPMENT**

17. All units conducting training in the RTA during the Fire Season are required to have in their possession first line firefighting equipment.

18. First line firefighting equipment for all training that **includes ammunition**, of any type, in Areas 1, 2, 3, 4, 5, 6, 7, 8, 9, M203 Range, A Range and the Bush Lane shall be comprised of:

- a. 1 x full serviceable pack pump for every 5 personnel to a maximum of 10 pumps per location;
- b. 1 x shovel for every 5 personnel to a maximum of 10 shovels per location; and
- c. 1 x rake for every 10 personnel to a maximum of 10 rakes per location.

19. First line firefighting equipment for all training that **includes ammunition**, of any type, at B Range, C Range, D Range, E Range, Q Range, Mechanical Target Range, X Range, Y Range, Grenade Range, Urban Assault Course, Urban Ops Village and Ortona Urban Ops Site shall be comprised of:

- a. 2 x full serviceable pack pumps per location;
- b. 2 x shovels per location: and
- c. 1 x rake per location.

20. First line firefighting equipment for all training that **includes ammunition**, of any type, in Areas A - L require the same amount of first line firefighting equipment as listed in para 18 a-c.

21. First line firefighting equipment for all training that **does not** include ammunition in Areas A - L require the same amount of first line firefighting equipment as listed in para 19 a-c above.

22. First line firefighting equipment requirements may be adjusted by the 4 CDSB Petawawa Fire Hall or Range Control, with 4 CDSB Ops Svcs approval, to match the activity.

23. Range Control will verify that all units entering the RTA have the required first line firefighting equipment via verbal confirmation on the Range Safety Net.

## **BONFIRES / CAMP FIRES / MAN MADE FIRES**

24. Because there is no reliable historical data on the use of UXO producing ammunition in the RTA, bonfires, campfires or man - made fires (known collectively as open fires) are not recommended. In February of 1988, Force Mobile Command (FMC), a predecessor to the Canadian Army (CA), ordered that all open fires are to be banned unless the area where the fire is built is guaranteed and certified to be dud free. With regard to the aforementioned policy, HQ 4 CDSB Petawawa recognizes the training value for troops to build open fires for military training purposes.

25. If open fires are considered to be an essential portion of the training, units shall submit a waiver request to the Sr Ops O Ops Svcs 4 CDSB Petawawa a minimum of seven days in advance indicating the location of the open fire.

26. Open fires can also be requested on any body of water, during the winter season, only if the ice thickness will support the activity and all materials are removed from the ice surface upon completion.

27. Units authorized to build open fires shall take all steps required to ensure the safety of the troops and that the fire will not spread.

#### **REGULATIONS SPECIFIC TO THE PRF**

28. In addition to the regulations stated above, the following regulations shall be strictly adhered to while conducting training in the PRF:

- a. the first line firefighting eqpt listed in para 18 a-c above shall be considered the minimum and shall be inspected by the 4 CDSB Petawawa Fire Hall prior to the commencement of any Live Fire trg for completeness and serviceability;
- b. all open fires, as listed in para 24 above, are strictly prohibited in the PRF;
- c. smoking and all stoves and heat sources for food or drink preparation shall only take place in designated areas that are free from combustion sources;
- d. all smoking materials shall be field stripped to ensure they are completely extinguished;
- e. if the FWI reaches Extreme then all firing in the PRF shall cease;
- f. requests for a waiver to conduct Live Fire trg once the FWI reaches Extreme may only be authorized by Comd 4 CDSG; and
- g. 4 CDSB Petawawa Fire Hall personnel shall use the data from the Area 6 weather station first and then the PRF stations to determine the FWI level for the PRF.

## Chapter 3 – ENVIRONMENTAL ORDERS

- References:
- A. Defence Energy and Environmental Strategy, 2017
  - B. DAOD 4003-0 Environmental Protection and Stewardship dated 30 July 2004
  - C. DAOD 4003-1 Hazardous Materials Management dated 24 June 2006
  - D. Canadian Army Environmental Policy dated October 2013
  - E. 4 CDSG Administrative Instructions (AIs) – Environmental Instructions last updated 13 June 2016
  - F. Directive Regarding Wildlife at Risk dated 20 April 2018

### GENERAL

1. RTA users must be aware of the potential effects of training on the environment. There is command, supervisory and individual responsibilities regarding environmental protection. The 4 CDSG Environmental AIs are a resource available to all units using the RTA. It outlines specific environmental concerns and procedures for 4 CDSB Petawawa including the requirements for Environmental Impact Assessments in the RTA, Spill procedures, Halocarbon Management, and Species at Risk. Despite past treatment of the RTA, and the present state of certain areas within it, avoidable environmental abuses will no longer be tolerated. In addition to this, commanders must be prepared to identify avoidable damage as soon as they become known and to initiate action to repair / mitigate damage where possible.

### RESTRICTED ACTIVITIES IN PROTECTED AREAS

2. **The Barron River Canyon.** The Barron River Canyon from GR 067 821 to GR 128 837 is a provincially significant Area of Natural and Scientific Interest (ANSI). The following mitigation factors shall be employed while training in this area:

- a. no off road vehicle movement is authorized;
- b. no cutting or removal of vegetation along the rock face and at the top of the canyon;
- c. minimal disturbance to other vegetation along the rock face; and
- d. natural or removable anchors / anchor points shall only be used if rappelling.

3. **Montgomery Lake.** The Montgomery Lake ANSI is significant for its terrain and forest type. It is a rectangular strip with corners at GR 017 908, GR 016 907, GR 018 902 and GR 020 904. Activities are limited to foot borne or light vehicle traffic on roads and trails.

4. **Area H Species at Risk.** All immature jack pine stands within Area H are considered Critical Habitat for an Endangered Species and are protected under the Species at Risk Act. All activities shall minimize disturbance in these areas. Consult with 4 CDSB Environment Services (Env Svcs) for more information. See also Para 52.

5. **Cemetery, Grave Site and Cairn in the RTA.** The Cemetery located along Veritable Road at GR 171 884 in Area 2, the Grave Site of Henri Raymond at GR 134 856 in Area 4 and the Cairn for Trooper Waldron at GR 059 872 in Area 7 are not be used for any training or directly targeted for firing.

6. **Area 9 South of Perch Lake.** The area South of AECL property (Perch Lake) in Area 9 is a restricted movement area. No training or movement through this area is permitted unless authorized by Range Control. The boundary of this restricted movement area runs from GR 170 990, West to GR 146 990, North West to GR 142 992, North East along the 4 CDSB Petawawa Boundary to GR 170 004 and South to GR 170 990.

## ARCHAEOLOGICAL SITE CONCERNS

7. A display of typical artifacts is available for examination at Range Control. Should such an artifact be discovered during a training activity, its location will be reported to Range Control. Ideally the artifact should be left exactly where it was found. However, if this would result in its loss, the artifact will be turned into Range Control along with a description of where it was located.

## REMOVAL OF NATURAL RESOURCES FROM THE RTA

8. Unless authorization is obtained from RPOU (O) Det Petawawa HQ or 4 CDSB Env Svcs, no one shall remove any Natural Resources from the RTA. Authorization can take the form of a signed contract between a contractor and 4 CDSB Petawawa, written permission from the RPOU (O) Det Petawawa RTA Cell, RPOU (O) Det Petawawa chain of command or the 4 CDSB Petawawa Env O. Natural Resources include, but are not limited to:

- a. flora;
- b. fauna;
- c. deadfall wood;
- d. cut or split wood;
- e. soil;
- f. sand;
- g. gravel;
- h. stones or rocks; and
- i. vegetation.

## ACTIVITIES REQUIRING ENVIRONMENTAL REVIEW IN THE RTA

9. Annex G – Activities Requiring Environmental Review in the 4 CDSB Petawawa RTA lists the common activities that need to be reviewed by 4 CDSB Env Svcs to determine if an Environmental Impact Assessment is required. For activities not listed in the table, read the rules and regulations for the specific types of training listed in this Chapter and if doubt still exists follow 4 CDSG AI 6.103 and consult your Unit Env O and the 4 CDSB Petawawa Env O to determine if an environmental review is required.

## GARBAGE CONTROL

10. **Dumpsters at Range Control.** All units garrisoned at Petawawa must bring their refuse back to their unit lines and sort into the dumpsters that are part of the Grn Solid Waste Stream Diversion Program (4 CDSG AI 6.108). Only visiting units to 4 CDSB Petawawa are authorized to use the locked dumpsters located at Range Control. These dumpsters are colour-coded as part of the Solid Waste Stream Diversion Program and it is recommended that users place refuse in the appropriate bin **RED** (non-recyclable waste), **BLUE** (paper and cardboard) and **BLACK** (plastics, metals, and glass). All these garbage items can be combined together and placed in the **RED** dumpsters. Only clear bags are authorized to be used in the dumpsters. Only garbage that is generated by units training in the RTA will be allowed in these dumpsters. Units shall not be permitted to use these dumpsters for Garrison generic or Garrison generated

garbage. The keys for the dumpsters are held at Bldg RR- 119 Centurion Gate. Under no circumstances will dry or wet garbage be buried or left in the training areas.

11. **Control and Access.** Range Control personnel will control the access to these dumpsters and may refuse anyone abusing or attempting to drop off unauthorized items. Absolutely NO USED TARGETS, METAL, WOOD, TIRES, COMMS WIRE or HAZMAT MATERIALS shall be placed in these dumpsters. If unauthorized items are discovered in the dumpster then the unit will be held responsible to clean out the offending materials and may be held accountable for any fines or associated costs.

12. **Deploying Dumpsters in the RTA.** Battalion or larger sized units / formations may request garbage dumpsters deployed into the RTA. All visiting units shall indicate their request on the 4 CDSB Petawawa Training Support Request (TSR). The request shall then be forwarded to the RPOU (O) Det Petawawa Contracts Cell. Local units may deal directly with the RPOU (O) Det Petawawa Contracts Cell. Cost estimates may be requested by the requesting unit and can be provided by the RPOU (O) Det Petawawa Contracts Cell. Financial Codes shall accompany the initial request.

13. **Deployed Dumpster Area Selection.** The area selected for the deployed dumpsters must be firm, flat, dry, accessible to and large enough for a garbage dump truck to enter in to complete his work and exit from. This will restrict these deployments to certain areas of the RTA. Range Control will verify the suitability of the proposed deployment area and the RPOU (O) Det Petawawa Contracts Cell will retain final approval on the site selected. The requesting unit shall bear all costs for transport, dumping and any other associated costs for the deployed dumpsters. Deployed dumpsters will be locked and controlled by the unit who ordered the dumpsters. If unauthorized items are discovered in the dumpster then the unit will be held responsible to clean out the offending materials and may be held accountable for any fines or associated costs.

14. **Bulk Garbage and Waste Control.** Units who bring targets, structures and any materiel that is not authorized to be placed in the dumpsters at Range Control mentioned above, must remove that materiel from RTA at the unit's expense. Visiting units to 4 CDSB Petawawa can indicate in the initial TSR that they require support in disposing of bulk waste. Range Control does not have any facility or capacity to handle bulk garbage or waste for any unit in the RTA. Units can make arrangements to take bulk waste to the Bulk Waste Transfer Site located on Flanders Row in the garrison.

15. **Ammunition Salvage.** All ammunition salvage, spent casings, links and spent pyrotechnics will be recovered, to the extent that is safe, feasible and reasonable, and returned to the Ammunition Compound. Under no circumstances will units take salvage or ammunition to the Bulk Waste Transfer Site or bury it in the RTA.

16. **Misfired Ammunition.** Misfired ammunition will be returned to the Ammunition Compound when all procedures in C-09-008-002/FP-000, Destruction of Dud and Misfired Ammunition and applicable weapons and ammunition manuals have been carried out.

## FIELD SANITATION

17. **Human Waste (Black Water).** Units will use some form of toilet for human waste while in the RTA. No cat sanitation or field latrines are authorized whatsoever in the RTA. Units may use any form of field commodes / toilets or portable toilets available from 4 CDSB Tech Svcs for their human waste containment requirements. Local units shall contact 4 CDSB Tech Svcs local 5805 to order the portable toilets. Visiting units shall demand portable toilets in their TSR to the 4 CDSB Petawawa Ops Svcs Operations WO. All maintenance and pumping of these toilets is coordinated by 4 CDSB Tech Svcs.

18. **Winter Exercises.** During winter exercises, or when the placement of portable toilets is not feasible, units will use field commodes / toilets. All human waste shall be doubled bagged which will be left for pickup by a contractor at GR 201 851 at the entrance to the portable toilet storage area just off Paquette Rd and GR 171 948 near the Range Warden's office on Deluthier Rd. Pickup of the human waste bags will be coordinated by 4 CDSB Tech Svcs.

19. **Bivouac Areas.** There are grey water tanks in the permanent bivouac sites established in Areas A, C, E, H, I, K and 3.

20. **Grey Water Tanks.** If a unit is not planning on using the bivouac areas mentioned above, then grey water bladders or grey water tanks must be used for platoon size deployments and greater. Range Control has a limited number of tanks that units can sign out to use in the training area. Units are responsible for all transportation and the emptying of these tanks.

### **TRACKED VEHICLES, APC DOZER AND BULLDOZER TRAINING**

21. Pivot turns will not be executed in the RTA whatsoever. Drivers and Crew Commanders will exercise extreme caution while turning with any tracked vehicle to minimize the damage to the roads and terrain. Considerable damage to the environment of 4 CDSB Petawawa will result if Tracked, APC and Dozer training is not well coordinated and controlled.

22. APC Dozer and Bulldozer trng in Area 1 is restricted. Contact Range Control for details.

23. Approval must be obtained in advance for any activity involving grading or excavation. Appendix 1 Annex A, Digging, Blasting, Vegetation Removal, Earthmoving, Obstacle Request shall be submitted to Range Control.

24. An Environmental Impact Assessment (EIA) must be conducted prior to any construction of new roads or permanent conversion of forests to cleared land. Construction-type EIAs are to be conducted with the assistance and consultation of RPOU. All other unit-driven projects or training exercises should consult with Env Svcs during the preparation of the EIA. Information on whether or not a project or activity requires an EIA can be located in 4 CDSG AI 6.103 Environmental Impact Assessment.

### **NOISE COMPLAINTS**

25. In accordance with the 4 CDSB Petawawa Noise Complaint Policy, all complaints received from the public about noise from training in the RTA will be referred to 4 CDSB Ops Svcs Public Affairs, through Range Control. Under no circumstances should personnel undergoing training involve themselves with any complainant.

### **MANOEUVRE DAMAGE CONTROL**

26. Range Control may impose limitations on off-road usage of specific areas to ensure their long-term protection as viable training areas. Tracked vehicles will not perform Pivot Turns and all drivers and crew commanders will exercise extreme caution while turning with any tracked vehicle to minimize damage.

27. Vehicles remaining stationary for more than one hour shall use drip pans. Drip pans shall be emptied into oil absorbing sheets or waste POL containers for disposal in garrison. Do not allow drip pans to fill with rainwater as the oily water will have to be disposed of and if the overflow contaminants will spill onto the ground. While the minimum standard is at least one spill kit for every five vehicles, it is recommended that every vehicle carry a spill kit to control spills from that vehicle. Any spills shall be responded to as per para 77.



28. The use of vehicles off-road is to be guided by the MANOEUVRE DAMAGE CONTROL (MDC) SYSTEM. The MDC limitations and principles are listed below in Tables 1 and 2.

**Table 1. MDC LIMITATIONS**

Condition Green	Condition Amber	Condition Red
Terrain will support realistic manoeuvre and unrestricted cross-country movement of tracked vehicles (See above).	Soil is partially saturated.  Limited cross- country manoeuvre is permitted in local areas based on judgement of local unit commander (See above).	Soft and saturated soil conditions prevent cross-country movement (See above).
Avoid "Fishtailing".	One-Way traffic on narrow roads.	All vehs stay on roads and well-drained trails.
Sharp turns in low gear only.	Breakdowns on one -way roads towed to turnoffs.	Tracked vehicles and LAV's remain in column.
Move on and off roads gradually.	Remove mud accumulated on roads.	Resupply and maint on hard surfaces (Including refueling).

**Table 2. MDC PRINCIPLES**

DO	DO NOT
<p>1. Do obey the trg area speed limit (50 km/h or as posted).</p> <p>2. Do take care when crossing under power and telephone lines to ensure that your antennae, Do not foul them.</p> <p>3. Do respect Protected areas and cemeteries.</p> <p>4. Do fill in any digging or ruts before you leave an area.</p> <p>5. Do enforce strict fire safety precautions at all times.</p> <p>6. Do leave every place you occupy tidy and clean.</p> <p>7. Do report all damages immediately.</p> <p>8. Do remove all barbed wire and signal cable from the Ex area. This is liable to snare animals.</p> <p>9. Do pick up all expended or unexpended blank ammo and pyrotechnics.</p> <p>10. Do clear all roads of excessive mud caused by vehicles entering roads from fields</p> <p>11. Do use a ground guide to check doubtful terrain.</p> <p>12. Do use wet ditches or depressions for vehicle recovery training (not wetlands, creeks, or other water bodies) and repair any damage afterwards.</p>	<p>1. Do not cut down trees or brush outside approved areas and without prior authorization.</p> <p>2. Do not leave gates open or knock down fences or walls.</p> <p>3. Do not destroy nesting areas or beaver dams.</p> <p>4. Do not bury garbage.</p> <p>5. Do not drive vehicles on underclass roads or bridges.</p> <p>6. Do not cross old railway line bed or Hwy 17 except at recognized crossings.</p> <p>7. Do not dig into old railway line bed embankments, bridge abutments, dykes or flood banks, or within 10 m of roads.</p> <p>8. Do not refuel within 30 m of water bodies. Always use secondary containment when refueling.</p> <p>9. Do not enter wetlands with vehicles.</p> <p>10. Do not perform Pivot Turns with tracked vehicles at any time or location.</p>

**TRAINING ON OR NEAR WATER**

29. Explosives shall not be targeted to impact or detonate within 50 metres of any stream, river, lake or wetland shown on the map unless authorization has been granted from 4 CDSB Env Svcs.

30. **Vehicle Recovery Training.** Vehicle recovery training may only be conducted in seasonal/temporary wet areas, such as wet depressions or ditches, and not permanent water bodies such as wetlands, creeks, and lakes. Wet areas are considered temporary if they lack typical vegetation such as

reeds or cattails. It is recommended to consult with 4 CDSB Env Svcs for assistance. The unit is responsible for repairing any damage.

31. **Fording, Rafting and Swimming.** Forging of the Petawawa River by military vehicles may only take place with prior approval of Env Svcs. Units shall request the training in the normal manner and Range Control shall contact Env Svcs to start the process. A site visit from the 4 CDSB Env O and an EIA will be required. The unit will be responsible for the EA, through their own Unit Environmental Officer. Env Svcs may be able to assist with the EA, but ultimately the responsibility lies with the originator. All sites for vehicle swimming will be approved only if the approach is at right angles to the banks, on firm granular materials at points where the banks are low and slopes are gentle (less than 5 percent slope).

32. Vehicles shall not be washed in any water body.

33. Units shall have appropriate spill response supplies located on shore and/or in boats during vehicle swimming or rafting. The Unit shall also arrange to borrow a 15 metre yellow containment boom from the Grn Fire Hall, to be kept ready on shore.

34. Vehicles shall have drain plugs in position at all times.

35. Wetlands shall not be traversed by any vehicles. A minimum buffer of 30 metres of natural vegetation will be maintained along the shorelines of water bodies and streams.

36. Units shall not refuel any form of vehicle on the water.

37. Assault boats may be launched at any location with adequate approaches, soils and slopes as per above.

38. All proposals for underwater demolition or ice blasting must be submitted in advance to Range Control. Range Control will verify with the 4 CDSB Env O to ensure that the proposed activities are in conformance with the Fisheries Act before giving authorization to proceed. Requests for this trg must be submitted well in advance in case permissions are required from Fisheries and Oceans Canada. Underwater demolition and ice blasting are also required to go through the EIA process.

#### **MILITARY FIELD DEFENCES AND OBSTACLE CONSTRUCTION**

39. The directions and restrictions found in the RTA Access and Use Policy, Annex C shall be strictly adhered to.

40. With the exception of the 70 cubic metre rule mentioned in para 42 below, all requests to construct military field defences and obstacles in the RTA for training purposes shall be sent at least 2 weeks in advance to Range Control by using Appendix 1 to Annex A Digging, Blasting, Vegetation Removal, Earthmoving Request Form. Range Control shall then consult with Env Svcs and RPOU (O) Det Petawawa where required.

41. Military field defenses include but are not limited to:

- a. shell scrapes;
- b. personal fire trenches and shelters;
- c. emplacements for sp wpns, arty and F Ech veh;

- d. any obstacles create with defensive stores or natural materials or with man-made materials;
- e. target emplacements; and
- f. any other defensive works that may disturb or require the removal of rock, soil, vegetation and or trees by either hand, mechanical or explosive means. If there are any questions, consult with Range Control.

42. **70 Cubic Metre Rule.** With the exception of the three areas listed directly below all shell scrapes, target emplacements, personal and support weapon trenches which disturbs or displaces less than 70 cubic metres of soil may be created without submitting Appendix 1 to Annex A as long as no trees or major vegetation growth is compromised and the unit provides detailed information in the booking request that they will be digging during the training. All shell scrapes and trenches shall be filled in immediately before the unit departs that specific location of the digging.

43. **Restricted Digging Areas.** The following areas are restricted for digging and require prior authority:

- a. Area 1 includes DZ Anzio and as such all digging is restricted in this area. Units shall confer with Range Control prior to digging in Area 1;
- b. Area D includes DZ Dives Crossing thus all digging is restricted in this area. Units shall confer with Range Control prior to digging in Area D; and
- c. Landry Crossing in Area L.

44. All digging at Landry Crossing shall have prior authority from RPOU (O) Det Petawawa.

45. **Root Zone Soil.** Root zone soil (commonly referred to as topsoil) shall be piled separately from subsoil and replaced last when an excavation is backfilled.

46. **Backfilling.** Excess backfill material shall be mounded over excavations, as best as possible, to a height of 10 to 20 percent of the depth of excavation to allow for subsequent settling of the soil.

47. **Backfill Material.** Scrap or plant material (e.g. branches, logs, leaves, needles, and grass) SHALL NOT be used as backfill material, but may be used to protect the surface of the backfill from erosion.

48. **Digging Near Water.** Digging related to military training shall not take place within 30 m of any water body with the exception of bridge guards. Bridge guard defensive positions will make maximum use of sandbags to minimize digging. Following the training, all holes shall be filled and sloped to their original state.

## **CUTTING TREES, PRUNING, GRUBBING AND VEGETATION CLEARING**

49. **Definitions.** For the purposes of these orders, tree cutting is defined as the cutting down or felling of any size tree by any method. Pruning is the cutting of any limbs from a tree. Grubbing is the removal of tree roots and stumps. Vegetation clearing is the removal of any shrubs, bushes, grasses, etc.

50. **Appendix 1 to Annex A.** All requests for grubbing, vegetation clearing, and or the cutting of trees less than 9 cm Diameter at Breast height (DBH), must be requested to Range Control using

Appendix 1 to Annex A of these orders. As a quick reference, 9 cm DBH is 28 cm circumference (approximately the circumference of a softball).

51. **Tree Cutting Request.** When a unit wishes to cut trees that are greater than 9 cm DBH the Tree Cutting Request Form, found at Appendix 8 to Annex A shall be used. Assistance with completing the Tree Cutting Request Form can be obtained from 4 CDSB Env Svcs. The Tree Cutting Request Form must be reviewed and approved by both the RPOU (O) Det Petawawa Forestry Manager and 4 CDSB Env Svcs. The unit is responsible for obtaining these authorizations.

52. **Species at Risk Sites and Critical Habitat Areas.** Species at Risk (SAR) sites and Critical Habitat (CH) areas are very restrictive for vegetation and tree removal. For up to date information on where in the RTA are the SAR and CH areas contact 4 CDSB Env Svcs. When it is deemed necessary to cut trees in or near an area deemed to contain SAR or CH an EIA is normally completed. See Paras 94-97 for more SAR information.

53. **Cutting.** There shall be no cutting of trees within 30 m of any water body. All trees that are cut for training purposes will be identified through Range Control by the RPOU (O) Forestry Manager. Clear cutting of any forested area is strictly forbidden. Normally every second tree will be cut so as to “thin out” the forested area rather than “clear cut” the forested area.

54. **Pruning.** The pruning of tree branches, to a maximum height of 1.5 m above the ground, is authorized for the construction of improvised shelters for winter training or camouflage purposes. Units shall exercise caution and only clean cuts as close as possible to the trunk of the tree, without causing damage to the trunk, are authorized. The pruning of trees in the RTA shall be limited to non SAR sites or non CH areas only.

55. **Use of Vegetation for Camouflage.** The uprooting of vegetation for camouflage purposes is strongly discouraged. To alleviate any surface soil erosion, vegetation shall be uprooted sparingly and none within 30 m of any water body. All camouflage material shall be cut cleanly. It shall not be stripped off. Branches may be pruned from trees only as indicated above.

56. **Contracts.** All timber removal contracts, construction projects, roadwork projects and any other similar project with similar designs or expected results are not considered military field defences and obstacles and shall follow the appropriate rules and regulations that pertain to these projects.

#### **CONCERTINA WIRE, BARBED WIRE AND COMMUNICATION WIRE**

57. All concertina wire, barbed wire and communication wire shall be removed from the RTA as soon as any exercise involving these materials is completed. The locations of any such materials discovered by personnel in the RTA will be reported to Range Control.

#### **BULK TRANSPORT OF FUEL**

58. All drivers of bulk fuel trucks shall hold a valid DND 404 license with Dangerous Goods Qualification (as per C-02-040-010/MB-003 Driver’s Manual for Dangerous Goods) and qualification on the vehicle being driven.

59. Loaded bulk fuel trucks shall not be driven under blackout conditions unless approval has been granted in advance from Range Control.

60. All drivers must have received appropriate training in first-response spill procedures.

61. All bulk fuel trucks shall carry a 4 CDSG or Bde approved spill kit for first response to spills. Drive-on spill containment berms shall be used for refueling in the RTA as secondary containment and under any bulk fuel trucks and or trailers that will remain static in the RTA.
62. All bulk fuel trucks should have ready access to communication equipment that enables the driver to notify Range Control of any spill incident.
63. Fuel trucks shall not ford any streams or watercourses.
64. Bulk fuel trucks and any other vehicle carrying over 450 Kg of Dangerous Goods will have a placard in accordance with A-GG-040-004/AG-001, Hazardous Material Safety and Management Manual.

### **STORAGE OF POL AND HAZMATS IN THE FIELD**

65. Bivouacs shall have a single, prominently marked location for the storage of POL and other Hazardous or potentially contaminating materials (e.g. solvents) that is co-located with a fire point. These storage areas shall not be located within thirty metres of a water body. An approved spill kit shall be available at all storage locations.
66. Containers for POL and other potentially contaminating materials shall be stored in the field in standard, sheet steel, hazardous material secondary containers issued by DND, in field constructed containment areas (Figure 3) below or in portable containment berms (Figure 4) below. POL and waste POL storage points must be located at least 30 metres from water.
67. Waste POL, hazmat and empty one-way containers for these products shall be clearly labeled and shall also be stored in secondary containment as described in para 66 above.
68. Units shall transport only minimum quantities of HAZMAT. All HAZMAT (Except bulk fuel) shall be transported in its original manufacturer's container.

Figure 3. Field Constructed Secondary Containment Area

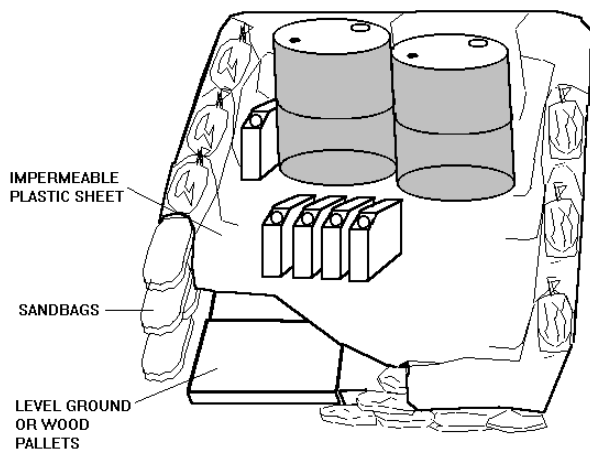
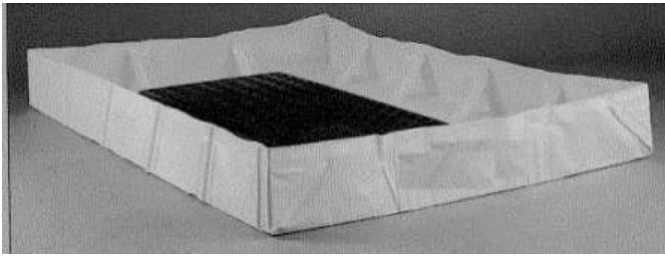


Figure 4. Portable Secondary Containment Berm



### **TRANSFERS OF POL AND HAZMATS IN THE FIELD**

69. All transfers of POL or HAZMAT shall take place over a drip pan or pad or other means of spill containment. Any spilled material shall be collected and stored in appropriately marked containers for subsequent disposal.
70. Funnels shall be used in all refueling situations where they reduce the potential for spillage.
71. Fuel transfers shall not take place within thirty metres of any water body or watercourse.
72. Spill kits and containers for spilled liquids or contaminated soil must be available at all POL transfer locations.

### **DISPOSAL OF HAZMAT**

73. This section deals with disposal of waste POL, contaminated soil, used absorbents and other HAZMAT wastes.
74. Units shall transport all HAZMAT from the RTA to their unit lines for disposal as per unit SOPs. Range Control will not collect HAZMAT from user units for disposal. Contact the 4 CDSG Safety Svcs HAZMAT O loc 6780 to arrange disposal of bulk POL contaminated soil.
75. Visiting units shall arrange for disposal of HAZMAT during working hours through 2 Svc Bn Supply Coy R & D local 5827. Consult 4 CDSG Safety Svcs for further information on HAZMAT disposal procedures.

### **ENVIRONMENTAL INCIDENT - IMMEDIATE ACTION**

76. The unit shall cease training and take appropriate action to reduce or eliminate any environmental damage. The Unit shall follow 4 CDSG AI 6.102 – Spill Prevention and Response. This AI contains further information on spill responsibilities and may be obtained on the [4 CDSG Administrative Instructions](#).
77. All spills meeting the following criteria must be reported to Range Control immediately as an environment incident:
  - a. the release of a Hazardous Material (HAZMAT) greater than 20 Litres, where HAZMAT is any material that if handled improperly can endanger human health and

well-being, property, equipment, or the environment (including all POL, antifreeze, etc.) and any amount of halon or halocarbons;

- b. a spill of HAZMAT that enters any water body (creek, river, lake, swamp);
- c. a spill of HAZMAT that is likely to migrate (leave) 4 CDSB Petawawa property boundaries or result in media/public involvement; and
- d. a release of any of the following materials: PCB, Asbestos, Lead, Mercury, Arsenic, Cadmium, Fluorides, Vinyl Chlorides, Radioactive Material, Biological or Chemical Warfare products, or Pesticides must be reported immediately.

78. If there is a release of halocarbons (i.e. from a vehicle fire suppression system), the unit must report it to 4 CDSB Env Svcs. A halocarbon release form (4 CDSG AI 6.106 Annex C) must be completed by the personnel responsible for the release and submitted to 4 CDSB Env Svcs for release reporting.

### **WILDLIFE CONCERNS**

79. Personnel undergoing training shall not block or divert any stream or destroy any existing beaver dam unless authorized by Range Control.

80. The killing of wildlife by any means in the RTA is strictly prohibited except under circumstances where human life is directly endangered or where specific trapping agreements are in place. Care should be taken when travelling on roadways to avoid hitting turtles which may be travelling on the roads or using them to nest. The RTA and the Petawawa Research Forest (PRF) contains turtles that are protected species under the Species at Risk Act.

81. Units shall Check Fire when they observe wildlife in the immediate vicinity of areas selected as targets. Occurrences of black bear, deer, moose or elk within targeted areas shall be reported to Range Control.

82. Feeding, harassing, capturing or handling wildlife is strictly prohibited.

83. Most wildlife will avoid contact with humans when strict hygiene, food and garbage procedures / controls are enforced.

84. Personnel are to exercise extreme caution when encountering carnivorous or omnivorous animals. It is recommended to make noise, use assertive vocal commands, back away slowly and give the animal plenty of space in which to leave the area. Contact Range Control ASAP when animals are encountered that do not leave the immediate area.

85. Any animal that is displaying unusual, aggressive or aberrant behaviour must be avoided. These animals may have rabies and must be reported immediately to Range Control.

### **NUISANCE BEARS**

86. **Responsibility and Training.** It is the responsibility of each unit to prevent bears from becoming a nuisance while training within the RTA. Env Svcs provides nuisance bear management training for designated personnel from each unit at Garrison Petawawa that utilize the RTA. The trained individuals



have the responsibility of ensuring that the unit complies with the procedures described in these RSOs and are responsible for the unit's actions that are taken to manage any particular bear issue.

87. The steps involved to manage nuisance bears in the RTA are as follows, in order of use:

- a. Prevention;
- b. Deterrence;
- c. Trapping or re-location of the unit if deemed necessary; and
- d. Dispatch.

88. **Prevention.** The majority of nuisance bear issues in the RTA are due to food/waste attractants that are accessed by bears. It is impossible to eliminate all attractants in the RTA, but it is possible to secure all food/waste so that they cannot be accessed by bears. If bears cannot access food rewards, they will move out to find other sources of food that they can access. Units are to secure all food, waste and other attractants so they are inaccessible to bears. Secured metal containers and portable electric fence are a few options that could be used to accomplish this. Feeding any animal is strictly prohibited.

89. **Deterrence.** Personnel are to deter bears by first using assertive verbal commands and loud noises such as air horns. If the bear does not retreat the deterrent items found in a bear management kit, described in para 92 below, can be used by authorized personnel. If the bear continues to be a nuisance, authorized personnel can haze the bear using a paintball marker. Paintball deterrents are only to be used on adult bears, targeting the rump. The intent is to inflict pain, but not injury, so no other target area is acceptable. Before the nuisance bear is hazed by paintball ammunition, a 12 gauge shotgun loaded with slug ammunition, must be made "Ready" to protect the paintball shooter in case the bear attacks. **Under no circumstances will the paintball gun be used against a nuisance bear without direct fire support from a 12 gauge shotgun loaded with slug ammunition.** For units without a bear management kit or if all paintballs from their kit have been depleted, authorized personnel can use thunderflashes to scare the animal with special precaution demonstrated to ensure no harm is done to the animal. Before using any deterrent method the animal must have a safe area or space to retreat to. Using deterrents and not allowing the animal a safe route may force the animal to attack. Always use verbal commands and identify yourself as a human no matter what form of deterrent is being used so the bear associates the negative experience with humans.

90. **Trapping.** Range Control holds four Bear Traps for use within the garrison-area, but can be deployed to the RTA if deemed necessary and if qualified personnel are available. Trapping within the RTA is minimally effective and thus will not be considered for most nuisance bear cases. Contact Range Control for trapping only if the bear returns on consecutive occasions after all attractants have been secured and deterrents deemed ineffective. Requesting a trap does not mean a trap will be deployed. Range Control may also direct the unit to evacuate that specific area and relocate to another location in the RTA.

91. **Dispatch.** Trained personnel have the authority to dispatch a nuisance bear within the RTA if deemed necessary by that individual. The safety of other users of the RTA must be considered in the risk assessment before dispatching a bear. Destruction of the animal should only be considered as a last resort and after all other prevention and deterrent techniques have failed. The destruction of the animal must occur as humanely as possible and thus only a 12 gauge shotgun loaded with slug ammunition is to be used. The shot must be made within 25m and the approved target area is the heart/lungs. The standard issue C-7 is NOT sufficient to humanely dispatch a bear and cannot be used. Contact Range Control

immediately after dispatching the bear for proper disposal of the carcass. Bears are protected under the Fish and Wildlife Conservation Act, and thus, the dispatching of a nuisance bear will be followed by an investigation by Garrison Petawawa Military Police to determine the justification of the action. For more information or to inquire about training, contact Env Svcs local 5960.

92. **Bear Management Kit.** A bear management kit is available at Range Control for use by each Unit's authorized bear management personnel. These kits must be requested in advance so the kit can be prepared for issue at the start of the training. These kits shall be inspected when returned to Range Control and any items used shall be accounted for in detail. Units are to supply their own 12 gauge shotgun, lethal ammunition and two authorized personnel to sign out a kit. The bear management kits contain all other necessary management tools, including non-lethal deterrents, portable electric fencing, detailed dispatch protocol, and contact information. Portable electric fencing can also be supplied separately from the rest of the bear kit and without the requirement for lethal backup or two authorized personnel.

93. **Range Control Course of Action.** The scope of training, the size of the deployed unit and the actions of the animal itself are factors that will be considered before any course of action is taken. Range Control may deploy a trap or may order the unit to evacuate that specific area. Keep in mind that you are training in the habitat of black bears, coyotes, wolves, deer, moose and other assorted wildlife.

**SPECIES AT RISK**

94. Species at Risk, requiring protection under the Species at Risk Act (SARA), are found within the RTA and the PRF. The following table and photographs will assist users of the RTA and PRF in identifying Species at Risk. Personnel are to respect exclusion zones or any other measures that might be in place to protect Species at Risk and their habitat. Personnel are also encouraged to report sightings by making note of grid coordinates and reporting them to Range Control.

95. The following information shows some of the species found in the RTA however it is not an exhaustive list of Species at Risk associated with 4 CDSB Petawawa:

- a. Table of Species at Risk 4 CDSB Petawawa:

<b>Species at Risk</b>	<b>Federal Status-</b>
Kirtland's Warbler	Endangered
Little Brown Myotis	Endangered
Golden-winged Warbler	Threatened
Olive-sided Flycatcher	Threatened
Canada Warbler	Threatened
Eastern Whip-poor-will	Threatened
Common Nighthawk	Threatened
Chimney Swift	Threatened
Bank Swallow	Threatened
Bobolink	Threatened
Eastern Meadowlark	Threatened
Wood Thrush	Threatened
Eastern Musk Turtle	Threatened
Blanding's Turtle	Threatened
Wood Turtle	Threatened
Western Chorus Frog	Threatened

b. Photographs:



Kirtland's Warbler



Golden-winged Warbler



Olive-sided Flycatcher



Canada Warbler



Common Nighthawk



Wood turtle



Blanding's turtle



Stinkpot turtle

96. A map of sensitive areas for Species at Risk within the RTA and PRF is available from the 4 CDSB Env Svcs ACIMS [site](#).

97. Although not in the RTA, Oiseau Rock, along the Ottawa River, is a significant nesting area for Species at Risk. There is a 500 metre radius no-fly zone centered at GR 211 005 as well as a minimum

flight ceiling level of 500 metres from the highest point at Oiseau Rock within the exclusion zone between April and mid-August each year.

## **SNARING AND FISHING FOR SURVIVAL TRAINING**

98. Units requesting to conduct snaring and or fishing for survival training must complete the Survival Training Request Form, Appendix 10 to Annex A. This single form will allow the expedited assessment and approval of all the survival activities to occur during the exercise to include fishing, snaring and vegetation removal for the building of shelters and or fuel for fires. Appendix 10 to Annex A must be submitted to Range Control at least two weeks in advance to ensure the appropriate planning can be carried out.

99. **Snaring.** Units conducting Survival Training may include snaring as part of any training conducted within the RTA boundaries. This does not include civilian or provincial property or any waterways that are not part of the RTA. All personnel will strictly follow all Ontario Ministry of Natural Resources and Forestry (MNR) rules and regulations, with the following inclusions:

- a. snare locations must be indicated to Range Control personnel and the complete area will be inspected prior to the unit departing to ensure all snares are dismantled;
- b. all animals caught will be reported on the RTA Clearance Checklist to Range Control during march out procedures indicating the species, the location caught and the date caught; and
- c. snares must be constructed of copper or brass wire between 22 and 24 gauge. Only snowshoe hares are to be targeted and the opening of the snare wire loop must be 10 cm (4 in.) or less in diameter. There are no daily catch or possession limits for snowshoe hare.

100. **Fishing.** Effective 01 Jan 19 MNR authorized veterans and active members of the CAF, who reside in Ontario, to enjoy free fishing across the province as a token of recognition for their service. In place of an Outdoors Card and recreational fishing license, veterans and active members will be required to possess and carry one of the following pieces of identification to legally fish in Ontario:

- a. Canadian Forces Identification Card (NDI 20);
- b. Record of Service Card (NDI 75); or
- c. Canadian Armed Forces Veteran's Service Card (NDI 75).

101. In accordance with other deemed licenses, veterans and active members of the CAF will need to follow the seasons, quotas and limits associated with a sport fishing license.

102. The RTA is situated within Fisheries Management Zone (FMZ) 15 and specific seasons and catch limits for a sport license in this zone can be found at the MNR website:

<https://www.ontario.ca/document/ontario-fishing-regulations-summary>.

103. Fishing for recreational purposes is not permitted within the RTA.

104. Lake Sturgeon is a provincially Threatened species for which no open fishing season exists. Lake Sturgeon are known to inhabit Chalk Bay, Sturgeon Lake, the Ottawa River and Petawawa River and the species shall not be targeted during any fishing activities within these waterbodies. If Lake Sturgeon are

captured incidentally while fishing for other species, they must be released immediately without photos or delays that may obstruct fish recovery time.

## CHAPTER 4 - DRY TRAINING

### SECTION 1 - GENERAL

1. All natures of Dry Training can be accomplished in the RTA. All orders, restrictions, publications, regulations, training publications, ammunition restrictions and any other local restrictions relating to safety, weapons handling or ammunition shall be followed.
2. Training Areas A, B, C, D, E, H, I, J, K and L are utilized mainly for Dry Training. Limited training can be conducted in Areas F and G, the Petawawa Research Forest, see below.
3. Dry Training can be conducted in Areas, 1, 2, 3, 4, 5, 6, 7, 8 and 9, however, Live Training normally takes priority over Dry Training in these Impact/Training Areas. There may be occasions that Live Training will take place in the Dry Training Areas.
4. **DZ Anzio and DZ Dives Crossing.** DZ Anzio in Area 1 and DZ Dives Crossing in Area D must be completely free, at the conclusion of the unit training, of all targetry, targetry pits, wire, pickets, field defensive works and obstacles that may cause injury to a parachutist. If a unit wishes to keep any of these works for future training events, this issue must be co-ordinated with Range Control in advance of the start of construction. As a minimum, all defensive works, trenches, obstacles, etc. shall be marked so they are obvious to other units conducting day and night training.
5. Coordination between units in which there will be Dry Training conducted near any Live Training Danger Area Overlay shall be conducted at the Range Control Weekly Coordination Conference the Wednesday prior to the commencement of the training. Continued coordination throughout the training between the units involved is mandatory to ensure a safe training environment for all.
6. Permanent target emplacements (cribs) for the Direct Fire Target System are placed throughout Areas 2, 6 and 9. Contact Range Control to obtain the locations of these cribs prior to conducting training in these areas.
7. Before commencing any Dry Training, consult the RTA Access and Use Table at Annex C.

### KEYS

8. Any key for any Dry Training facility that is expected to be signed out for greater than 14 days shall be returned to Range Control on the 14<sup>th</sup> day for verification and if authorized to do so the unit may sign that key out again.

## **SECTION 2 - USE OF THE PETAWAWA RESEARCH FOREST**

### **BACKGROUND**

9. The Petawawa Research Forest (PRF) was established on DND property in 1917 and in 1998 an agreement was renegotiated which delegates day-to-day managing authority to the PRF. Use of the PRF for military training is governed by the standing agreement already in place between DND and Natural Resources Canada (NRC) and between 4 CDSB Petawawa and the PRF. Any modifications or requests for modifications to these RSOs must be agreed upon between DND and NRC.

10. The boundaries of the Petawawa Research Forest are outlined on the Petawawa TAM.

### **RESTRICTIONS**

11. The following restrictions apply to all users of the PRF:

- a. tree cutting of any sort is not authorized;
- b. ball garbage and or salvage must be removed upon leaving the PRF area;
- c. no pyrotechnics are authorized for use in the PRF;
- d. no open fires are authorized in the PRF;
- e. all vehicles shall be restricted to the road system and any pre-authorized off-road open areas; and
- f. due to the large number of sensitive research plots and research areas within the PRF, vehicle and personnel movement near any sensitive plots or areas shall be restricted to the road system only.

### **REQUEST PROCEDURES**

12. All requests for training in the PRF shall be vetted by Range Control and then the training will only be authorized by Range Control after consultation with the PRF Site Manager or a designated representative.

13. Requests for use of the PRF are to be submitted to Range Control at the Weekly Coordination Conference as early as possible before the planned commencement of the training however two weeks advance notice is the minimum. Range Control will then arrange with PRF Staff the necessary clearances as required. Greater lead time will allow Range Control to better facilitate a unit's request. No training in the PRF will be authorized unless proper clearances from the PRF Site Manager or a designated representative are obtained by Range Control on behalf of the requesting unit.

12. Requests should include as much information as possible about the nature of training including use of vehicles and specific areas of the PRF to be used.

### **SCOPE OF TRAINING**

13. Although the scope of training that can be conducted in the PRF area is normally limited to Dry Training only, the area does offer:

- a. watermanship training, such as canoeing, diving trg, etc., on waterways subject to restriction by the PRF Staff;
- b. cross-country skiing;
- c. military navigation and patrolling training;
- d. ricochet of inert materiel (Non UXO producing) can only be authorized with prior approval from the PRF Staff;
- e. the use of specific areas for bivouacking, patrol bases and similar types of Dry Training related land use. Contact Range Control for the most up to date details on what areas are authorized for use; and
- f. the deployment of artillery units into specific areas for use as gun positions to fire from the PRF into the Impact Areas of the RTA. Contact Range Control for the most up to date details on what areas are authorized for use. See Chapter 5 Section 3 Field Firing / Indirect Fire for the specific details on the deployment and firing of guns from the PRF. A map and aerial photos of the specific areas is located at Annex H of these orders.

## **INCIDENTS**

14. All unusual incidents occurring during use of the PRF shall be reported in detail to Range Control. For large scale exercises, such as Bn or Bde level trg, units may be ordered to utilize umpires and controlling staff to ensure compliance to these regulations.

15. Any damage caused by the unit to the grounds, the flora, any sensitive plots, any sensitive areas or any infrastructure located in the PRF shall be reported immediately to Range Control. Range Control shall immediately contact the PRF Site Manager or a designated representative and pass on the details of the damages.

16. The offending unit is responsible to remediate the damage, to the satisfaction of the PRF Site Manager or a designated representative, only if the unit possesses the appropriate eqpt to properly complete the work. If not, then any costs incurred by 4 CDSB Petawawa to repair any damage caused by a unit training in the PRF shall be transferred to that unit.



## **SECTION 3 – MIL PARACHUTE TRAINING & DROP ZONES**

### **GENERAL**

17. There are 12 recognized Drop Zones (DZ) within the RTA. They are as follows:
- a. DZ Anzio (Area 1);
  - b. DZ Bullcheck (Area 6);
  - c. DZ Crosscheck (Area H);
  - d. DZ Crosseye (Area 6);
  - e. DZ Daniel (Area D);
  - f. DZ Dives Crossing (Area D);
  - g. DZ Eadie (Area 1);
  - h. DZ Foley (Ortona Urban Ops Site)
  - i. DZ Holstein (Area H);
  - j. DZ Race Horse (Area 6); and
  - k. DZ Sand (Area 1); and
  - l. DZ Shorty (Area D).
18. Specific information on the DZ's such as size, hazards, obstacles, approaches, exact location, etc..., can be found on the DZ Registration Form for that specific DZ. Range Control holds a copy of the forms for the above mentioned DZs, however Range Control cannot guarantee the validity of the DZ Registration Form nor the data contained within the DZ Registration Form. Assistance should be sought from the Canadian Army Advanced Warfare Centre (CAAWC) in Trenton. A map of each DZ can be found at Annex F of these orders. DZ Greenfield on the Grn Sports Field, DZ Lions Gate in 427 SOAS lines, DZ Viking in 450 Sqn lines and DZ Lamure Bay in the Ottawa River are also indicated in Annex F.
19. DZ Anzio is the primary drop zone for day / night and pers / eqpt drops in the RTA.
20. Units may establish temporary DZs in the RTA as long as all orders and directives WRT DZs are followed and Range Control has authorized the training.

### **DZ CONTROLLER RESPONSIBILITIES**

21. All DZs shall be inspected by the unit/DZ Controller 24 to 48 hrs prior to any intended P Hour IOT ensure that the Drop Zone is free of debris or safety hazards. Any safety concerns need to be immediately addressed to Range Control at that time.
22. The DZ Controller will establish and maintain communications with Range Control as per Chapter 1 of these orders. It is the DZ Controller's responsibility to ensure that Range Control is informed of any changes in P Hour timings.

23. A six minute warning on aircraft approaching the RTA shall be sent to Range Control. Range Control will then place any affected units in CHECK FIRE. Only Live Training that may affect the standard flight route for the ingress and egress of the DZ being used shall be placed in CHECK FIRE.
24. The DZ Controller is responsible for safety on the DZ. He will be the first one on the DZ and last to leave upon completion of the para activity.
25. The DZ Controller will collect and return any keys for any gates along Highway 17 that are required for safety reasons. No POMV's may access through these gates.
25. It is the DZ Controller's responsibility to ensure that gates are closed along access routes from the west side of DZ Anzio prior to any para activity. Upon completion of the para activity, it is the DZ Controller's responsibility to ensure the gates are opened prior to departing the RTA.
26. The DZ Controller will position himself at the IP for all para drops. He will direct the ignition / illumination / identification of the code identifier and leading / trailing edge markers.
27. The DZ Controller will report any of the following occurrences to Range Control:
  - a. any smoke/fires on or in the immediate vicinity of the DZ;
  - b. any unexploded munitions giving grid and method of marking;
  - c. any unauthorized vehicles on the DZ; and
  - d. any other occurrence which may adversely affect the para activity.

## **CHECK FIRE**

28. Once the six minute warning has been sent to Range Control from the DZ Controller, Range Control will then place any affected units in CHECK FIRE. CHECK FIRE may be imposed upon the entire RTA, depending on the scope of the para activity, but normally, only the ranges and areas that are in the standard flight route for ingress and egress for the DZ in use shall be ordered into CHECK FIRE. The drop(s) will only continue when all Live Trg in the applicable ranges and areas have been placed in CHECK FIRE by Range Control. CANCEL CHECK FIRE will be ordered when the last jumper is on the ground, accounted for, all personnel are clear of any Danger Areas and the aircraft is clear of the Danger Areas or the Petawawa airspace.

## **COMMUNICATIONS**

29. All parachuting activities in the 4 CDSB Petawawa boundaries shall be conducted with Full Comms between the DZ Controller and the aircraft formation. Blind, Silent or No Comms **shall not be employed** due to the shared use of the RTA. If communications are lost between the aircraft and the DZ Controller and or Range Control, the drop(s) shall be suspended and the aircraft shall remain outside of the RTA until communications are re-established.

30. If a unit wishes to use another method of radio communications between the aircraft, the DZ Controller and Range Control, they shall present the plan to Range Control forty eight hours prior to the event.

## **TRAFFIC CONTROL**

31. Sentries shall be placed as required to provide traffic control for all para activities.

## **POMV ACCESS TO DZ ANZIO**

32. To control vehicle and personnel movement near the DZ, the following rules shall apply in addition to the regulations found in Chapter 1:

- a. units shall indicate to Range Control 24 hrs in advance the number of POMVs that are requesting access to watch the para activity on DZ Anzio only. If no indication is given to Range Control then no spectators will be authorized to enter RTA;
- b. when authorized, spectators shall obtain a Vehicle Pass for themselves and their vehicle at Range Control at Bldg RR-119;
- c. entrance may be restricted as the situation warrants;
- d. all passes must be returned to Range Control, Bldg RR-119 upon leaving the RTA;
- e. all POMV access shall be through Centurion Gate;
- f. the unit conducting the training must ensure that POMV's are parked near the DZ troop shelter in such a manner as not to interfere with SMP vehicle traffic;
- g. pets are not authorized; and
- h. no vehicles shall be parked along Hwy 17. Parking vehicles on Highway 17 and walking into DZ Anzio or any part of the RTA constitutes an infraction of DND Trespass Regulations.

## **SECTION 4 - UNMANNED AERIAL VEHICLES (UAV)**

### **GENERAL**

33. UAV trg can be conducted over the RTA when all flight regulations, procedures and / or orders are strictly followed. Units shall launch and recover all UAVs in a Restricted Operations Zone (ROZ) and must ensure that the UAV remain in the designated airspace allotted for the trg.

34. **Restricted Operating Zone (ROZ).** A ROZ shall be established for all UAV trg within the RTA. There are 3 different ROZs that can be used:

- a. Launch / Recovery Sites: from the ground to a set altitude and defined by a radius;
- b. Air Corridors: normally a set width and min / max altitude; or
- c. Loiter Areas: defined by a radius or a polygon.

35. Launch / Recovery Sites may be incorporated into the Air Corridor or Loiter Area ROZs when required.

### **CRITICAL DATA**

36. All ROZs and flight corridors shall be indicated to Range Control to include the following information:

- a. the size of any Launch / Recovery Area or Loiter Area in metres (see para 37a below);
- b. the width of any Air Corridor in metres (see para 37a below);
- c. the minimum and maximum altitude required of any Air Corridor, Loiter Area or maximum altitude of the Launch / Recovery Area in feet AGL, which Range Control shall convert to ASL;
- d. the actual trg areas required for the trg;
- e. the start and end date and timings of the trg to include actual launch and recovery times if known in advance;
- f. the unit freq in MHz that the unit can be reached to coord any flight issues with other aircraft or units conducting UAV trg
- g. the phrase ROZ HOT is to be used to declare a ROZ with UAV flights in the air;
- h. the phrase ROZ COLD shall be used to declare a ROZ with no UAV flights in the air.

### **REQUEST PROCEDURES**

37. The procedure to be used to submit a TSR for UAV trg is as follows:

- a. units shall prepare a trace in CFRIS Base Safety Map using the Create UAV or RAO feature to indicate the complete ROZ, including any pre-known launch / recovery sites, and submit the trace to Range Control in the same manner as Live Fire DAOs;

- b. Range Control shall add 500' to the anticipated UAV operating altitude to ensure separation by altitude with any other aircraft; and
- c. units shall present their requests in the normal fashion including the above mentioned data in para 36 and Range Control shall de-conflict all airspace issues with 4 CDSB Petawawa Military Flight Advisory Unit (MFAU) prior to confirming the booking request.

#### **PROCEDURES DURING UAV TRG**

38. The following procedures shall be followed during any UAV trg over the RTA:
- a. units shall be in radio contact with Range Control on the Range Safety Net at all times;
  - b. the unit shall send a request to go ROZ HOT to Range Control **30 minutes prior to the first launch of that day or trg period as indicated in the DRSOs**. The unit shall include in that report the estimated time of recovery and any other details that will assist in keeping the airspace safe;
  - c. the unit shall inform Range Control when the UAV(s) are recovered;
  - d. a 30 minute advance report is not required for any subsequent launches and recoveries for that day or trg period as indicated in the DRSOs;
  - e. if comms are lost between the unit conducting the UAV trg and Range Control, all UAV trg shall cease and all UAVs shall be recovered immediately until comms is re-established;
  - f. when there is a significant timeframe between flights or serials (greater than 60 minutes), the unit shall announce ROZ COLD to Range Control; and
  - g. Range Control may place any ROZ in ROZ COLD at any time and may order a unit to recover their UAV(s) if the ROZ is ROZ HOT.

#### **UAV OPERATIONS OVER THE EAST RTA**

39. UAV operations over the East RTA requires detailed co-ordination on the part of the unit. CO 4 CDSB Ops Svcs shall be the approving authority for any UAV trg over the East RTA.
40. Units shall ensure the following procedures are completed prior to bringing the TSR to the Range Control Coordination Conference:
- a. all trg must be planned in advance;
  - b. the TSR must be supported by a training plan which has been endorsed by the unit CO;
  - c. the TSR will be discussed at the Weekly Coordination Conference; and
  - d. the unit shall prepare a request to include the endorsed training plan and the UAV ROZ(s) and send that request to Range Control for review of the data. Range Control shall then forward the reviewed request to CO 4 CDSB Ops Svcs for final approval.
41. Once the trg has been authorized by CO 4 CDSB Ops Svcs, Range Control shall confirm the CFRIS TSR and the associated ROZ(s) in CFRIS.

42. The procedures as listed in para 38 above shall be followed with the exceptions listed below:
- a. all reports and returns WRT ROZ HOT and ROZ COLD shall be sent to the Military Flight Advisory Unit (MFAU) on Freq 126.4 MHZ or 250.1 MHZ instead of Range Control;
  - b. units shall maintain comms at all times with MFAU;
  - c. the unit is responsible to join and maintain comms on the Range Safety Net as per standard communications procedures as indicated in Chapter 1, and
  - d. if MFAU is not manned during the trg then all comms shall revert back to Range Control as per para 38.

### **CIVILIAN UAVS**

43. Civilian UAVs may require further authorization from 1 Cdn Air Div A3 UAV to fly in CYR 511. Contact Range Control for more details. Units must know the type of UAV to be used and if there is a current Specific Flight Operation Certificate (SFOC) issued from NAV CANADA.

### **UAV LOSS OF LINK DRILL**

44. If possible, depending on the UAV used, the operator shall pre-program the UAV to follow one of the following options upon Loss of Link between the operator and the UAV:
- a. continue to fly the waypoint loop for a pre-determined time to regain connection and auto-land in a safe landing area within the ROZ allotted for the training if connection is not restored; or
  - b. immediately auto-land the UAV in a designated safe landing area within the ROZ allotted for the training.
45. In the event of a Loss of Link condition, regardless of any pre-programming mentioned above, the unit shall inform the MFAU and Range Control immediately of the situation and shall, at the minimum, include the expected direction of flight and altitude of the UAV.
46. Upon receipt of the Loss of Link report from the unit all other air traffic shall be warned of the situation so the expected direction of flight and altitude of the UAV can be avoided.

## **SECTION 5 - RAPPELLING AND MOUNTAIN OPERATIONS TRAINING**

### **GENERAL**

38. Safety precautions contained in B-GL-381-001/TS-000 Operational Training, Training Safety, B-GL-392-003/FP-001 Rappelling Techniques and Procedures, LFCO 24-01 Rappelling and all other applicable orders, directives and training pams shall be read and strictly adhered to by all Rappel Masters (RM), Helicopter Insertion Masters (HIM), Complex Terrain Instructors (CTI) and or Advanced Mountain Operations (AMO) instructors conducting rappel training or mountain ops training in the RTA. The phrase Instructor (Instr) shall be used in this section to represent all above indicated qualifications collectively where applicable. CANSOFCOM units have particular and specific instructions with regard to the training that formation conducts. All safety regulations and procedures established by that formation shall be strictly adhered to. Any reference to RM, HIM, CTI and AMO Instr in these orders shall also represent the qualified CANSOFCOM Instructor equivalent.

39. The Ortona Urban Ops Site and the Urban Ops Village may also be used for rappel training by qualified rappellers only. Mountain ops training may be conducted in any area of the RTA which is suitable for the scope of the trg.

### **COMMUNICATIONS**

40. Units using the Rappel Tower are not required to join the Range Safety Net. A telephone is located at the facility for units to use. The telephone shall not be used for personal purposes. Units shall report to Range Control any accidents or incidents that occur at the facility and units shall contact Range Control to coordinate a march out of the facility.

41. Units shall man the Range Safety Net while conducting any rappel training in the remainder of the RTA, see Chapter 1 for details.

### **TOWER & RAPPEL SITE ANCHOR INSPECTIONS**

42. The Rappel Tower and the anchor points at the Rappel Site shall be inspected once a year (normally in the spring) by RPOU (O) Det Petawawa to ensure that they are structurally sound.

### **QUALIFICATIONS**

43. Only a qualified CTI or AMO Instr shall dispatch personnel from the Rappel Site, the Ortona Urban Ops Site, the Urban Ops Village or any Mtn Ops site.

44. LFCO 24-01 states, in part, that Rappel Masters may only dispatch rappellers and equipment bundles from helicopters and rappel towers and AMO Instr are authorized to dispatch rappellers from mountainous terrain on all types of slopes and from man-made ground structures such as buildings, bridges and towers, but not from helicopters.

### **INSTR RESPONSIBILITIES**

44. All Instr who are in charge of the training, regardless of rank, are responsible for all training and the safety of the rappellers or climbers at the applicable site.

45. Prior to any instructional period, the Instr must carry out the following checks:

- a. visually check the structure of the tower for obvious defects;

- b. inspect the ladders, steps, and vertical walls to ensure they are clean, dry and free of hazards;
- c. inspect all ropes, carabiners, and equipment to ensure they are functional and safe; and
- d. inspect all anchor points to ensure they are not excessively rusted or loose.

46. The Instr must ensure the following:

- a. all instructors are qualified;
- b. all instructors on the Tower wear a safety harness; and
- c. at any one rappel station there must be an Instr and an Assistant Instr, when required, to assist with the conduct of the training.

### **PERSONNEL UNDERGOING TRAINING**

47. All personnel undergoing training shall be supervised by qualified instructors. They shall be thoroughly briefed by the Instr on the applicable facility in use and applicable safety precautions.

48. All personnel shall wear helmets with chinstraps secured when undergoing training.

49. Before trainees are allowed to climb the Rappel Tower, they must be rigged for the type of rappel they are to attempt. They must be checked by an Instr on the ground and at the station, prior to their rappel.

50. No individual shall be permitted to attempt a phase of training unless he is thoroughly proficient in all previous phases.

51. The Rappel Site is an austere facility and strict control over movement shall be maintained at all times.

### **GROUND SAFETY**

52. All personnel on the ground within 20 metres of the tower shall wear helmets with chinstraps secured.

53. There shall always be ground brakemen, one for each rope in use, who shall control the ground end of the rope and brake any rappeller who loses control of his rate of descent. The only exception to this order is when self-braking mechanisms and or leg bags are employed. Only experienced rappellers shall conduct this type of training.

### **MEDICAL**

54. As a minimum, a Cpl, qualified Standard First Aid, with a First Aid Kit, a stretcher, and a suitable safety vehicle shall be on hand during all rappel training providing a MO is available within 30 minutes time, (from the time of injury), using proper transportation. Otherwise an ambulance and a Medical Technician or a Reserve Medical Assistant QL 5A with equivalent qualifications (PCP / TA) or a Physician Assistant is required.



## **CEASE TRAINING**

55. If any unsafe condition arises, all training shall cease until it is rectified. Certain training can be conducted during inclement weather and weather conditions however the Instr must make an informed decision to decide to either cease or continue with the trg.

56. All rappelling shall cease when the winds have reached a speed of forty km per hour, or it is gusting to forty km per hour. All personnel shall vacate the Rappel Tower when electrical storms are present.

57. Regardless of the experience of the rappellers it is recommended that the Rappel Tower or Rappel Site should not be used if the surfaces are wet or otherwise slippery, however the decision to continue training will be that of the Instr.

## **RAPPEL TOWER**

58. Located at GR 206 876, on the west side of the abandoned airfield, the Rappel Tower is a newly designed facility which offers many rappel stations and the flexibility to train soldiers in different situations and scenarios. There are 4 floors, excluding the ground floor, that provide tie downs and access points to conduct various types of training. The safety of personnel is first and foremost while using this facility. The tower consists of the following features:

- a. a 15 foot wall on the 1st floor;
- b. a window opening on the 1st floor;
- c. a 30 foot wall on the 2nd floor;
- d. a trap door on the 2nd floor;
- e. a window opening on the 2nd floor;
- f. a window opening on the 3rd floor;
- g. a 60 foot wall on the 4th floor with open windows at the 50, 35 and 20 foot levels;
- h. a 61 foot slant wall on the 4th floor;
- i. a 60 foot free rappel station on the 4th floor (helo mock up); and
- j. Fast Rope hard points are located on the 1st, 2nd and 4th floor levels.

59. Safety chains are installed at every rappel station and these chains shall be removed before training commences and replaced at the end of training. When the Safety chains are removed, any personnel working within their body length of any edge of the facility shall be secured, using an approved safety harness, to an anchor point.

60. Because of the flexibility of the facility, strict control of the rappellers and the rappel stations must be exercised at all times to ensure the safety of all personnel. The Instr must ensure that the area directly below any rappellers is clear and free of any obstacles, other rappellers or personnel.

61. An audible bird distraction device is wired into the facility. This device may be temporarily disconnected during training but must be reconnected at the end of the training. To disconnect the system,

unplug the system from the power source on the 3rd floor. Do not use the main power switch / circuit breaker located at the entrance door of the facility to power off this device.

62. The main power switch shall not be turned off at any time unless there is an emergency. The Main Entrance light shall be left on.

63. **Modifications.** No unit shall modify this facility or permanently attach any item, device or materiel to this facility. This includes attaching matting with nails or screws. For example, if matting or extra protective material is needed to keep a rope from fraying, units may temporarily attach the material with cord or rope or any other material that will not permanently affect or mar the facility. If a unit wishes to modify the facility they shall present their request in writing to Range Control, attention RCO, who shall then forward that request to the Snr Ops O 4 CDSB Petawawa Ops Svcs and the RPOU(O) Det Petawawa RTAD.

64. **Fast Roping.** Fast roping shall only be conducted by personnel trained in this technique. Fast ropes shall not be released when personnel are located in the area directly beneath the fast rope anchor.

65. **Window Stations.** Use of the windows for rappelling is authorized as long as all safety precautions are followed and in the case of rappellers entering through the windows from a higher station, leg bags or equivalent devices shall be employed. Only experienced rappellers shall practice either particular manoeuvre.

66. **Trap Door.** The trap door is provided for confined space operations training. The trap door shall only be opened for this training and safety harness shall be employed. Approved high directional anchor systems to include tripods, shall be secured to the tower when used for lowering, raising, and other confined space operations. No permanent modifications are authorized.

67. **Simultaneous Rappelling.** Provided there is at least one Instr for each active rappel station, one Assistant Instr on the ground for each active rappel station and one brakeman for each rope when required, simultaneous rappelling may be carried out. The Instr must ensure that the area directly below any rappellers is clear and free of any obstacles, other rappellers or personnel. The only exception to this order is when units are practicing from the free rappel station (helo mock up) then a maximum of eight rappellers may be dispatched by one Instr and one Assistant Instr shall control the eight brakemen when required.

68. **Access and Parking.** Access to the Rappel Tower is through a locked gate and the key for this gate and the tower itself are controlled by Range Control. Units shall park vehicles in the designated admin area only. Vehicles are to remain on the hard stands to reduce manoeuvre damage to the area.

## **RAPPEL SITE**

69. An austere Rappel / Mountain Ops Site is located at GR 009 864 in Area I. The site has multiple anchor points, a parking / admin area located at the top of the hill and an austere admin pad near the foot of the hill. Veh access to the foot of the hill is via the black track which meets Survey Lake Road at GR 091 853.

70. A redundant safety system must be used at the Rappel Site for all rope installations.

## **ROCK CLIMBING WALLS**

71. All Rock Climbing Walls located in unit lines or PSP facilities shall have a qualified Instr or equivalent in attendance while any military mountain ops training is being conducted. The facility will be

inspected by the Instr prior to use.

### **FIELD HOUSE CLIMBING WALL AT DUNDONALD HALL**

72. The Field House Climbing Wall (FHCW) is located in the Field House of DunDonald Hall (DDH). The Personnel Support Program (PSP) at DDH is the controlling agency of this facility. Booking requests shall be sent to the DDH Sports Stores, local 7002.

73. Instructors / Supervisors of the wall shall be qualified CTI or AMO or the CANSOFCOM equivalent and the unit shall forward the name of the Instructor / Supervisor to PSP when initially requesting the facility. It is a unit responsibility to provide to PSP a list of personnel that are qualified to supervise training on the wall.

74. The use of the FHCW is for military training only. No civilian use is permitted. The PSP has a climbing wall in the Rec Plex that can be used by civilians through the Indoor Rock Climbing Club (IRCC) of PSP. The IRCC is authorized to use the FHCW outside of the military training hours. Members of the IRCC shall follow all procedures as per the club bylaws and any rules stated herein.

75. Helmets shall be worn at all times by all personnel using the FHCW. The Instructor / Supervisor of the military training shall sign for and inspect all equipment prior to the training event. All military training shall be conducted IAW current TTP's as taught on the AMO and CANSOFCOM courses. Units shall have a Cpl, qualified Standard First Aider, with a First Aid Kit, a stretcher, and a suitable safety vehicle on site while any climbing activity is being carried out.

76. Questions about the IRCC are to be directed to PSP.

## **SECTION 6 - OBSTACLE COURSE**

### **GENERAL**

77. The Obstacle Course is located at GR 230 874 on the Grn. It contains 20 obstacles and may be used under all weather conditions, provided that the obstacles are inspected beforehand and considered safe by the Supervisor. 4 CDSB Petawawa Ops Svcs is the controlling agency of this facility. Booking requests shall be sent to 4 CDSB Petawawa Ops Svcs or call locals 5269, 6403 or 6078.

### **TRAINING**

78. All potential supervisors must have completed a brief indoctrination course on the proper use of the obstacle course prior to supervising troops using the course.

79. Due to the risk of injury on most obstacles, troops shall be walked through the course on their first attempt. Battle Order and personal weapons can be added on later. Training should be progressive and every degree of difficulty should be mastered before going to a higher level.

80. The correct or desired method of negotiating each obstacle shall be demonstrated by the Supervisor before the troops are permitted to proceed.

### **INSPECTIONS**

81. The obstacles shall be inspected and maintained by RPOU (O) Det Petawawa annually.

82. All obstacles must be inspected by the Supervisor prior to using the course.

### **RESPONSIBILITIES OF THE SUPERVISOR**

83. The Supervisor is responsible for ensuring the following rules are complied with:

- a. a designated safety vehicle with stretcher and qualified first aider are present;
- b. no smoke or pyrotechnics will be used;
- c. troops are adequately prepared for the course;
- d. all ropes and obstacles are inspected for serviceability both before and after use; and
- e. all faults will be reported to 4 CDSB Petawawa Ops Svcs.

84. The Supervisor is responsible for the safe and orderly conduct of training.

85. The Supervisor will check for cleanliness and serviceability after each use. 4 CDSB Petawawa Ops Svcs may conduct a march off procedure with all user units.

## SECTION 7 – ORTONA URBAN OPS SITE

### GENERAL

85. The Ortona Urban Ops Site (UOS) is centered on GR 188 915, between Areas A and B. This facility is to be used for urban operations and related training. It is not to be used as a Bivouac Site, sleeping quarters, or as a unit admin area.

86. The facility, is based on a European town, consists of 20 brick and cinder block bldgs. 17 bldgs are located within the Main Site and 3 bldgs are located in the Hamlet Site, which is 150 metres South East of the Main Site. The Site has approx 25 hectares of training area associated with the built up area of the site. An Ablution Bldg, bldg# RR-035, is located at the entrance to the site, at the junction of Middle Rd, Black Bear Rd and Thackray Rd (5 Fingers, GR 187 913).

87. Units must understand that the booking of Areas A or B does not include this training facility. Units must specifically request the UOS in their booking request.

88. A gate is located at GR 18865 91971 on Thackary Rd approx 130 metres north of the site. Unit shall close this gate to ensure other units do not inadvertently enter the site from the north.

### ELECTRICAL POWER

89. Lights and 120v power outlets are installed throughout the site in all bldgs, except Bldgs 32 and 34 in the Hamlet Site, which have been purposely left without power for other training requirements. Street lights and entrance lights, which are automatically activated during the hours of darkness by sensors, are located in the streets and doorways of the main site.

90. The main power to the Main Site bldgs can be turned off individually or collectively from the Site Power Room located in the bottom floor of Bldg 11, the Town Hall. To access that room, enter through the front double doors, keep left and enter the first room on the left. If power to Bldg 11 is turned off, the lights in the Site Power Room remain on for safety reasons. The main power to the street lights can only be turned off collectively and not individually.

91. Bldg 33 in the Hamlet Site has independent power which is exclusive from the main site.

92. **Electrical / Conduit Tunnels.** The Electrical / Conduit tunnels located throughout the site are Out of Bounds to all personnel and shall not be included in any training scenario. High Voltage power lines run through these tunnels. Only qualified maintenance personnel are authorized to remove the manholes and enter these tunnels.

### AUTHORIZED AMMUNITION

93. All safety precautions related to the use of service ammunition are to be strictly adhered to. Service ammunition authorized for use in the UOS are:

- a. blank ammunition and thunderflashes;
- b. artillery simulators, para flares and trip flares (trip and para flares are not to be used in the bldgs);
- c. Smoke Grenades and or Smoke Pots (NO WHITE PHOSPHORUS);
- d. HC Smoke (in accordance with restrictions found in B-GL-381-1 Training Safety);

- e. CS Gas;
- f. Close Engagement Ammunition Simulation System (CEASS);
- g. M69 Practice Grenades with Fuze M228; and
- h. Det Cord and High Explosives in limited quantities for Explosive Breaching Drills.

94. The use of Det Cord, High Explosives and M69 Practice Grenades with Fuze M228 shall be discussed with Range Control prior to the actual event and detailed planning shall be carried out to ensure that no damage to the existing facilities occurs.

95. Danger Area Overlays are required for all training that includes CEASS, Det Cord and High Explosives.

### **SENTRIES**

96. Units shall place a sentry at the entrance to the site and if required, shall place additional sentries on Middle Rd or Clement Lake Rd when ordered by Range Control. These sentries shall be in communication with the OIC Exercise or the Range Safety Officer (RSO). Sentries shall be briefed, as a minimum, on where to direct visitors and who is in charge of the training.

### **RAPPELLING**

97. Rappelling is authorized at the UOS as long as there is a qualified Advanced Mountain Operations (AMO) or a Complex Terrain Instructor (CTI) Instructor and all rappellers are qualified on the Rappel Tower. All safety precautions must be strictly adhered to. All rope anchors and rope protection bars must be inspected before use. Medical coverage as per para 54 above shall apply.

### **HELICOPTER TRAINING AT THE SITE**

98. To minimize damage to the UOS, low level helo activity must be restricted. Fast Roping and rappelling must maintain a minimum altitude of 25 feet above the roof tops, to prevent damage to the shingles. Aircrew shall ensure that any overflights of the site respect this minimum altitude. Keeping low level helo activity on or over the flat top roofs and away from the shingled roofs will assist in maintaining the site.

### **ADDITIONAL EQPT, FURNITURE AND STORES**

99. Units may bring additional eqpt to the UOS, i.e. furniture, crates, etc. however these additional stores **MUST** be removed from the Site upon completion of the training.

100. **Wall Partitions and Obstacles.** There are pre - positioned studs on certain bldgs to assist units in attaching wall partitions. Units shall not attach any partitions or materials to any other section of the walls without permission from the RPOU (O) Det Petawawa RTAD Cell. Units are also authorized to construct additional obstacles in or near the bldgs and all additional partitions and/or obstacles must be dismantled prior to the march out. Should a unit cause any damages by neglect to the installation, repairs will be completed at the unit's expense.

101. **Furniture and Car Wrecks on Site.** Various quantities of furniture and car wrecks, to augment the training value of the UOS is available for units to use. One locked sea container located just outside the main site is used to store the furniture. Units that request the use of the furniture must indicate this

during the booking process for the Site. The car wrecks are located beside the locked furniture sea container. Units must return any car wrecks used during their trg back to this location at the end of the trg.

## **CLEARANCES**

102. On completion of the training, the user unit will coordinate with Range Control a march out of all bldgs that have the Range Control security seal broken, regardless of the actual bldgs used. This can be a time consuming procedure and units must take this factor into account during their time appreciation for the training event. March Off procedures are listed in Appendix 3, Annex A, Ortona Urban Ops Site Clearance Certificate.

103. User units shall be held financially accountable for any damages to the site, loss or damages to any or all eqpt and or furniture that may be signed out from Range Control. Financial Codes shall be provided to Range Control, prior to occupying the site, by the user unit, when requested.

## **DUD DESTRUCTION**

104. User units are responsible for the destruction of all UXO's that occur during their training. All UXO's shall be destroyed in accordance with B-GL-381-001/TS-000 Operational Training, Training Safety and C-09-008-002/FP-000 Destruction of Dud and Misfired Ammunition. If a UXO is located inside one of the bldgs, then assistance from Range Control and 2 Svc Bn Ammunition Techs shall be requested prior to destroying the UXO.

## **SECTION 8 – URBAN OPS VILLAGE**

### **GENERAL**

105. The Urban Operations Village (UOV) is centered on GR 159 928. The normal entrance to the village is at GR 164 928, off of Messer Trail. This facility is to be used for urban operations and related training only. It is not to be used as a Bivouac Site, sleeping quarters, or as a unit admin area. Units must understand that the booking of Area L does not include this training facility. Units must specifically request this village in their booking request.

106. The facility consists of 37 structures, configured in single, 2 and 3 storey style bldgs which are constructed out of 40' sea containers. Windows, doors, stairs, trap doors and wall panels are installed in the bldgs, which replicate 3rd World style dwellings. Removable railings are installed on 2nd and 3rd level roofs for safety purposes. An Administration Area, with a troop shelter and latrines, is located at GR 163 928, outside the 200 metre Danger Area Overlay (DAO) for Close Engagement Ammunition Simulation System (CEASS).

### **DANGER AREA OVERLAY, FLAGS AND BARRIERS**

107. **Danger Area Overlay.** The UOV itself is pre-templated for CEASS use. The Danger Area Overlay is constructed so that the built-up portion of the village is the Manoeuvre Box of the overlay and a 200 metre Danger Radius extends outwards in all directions from the outside edge of the exterior boundary of the village.

108. **Safety Barriers and Flags.** Safety barriers and flags are located at the following locations:

- a. GR 164 928, the Entrance to the village off of Messer Trail;
- b. GR 160 932, a T Junction of a Black Track and an Orange Track to the North;
- c. GR 158 931, the Y Junction of two Orange Tracks to the North; and
- d. GR 158 924, the Orange Track to the South.

109. When Live Trg is conducted at the UOV, user units are responsible for raising and lowering the flags and closing and opening the barriers.

110. Two signs, which state that no unprotected troops beyond this point when CEASS is employed, are positioned on the 2 Orange Tracks that lead westward to the village from the Administration Area.

### **AUTHORIZED AMMUNITION**

111. All safety precautions related to the use of service ammunition are to be strictly adhered to. Service ammunition authorized for use in the UOV is:

- a. blank ammunition;
- b. pyrotechnics;
- c. Close Engagement Ammunition Simulation System (CEASS);
- d. M69 Practice Grenades with Fuze M228; and
- e. Det Cord and High Explosives in limited quantities for Explosive Breaching Drills.



112. The use of Det Cord, High Explosives and M69 Practice Grenades with Fuze M228 shall be discussed with Range Control prior to the actual event and detailed planning shall be carried out to ensure that no damage to the existing structures occurs.

113. All safety precautions related to the use of service ammunition are to be strictly adhered to.

### **SENTRY LOCATION(S)**

114. When CEASS, practice grenades or explosives are employed, as a minimum, one sentry shall be placed at the Entrance barrier.

115. If the use of CEASS, practice grenades or explosives extends beyond the boundaries of the UOV DAO, the user unit shall construct a DAO and present that DAO to Range Control in the normal fashion. Extra sentries may be required as well. See Chapter 5 Live Training for details. The sentry(s) shall be in communication with the Firing Point Officer and shall be briefed, as a minimum, on where to direct visitors and who is in charge of the training.

### **RAPPELLING**

116. Rappelling is authorized at the UOV as long as there is a qualified Advanced Mountain Operations (AMO) or a Complex Terrain Instructor (CTI) Instructor and all rappellers are qualified on the Rappel Tower. All safety precautions must be strictly adhered to. Medical coverage as per para 51 above shall apply. There are no pre - positioned anchor points in the bldgs so the AMO / CTI must ensure rappel ropes are anchored in an authorized manner.

### **ADDITIONAL EQPT, STORES AND OBSTACLES**

117. Units may bring additional eqpt to the UOV for their training. Any additional stores MUST be removed from the village upon completion of the training. Units are also authorized to construct additional obstacles and partitions in or near the bldgs but they must be dismantled prior to march out.

118. Should a unit cause any damages, by neglect or design, to the bldgs or the UOV grounds, repairs shall be completed at that unit's expense.

119. **Car Wrecks on Site.** Three car wrecks are prepositioned beside the troop shelter. Units must return any car wrecks used during their trg back to this location at the end of the trg.

### **CLEARANCES**

120. On completion of the training, the user unit will coordinate with Range Control a march out of all the bldgs and the immediate area surrounding the UOV. This can be a time consuming procedure and units must take this factor into account during their time appreciation for the training event. Range Control shall inspect for cleanliness, removal of garbage and the removal of all ammunition salvage. March Off procedures are listed in Appendix 4, Annex A, Urban Ops Village Clearance Certificate.

### **DUD DESTRUCTION**

121. User units are responsible for the destruction of all UXO's that occur during their training. All UXO's shall be destroyed in accordance with B-GL-381-001/TS-000 Operational Training, Training Safety and C-09-008-002/FP-000 Destruction of Dud and Misfired Ammunition. If a UXO is located inside one of the structures, then assistance from Range Control and 2 Svc Bn Ammunition Techs shall be requested prior to destroying the UXO.

## SECTION 9 - URBAN ASSAULT COURSE

121. **General.** Designed for Basic Urban Operations training, the Urban Assault Course is located at GR 196 876 in Area 2. The facility is comprised of six wooden structures split into four training events or obstacles. Access to the facility is via the access road which joins Messer Tr at GR 200 877.

122. Description of Obstacles. The course consists of the following four obstacles, south to north:

- a. Obs 1: Clearance Techniques;
- b. Obs 2: Destiny Doorway;
- c. Obs 3: Dodge City; and
- d. Obs 4: Vault and Fight.

123. All obstacles are constructed mainly of plywood and must be treated accordingly. Some of the doors are specially reinforced for mechanical entry training techniques. The majority of the obstacles are open to the elements so the use of the facility during and after heavy rains or snowfalls may be somewhat compromised so user units must be prepared for these meteorological situations.

124. **Catwalks.** Each obstacle has a catwalk or platform of some sort built into the structure. These catwalks and platforms shall be used by Exercise Directing Staff to observe and control the progress of the trainees and they are not to be used as observation galleries for spectators or follow on troops.

125. **Training Techniques and Progression.** Basic clearance techniques and procedures can be practiced at Obs 1 and then trainees can progress onto the other obstacles. This is, by no means, a restriction on the type of training that can be conducted at the facility. As long as all training carried out is done in a safe manner and is in accordance with all CF policies, training procedures and these orders, units may utilize this facility to suit their training requirements.

126. **Authorized Ammunition.** All safety precautions related to the use of service ammunition are to be strictly adhered to. The following ammunition can be used within the facility:

- a. blank ammunition;
- b. pyrotechnics;
- c. Close Engagement Ammunition Simulation System (CEASS);
- d. M69 Practice Grenades with Fuze M228; and
- e. Det Cord and High Explosives in limited quantities for Explosive Breaching Drills.

127. The use of Det Cord, High Explosives and M69 Practice Grenades with Fuze M228 shall be discussed with Range Control prior to the actual event and detailed planning shall be carried out to ensure that no damage to the existing structures occurs.

128. **Danger Area Overlay.** The facility is pre-templated for both 5.56mm and 9mm CEASS ammunition. The Danger Area Overlay is constructed so that the gravel pad which the four obstacles are built on is the Manoeuvre Box of the overlay and a 200 m Danger Radius extends outwards in all directions from the outside edge of the pad. Any other Live Trg that a unit wishes to conduct at the facility must be templated in accordance with B-GL-381 and Chapter 5 of these orders. Contact Range

Control for any questions.

129. **Sentry and Flag Location.** A sentry shall man the gate at the entrance to the range at all times. A red safety flag is co-located at the gate.

130. **Communications.** Units shall man the Range Safety Net while occupying the Urban Assault Course.

131. **Pyrotechnic Safety.** All pyrotechnics must be strictly controlled due to the materials used for construction of the obstacles and in the case of burning type pyrotechnics, the restricted air flow through each obstacle and alleyway. Units must be careful when using smoke to mask movement within the facility due to the close proximity of Messer Tr.

132. **Clearances.** A Range Clearance, as per Chapter 1 of these orders, shall be carried out after the user unit has completed their training and the facility is ready for an inspection. User units shall be held responsible for any damage caused to the facility.

### **DUD DESTRUCTION**

133. User units are responsible for the destruction of all UXO's that occur during their training. All UXO's shall be destroyed in accordance with B-GL-381-001/TS-000 Operational Training, Training Safety and C-09-008-002/FP-000 Destruction of Dud and Misfired Ammunition. If a UXO is located inside one of the structures, then assistance from Range Control and 2 Svc Bn Ammunition Techs shall be requested prior to destroying the UXO.

## CHAPTER 5 - LIVE TRAINING

### SECTION 1 - GENERAL REGULATIONS

#### GENERAL

1. Live Training may be conducted on the established Ranges (A, B, C, D, E, Q, Y, MTR, Grenade, M203 Grenade Range, Known Distance Range, Demolition Range, Gas Huts 1 and 2, the Live Fire Shoot House Complex, the Urban Ops Village and in the Impact/Training Areas (1, 2, 3, 4, 5, 6, 7, 8 and 9), which are bordered in Red on the Trace map. Live firing may also be conducted in the Training Areas (A, B, C, D, E, H, I, J, K and L) and at FOB Warbler and the Ortona Urban Ops Site with permission from Range Control. Further restrictions may be in place on the use of the RTA for Live Training. Units shall be conversant with all rules and regulations located in other chapters and sections of these orders so that safe and successful Live Training is achieved.
2. **DZ Anzio and DZ Dives Crossing.** DZ Anzio in Area 1 and DZ Dives Crossing in Area D must be completely free, at the conclusion of the unit training, of all targetry, targetry pits, wire, pickets, field defensive works and obstacles that may cause injury to a parachutist. If a unit wishes to keep any of these works for future training events, this issue must be co-ordinated with Range Control in advance of the start of construction. As a minimum, all defensive works, trenches, obstacles, etc. shall be marked so they are obvious to other units conducting day and night training.
3. **Licenses.** Each individual Range or Area has a specific RTA Authorization Form (Range License) that specifies exactly what ammunition that can be fired on that Range or Area. Units may contact Range Control for more specific information or refer to the Range License in CFRIS. Each Range has the Range License posted at that Range.
4. **Coordination of Training Between Units.** Normally, Live Training takes priority over Dry Training in the Impact/Training Areas. Because of the limited area available, Dry Training can take place in Impact/Training Areas concurrently with Live Training and in proximity to live fire events. As well, units may share the same areas for Live Training. Coordination between units in which there will be Dry Training conducted near any Danger Area Overlay of any Live Fire event shall be conducted at the Weekly Range Coordination Conference the Thursday prior to the commencement of the training. Continued coordination throughout the training between units involved is mandatory to ensure a safe training environment for all. When necessary, copies of the Danger Area Overlay (DAO) shall be produced from the original, once authorized by Range Control, and these copies will be distributed amongst the units sharing the Live areas.
5. **Relevant Orders.** All orders, regulations, publications, weapons manuals, training manuals, pamphlets, ammunition restrictions and any other local restrictions relating to safety, weapons handling or ammunition must be followed when conducting Live Training. The most restrictive order shall take precedence in any case of a conflict in safety.
6. **DFTS Targetry Cribs.** Permanent target emplacements (cribs) for the Direct Fire Target System are placed throughout Areas 2, 6 and 9. Contact Range Control to obtain the locations of these cribs prior to conducting training in these areas.
7. **Access and Use Table.** Before commencing any Live Training, consult the RTA Access and Use Table at Annex C.

## COMMUNICATIONS

8. **General.** Units shall establish communications as per the communications instructions found in Chapter 1.
9. **Request to Go Live.** Units shall request permission to go Live with Range Control before firing commences on any Range or Area. The unit shall send the name of the Range Safety Officer (RSO) for that live fire event to Range Control via the Range Safety Net for verification of that person's listing on the unit Safety Officer List. If the name does not appear on the unit Safety Officer List then that unit shall be denied permission to go Live. Certain units of CANSOFCOM have relief from sending the name of the RSO but shall send the ZAP number of the RSO instead.
10. **Range Safe.** When firing has ceased, the Officer in Charge of Practice will inform Range Control that the particular Range(s) or Impact/Training Area(s) is Safe.
11. **Lost Communications.** If communications, on the Range Safety Net or between the unit CP and an out station that is conducting the live fire training are lost at any time, firing shall cease until communications have been re - established. See Chapter 1 for more specific communication procedures.

## TARGETRY

12. **General.** All forms of targetry available in the CFSS can be used in the RTA for Live Firing Training. Other non-standard targetry can be used as well, as long as user units stay within the guidelines as published in these orders for both standard and non-standard targetry. Any targetry brought into the RTA must be removed from the RTA upon completion of the training. All target scrap that may contain spent ammunition, projectiles or UXO's must be inspected by an Ammunition Technician and must be declared Free From Explosives.
13. **Polycyclic Aromatic Hydrocarbons (PAH).** CADTC has ordered an immediate moratorium of all clay pigeons that contain PAH and to close all recreational skeet ranges. Units that wish to use clay pigeons at 4 CDSB Petawawa as targets must follow these guidelines:
  - a. indicates the use to Range Control when the training is initially requested;
  - b. the unit must ensure that the clay pigeons to be used do not contain PAH;
  - c. the unit must show positive proof to Range Control that the clay pigeons do not contain PAH; and
  - d. all remnants of the clay pigeons must be removed from the Training Area or Range that they were used on.
14. **Range Warden.** The Range Warden is the contact point for all targetry except the 3D Fig 11 target used with the Direct Fire Targetry Suite (DFTS), see chapter 6. Contact the Range Warden during his work hours (0600 - 1430 hrs, Mon - Fri) for any target requirements at locals 7465 or 5570, or send in a request using the Target Request Form in the 4 CDSB Petawawa TSR.
15. **Gallery Range Targets and Target Placement.** B, C, D, E, Q and Y Ranges have targets pre-positioned in the storage shed located on the range. Targets are to be placed in or on the target frames provided. Targets may be placed on top of the Mantlet (this is the grass sloped portion of the Markers Gallery that faces the Firing Points) and at the base of the Stop Butts as long as the safety of the Butt Party is not compromised and the rounds stay inside of the Danger Area Overlay of that particular range. Targets will not be placed in front of the Mantlet nor will they be placed so as to allow a round passing

through or by the target to strike the Mantlet or other Firing Points. In general all rounds are to come to rest in the Stop Butt or Bullet Trap provided for that target lane.

16. **Completion of Firing on Gallery Ranges.** On completion of firing, all targets are to be patched and placed in the storage sheds provided, when applicable and target frames are to be left at half-mast, when applicable. All non - serviceable targets and or target frames are to be placed by the entrance to the Markers Gallery (butts), so they can be replaced by the Range Warden, when necessary.

17. **A Range.** A Range has seven tank hulls on the left side of the range for use as targets.

18. **M203 Range and the Grenade Range.** These ranges do not have any targets available at the range or pre-positioned downrange.

19. **Mechanical Target Range.** The range can accommodate the DFTS. See Chapter 6 for more details on the DFTS. Units may also use the standard targets available through the Range Warden. There are no target frames on the range for standard targetry.

20. **Field Firing Ranges.** Units are responsible for all target requirements for their field firing ranges. Targets will be placed within the detailed arcs of fire as depicted on the Danger Area Overlay of the range and all firing will be confined within these arcs. Derelict vehicles, jerry cans of fuel and similar materials shall not be brought into the RTA as targets, unless permission from HQ 4 CDSB Petawawa Ops Svcs is received. If in doubt, contact Range Control.

21. **DFTS Ranges.** DFTS Ranges are located in Areas 2, 6 and 9. DFTS can also be employed at the MTR and on austere field firing ranges. See Chapter 6 for more details on the DFTS. Questions can be directed to Range Control.

## FLAGS AND BARRIERS

22. **General.** Range Control will ensure that all Impact/Training Area Flags and barriers are in position at first light of each day in the areas that firing is to commence. If necessary, Range Control will place units in CHECK FIRE so that a patroller can safely verify all appropriate flags and barriers. Once this task is completed, Range Control will CANCEL CHECK FIRE or authorize units to GO LIVE where appropriate. Units must ensure that all barriers are closed, if they pass through a closed barrier, to reach the Firing Point(s).

23. **Visual Check by OIC/RSO.** The Officer in Charge of the Practice will ensure, by a visual check, that the Impact/Training Area(s) or Range(s) is clear, the appropriate flags are raised and barriers are closed prior to requesting for permission to go Live (commence firing). Units are responsible for raising and lowering all flags on A, B, C, D, E, Q, Y, MTR, Known Distance Range, Grenade Range, M203 Grenade Range and the Urban Ops Village.

24. Range Control is responsible to ensure that the Impact/Training Area flags are lowered, and barriers opened, when firing has been completed.

25. The following table indicates barrier identification and their location:

Barrier	Location	Barrier	Location
1A	175 912	6F	GR 123 833
1B	177 907	6G	GR 130 843

1C	182 901	6H	GR 137 846
1D	157 895	7A	GR 083 883
2A	186 896	7B	GR 085 907
2B	187 894	7C	GR 087 908
2C	188 891	7D	GR 052 918
2D	193 885	7E	GR 018 902
2E	194 884	7F	GR 022 898
2F	195 882	7G	GR 022 896
2G	197 880	8A	GR 074 824
2H	201 873	8B	GR 075 832
2J	201 870	8C	GR 083 837
2K	157 868	8D	GR 080 849
3A	141 852	8E	GR 080 854
3B	162 842	8F	GR 080 863
3C	194 863	8G	GR 084 879
4A	159 903	8H	GR 015 881
4B	155 905	8J	GR 015 862
4C	150 919	8K	GR 021 857
4D	131 913	8L	GR 035 834
4E	136 864	8M	GR 052 821
4F	137 865	C1	GR 155 946
4G	157 896	H1	GR 998 883
5A	128 912	Z1	GR 138 916
5B	092 913	Z2	GR 131 913
5C	084 896	Z3	GR 093 917
5D	085 883	Z4	GR 065 923
5E	108 876	Z5	GR 055 923

5F	108 877	Z6	GR 041 918
6A	085 876	Z7	GR 042 966
6B	085 869	Z8	GR 082 969
6C	080 858	Z9	GR 094 948
6D	081 853	Z10	GR 099 953
6E	113 831	Z11	GR 131 947

### **SUSPENSION OF FIRING FOR AIRCRAFT**

26. All Live Firing will cease if an aircraft flies over the firing point or enters the Danger Area Overlay (DAO) of that Live Training. See Chapter 1, Communications and Annex K Airspace Coordination for more on aircraft procedures.

### **RESTRICTION ON HEIGHT OF TRAJECTORIES**

27. No trajectory of any projectile will exceed 17,000 feet Above Sea Level (ASL) without approval of Range Control.

### **DUDS AND MISFIRES**

28. All duds (blinds) shall be reported to Range Control on the Ammunition Control Certificate, Appendix 7 to Annex A of Chapter 1. Units shall make every attempt possible to locate and destroy any duds that occur during their Live Training.

29. All misfires shall be handled in accordance with drills as established in the applicable weapon publications. Questions shall be referred to the Ammunition Compound Explosive Safety at loc 4909 for clarification. Specifically, the following ammunition shall be repackaged separately and returned to the Ammunition Compound:

- a. Parachute Flare C7;
- b. Grenade Hand Smoke C8 (all colours) and L83A1;
- c. Cartridge 105mm Howitzer (various natures);
- d. Rocket Practice Tracer 21mm (sub calibre training device); and
- e. all small arms.

30. Destruction of all blinds or misfires shall be conducted strictly in accordance with C-09-008-002/FP-000, Destruction of Dud and Misfired Ammunition and B-GL-381-1.

### **DEMOLITION KITS**

31. Demolition Kits shall be taken to the ranges whenever explosive ammunition is used. Only qualified personnel, as listed in C-09-008-002/FP-000, shall use these kits to destroy a blind. CO's are



responsible for detailing the qualified personnel in writing to the 2 Svc Bn Ammunition Platoon. The list must be updated annually as a minimum.

### **AMMUNITION COMPOUND**

32. The Ammunition Compound is located North of Orange Rd, adjacent to Area L and the entrance is located at GR 141 916. No Service ammunition shall be fired so as to detonate, ricochet or pass within the boundary of the compound as marked on the TR map. Any HE projectiles fitted with Time or VT fuzes must maintain the Positive Safe Distance for the projectile fired and the boundary of the compound as well.

### **KEYS**

33. Any key that is expected to be signed out for greater than 14 days shall be returned to Range Control on the 14<sup>th</sup> day for verification and if authorized to do so the unit may sign that key out again.

## **SECTION 2 – CONVENTIONAL RANGES**

### **GENERAL**

33. 4 CDSB Petawawa has five Rifle Ranges (B, C, D, X and Y), two Pistol Ranges (E and Q), one Gas Hut (Bldg CC- 092), a Mechanical Target Range (MTR), a Known Distance Range (KDR), an Anti-Tank / MG Range (A), a Grenade Range and a M203 Grenade Launcher Range (M203 Range). X Range is closed awaiting major repairs. B, C, D, E, Q, X, Y and the MTR ranges are pre- templated from the Firing Point(s) for firing directly to the front of each individual shooter, along the axis of the range, engaging the target directly to the front. The M203 Range, the KDR and A Range have permanent arc markers placed down range. B-GL-381-1, Chapter 3 gives specific detail on the conduct of conventional ranges. CSOTC controls the bookings and use for F Range in Area 9 however Range Control controls the moment of firing and all units who use this range must be in communication with Range Control. Details on F Range can be sought from CSOTC and their RSOs.

### **KEYS**

34. Keys for the conventional ranges are held at Range Control, Bldg RR-119. Normally all keys will be returned to Range Control patroller after the march out is completed or in exceptional circumstances directly to Range Control, Bldg RR-119, upon completion of the training.

### **VEHICLE MOVEMENT ON THE CONVENTIONAL RANGES**

35. No Tracked Vehicles will be driven onto, over or through any of the conventional ranges. No vehicle movement is permitted off the established roads or trails of the conventional ranges. Access roads shall not be blocked at any time.

### **TROOP SHELTERS**

36. The Troop Shelters at A, B, C, D, E, Q, Y, MTR, KDR, Grenade Range and the M203 Range are for the use of units firing on the range as per B-GL-381-001/TS-002, Range Construction and Maintenance (B-GL-381-2). If a unit requests to use the Troop Shelter for other than the protection of troops conducting a range practice, i.e. CP's, Crse Staff accn, etc., these requests will be entertained on a first come, first serve basis. Be advised that the priority for use of the Troop Shelter goes to any unit who is conducting a Range Practice, even if the Troop Shelter is booked prior to the Range Practice. Units may coordinate the sharing of the Troop Shelter, but in the end, the priority for use still remains with the unit conducting the Range Practice. If any doubt exists, contact Range Control for further clarification.

### **BIVOUACS AND EXTRA TENTAGE ON CONVENTIONAL RANGES**

37. Units may establish bivouacs on the conventional ranges as long as the bivouac conforms to the Fire Safety Policy of 4 CDSB Petawawa. Extra tentage, for any reason, that is erected on the range shall not be erected downrange of the established firing point or on the ground between the Firing Points and the Stop Butt. All ranges offer sufficient room either left, right or behind the Troop Shelter / Firing Point to establish tent lines, staging areas, etc. Verify with Range Control if any doubt occurs.

### **LEAD CONTAMINATION AND WEAR ON STOP BUTTS**

38. To even out the lead contamination and the wear on the Stop Butt, restrictions on what lanes that can be used may be ordered by Range Control. Units are to evenly spread firers along the firing point so as to not fire the total allotment of rounds for the practice into just a few firing lanes.

## SENTRIES

39. Sentries shall be posted at the entrance of each range to control access to that range. This shall be their sole responsibility. These sentries shall be in communication with the Firing Point Officer. Sentries shall be briefed, as a minimum, on where to direct visitors and who is in charge of the range.

## SUSPENSION OF FIRING

40. If for any reason firing is suspended (aircraft passing overhead, CHECK FIRING from Range Control, loss of communications, etc.), all weapons shall be unloaded and all firers shall be ordered to stand clear of their firing positions.

## NON STANDARD RANGE PRACTICES

41. If a unit desires to conduct a non-standard range practice on any conventional range, i.e. greater firing arcs, fire and movement on the range, non-standard targetry, additional targets in the Target Gallery or in any other location on the range, firing platforms, etc., they shall indicate this information when booking the range and shall present the proposed training and the Danger Area Overlay (DAO) to Range Control at least one week prior to the practice for approval. Once the practice has been authorized, Range Control may also inspect the range prior to commencement of firing, depending on the scope of the training. The rule of thumb is: If you are not firing straight to the front, at targets received from the Range Warden from the established Firing Points, then you must inform Range Control.

## A RANGE - ANTI TANK / MG RANGE

42. **General Description.** Located at GR 156 956 in Area 9, A Range is primarily a UXO producing ammunition Anti-Tank Range. The C6 MG and C9 MG may also be used on this range. This range is equipped with portable toilets, a Troop Shelter and a parking area. The range has six firing bays and a misfire pit, which is located on the left side of the firing point. The misfire pit may be used as a firing bay as long as there are no misfires. Once a misfire occurs, then that bay must revert back to a misfire pit. Entrance to the range is through B Range, between the 500 and 600 metre firing points, and this access road has a locked barrier. If both A and B Ranges are being used, coordination between the user units shall be carried out.

43. **Arc Markers.** The Left Arc Marker is located at GR 153 964 and the Right Arc Marker is located at GR 155 964. When firing 84mm HE or HEAT ammunition the Left Arc Marker located at GR 154 966, at the far centre of the Impact Area, shall be used in conjunction with the Right Arc Marker located at GR 155 964.

44. **84mm HE / HEAT Restriction.** 84mm HE or HEAT ammunition shall only be fired from firing points 1 - 3 located on the right side of the range. The Left and Right Arc Markers for mentioned above for 84mm HE/HEAT ammunition shall be respected.

45. **Authorized Ammunition.** The range is pre-templated and the following ammunition is authorized:

- a. 5.56mm;
- b. 7.62mm / .308 Cal;
- c. 9mm;
- d. 12 Gauge shot gun;

- e. 21mm SCTD (M72);
- f. 25mm Sub-Cal 60mm Mortar;
- g. 66mm HEAT (M72);
- h. 84mm TP/HEDP/HEAT;
- i. 84mm AT-4 HEAT;
- j. C19 Defence Command Detonated Weapon (C19 DCDW); and
- k. pyrotechnics.

46. **Duds.** If during a firing practice, a HE/HEAT dud occurs and that dud is so located that injury to personnel may result, the firing practice will cease. The dud will be located and destroyed, in accordance with regulations, before the firing practice resumes. In cases where the dud cannot be located, an assessment will be made by Range Control before permission is given to resume the practice.

47. There may be occasions that Range Control will restrict movement downrange due to UXO's or other reasons. Units shall contact Range Control prior to sending any unprotected personnel downrange, for whatever reason. When safety permits, marking of duds should be accomplished by inserting a stake no less than 4 feet in length (dead fall/tree branch) into the ground directly between the firing point (route of entry) and the UXO approximately 1 meter from the item. When possible a bright contrasting colour should be affixed to the top of the stake.

48. When snow conditions are such as to contribute to fuse failures, the range shall be restricted to the firing of non-UXO producing ammunition only.

## **B RANGE - RIFLE RANGE**

49. **General Description.** Located at GR 162 948 in Area 9, B Range is a 600 m Classification Range. It has 12 Firing Points, an enclosed gallery, 36 firing trenches (12 each on the 100, 200 and 300 metre Firing Points), a Troop Shelter, a latrine and a parking area.

50. **Authorized Ammunition.** The following ammunition can be fired on this range:

- a. .22 Cal;
- b. .38 Cal;
- c. .40 Cal;
- d. 5.56mm;
- e. 7.62mm / .308 Cal;
- f. .303 Cal
- g. .338 Cal;
- h. 9mm; and
- i. pyrotechnics.

51. **MG Range Practices.** When conducting any MG range practices, a maximum of five rounds per burst is to be fired.

52. **MG Restrictions.** To reduce the tunneling effect of sustained fire on the Stop Butt, MG's shall be moved, if available, to another firing lane on the range, after one firer has completed the individual practice. The goal of this drill is to even out the lead contamination and the wear on the Stop Butt.

53. Entrance to A Range is through this range, between the 500 and 600 m Firing Points. If both A and B Ranges are being used, coordination between the user units shall be carried out.

54. Extra tentage, for any reason, that is erected on the Range shall not be erected on the ground between the Firing Points and the Stop Butt.

### **C RANGE - RIFLE RANGE**

55. **General Description.** Located at GR 168 948 in Area 9, C Range is a 500 m Classification Range. It has 12 Firing Points, an enclosed gallery, a Troop Shelter, a latrine and a parking area.

56. **Authorized Ammunition.** The following ammunition can be fired on this range:

- a. .22 Cal;
- b. .38 Cal;
- c. .40 Cal;
- d. 5.56mm;
- e. 7.62mm / .308 Cal;
- f. .303 Cal
- g. .338 Cal;
- h. 9mm; and
- i. pyrotechnics.

57. **MG Range Practices.** When conducting any MG range practices, a maximum of five rounds per burst is to be fired.

58. **MG Restrictions.** To reduce the tunneling effect of sustained fire on the Stop Butt, MG's shall be moved, if available, to another firing lane on the range, after one firer has completed the individual practice. The goal of this drill is to even out the lead contamination and the wear on the Stop Butt.

59. Extra tentage, for any reason, that is erected on the Range shall not be erected on the ground between the Firing Points and the Stop Butt.

### **D RANGE - RIFLE RANGE**

60. **General Description.** Located at GR 172 949 in Area 9, D Range is a 500 m Classification Range. It has 12 Firing Points, an enclosed gallery, a Troop Shelter, a latrine and a parking area.

61. **Authorized Ammunition.** The following ammunition can be fired on this range:

- a. .22 Cal;
- b. .38 Cal;
- c. .40 Cal;
- d. 5.56mm;
- e. 7.62mm / .308 Cal;
- f. 9mm;
- g. .303 Cal
- h. .338 Cal; and
- i. pyrotechnics.

62. **MG Range Practices.** When conducting any MG range practices, a maximum of five rounds per burst is to be fired.

63. **MG Restrictions.** To reduce the tunneling effect of sustained fire on the Stop Butt, MG's shall be moved, if available, to another firing lane on the range, after one firer has completed the individual practice. The goal of this drill is to even out the lead contamination and the wear on the Stop Butt.

64. Extra tentage, for any reason, that is erected on the Range shall not be erected on the ground between the Firing Points and the Stop Butt.

#### **E RANGE - PISTOL RANGE**

65. **General Description.** Located at GR 179 995 in Area 9, E Range is a 100 metre Classification Range. It has 15 Firing Points, a Troop Shelter, a latrine and a parking area. There are no mechanical target frames on this range however there are wooden target frames built at the base of the Stop Butt to place targets. The target shed is located to the right of the range.

66. Zeroing of the following weapons is authorized on this Range:

- a. C3 Rifle;
- b. C6 MG;
- c. C7 Rifle; and
- d. C9 MG.

67. **Authorized Ammunition.** The following ammunition can be fired on this range:

- a. .22 Cal;
- b. .38 Cal;
- c. .40 Cal;
- d. 5.56mm;

- e. 7.62mm / .308 Cal;
  - f. .303 Cal
  - g. 9mm;
  - h. 12 Gauge shot gun;
  - i. air rifle BB's / Pellets; and
  - j. pyrotechnics.
68. No Lead Shot / Pellets / BB's are authorized.
69. **MG Range Practices.** When conducting any MG zeroing range practices, a maximum of five rounds per burst is to be fired.
70. **MG Restrictions.** To reduce the tunneling effect of sustained fire on the Stop Butt, MG's shall be moved, if available, to another firing lane on the range, after one firer has completed the individual practice. The goal of this drill is to even out the lead contamination and the wear on the Stop Butt.
71. **PWT 4.** The target frames directly in front of Lanes 1, 3, 5, 7, 9, 11 and 13 are painted red and these specific lanes shall only be used for PWT 4 Parts 1 and 2 range practices. Safety staff must ensure that each shooter is in front of their applicable lane before ordering UP or any other form of fire engagement order that authorizes a shooter to fire at their target.
72. Extra tentage, for any reason, that is erected on the Range shall not be erected on the ground between the Firing Points and the Stop Butt.

#### **F RANGE – CSOTC ADVANCED APPLICATION RANGE**

73. Canadian Special Operations Training Centre (CSOTC) is responsible for this particular range. See the CSOTC Range Standing Orders for the safety and employment details pertaining to F Range.
74. F Range shall be booked through the CSOTC Ops Cell and then brought to the Coordination Conference and booked just like any other facility found in the RTA.

#### **Q RANGE - PISTOL RANGE**

75. **General Description.** Located at GR 198 852 in Area 3, Q Range is a 50 metre Classification Range. It has 20 Firing Points, lanes 1-10 are manual turning mechanical target frames and lanes 11-20 are wooden target frames. The target shed is located to the back left of the parking area near the latrine. A Troop Shelter is located near the entrance of the range. Access to the range is through a locked gate which must remain locked or guarded at all times.
76. **Authorized Ammunition.** The following ammunition can be fired on this range:
- a. .22 Cal;
  - b. .38 Cal;
  - c. 9mm;
  - d. 12 Gauge shot gun;

- e. air rifle BB's / Pellets; and
- f. pyrotechnics.

77. No Lead Shot / Pellets / BB's are authorized.

78. Extra tentage, for any reason, that is erected on the Range shall not be erected on the ground between the Firing Points and the Stop Butt.

#### **Y RANGE - RIFLE RANGE**

79. **General Description.** Located at GR 198 858 in Area 3, Y Range is a 600 yard Classification Range which is in the process of being converted to a 500 metre Classification Range. It has 30 Firing Points, an enclosed gallery, a Troop Shelter and a parking area. Access to the range is through a locked gate which must remain locked or guarded at all times.

80. **Authorized Ammunition.** The following ammunition can be fired on this range:

- a. .22 Cal;
- b. .223 Cal;
- c. 5.56mm;
- d. .270 Cal;
- e. .303 Cal;
- f. .38 Cal;
- g. .40 Cal;
- h. .45 ACP;
- i. 7.62mm / .308 Cal;
- j. 30/30 Cal;
- k. .338 Cal;
- l. .45 cal;
- m. .38 Cal;
- n. 9mm; and
- o. pyrotechnics.

81. **MG Range Practices.** When conducting any MG range practices, a maximum of five rounds per burst is to be fired. Units are reminded that this range is laid out in yards not metres.

82. **MG Restrictions.** To reduce the tunneling effect of sustained fire on the Stop Butt, MG's shall be moved, if available, to another firing lane on the range, after one firer has completed the individual practice. The goal of this drill is to even out the lead contamination and the wear on the Stop Butt.



83. Extra tentage, for any reason, that is erected on the Range shall not be erected on the ground between the Firing Points and the Stop Butt.

### **MECHANICAL TARGET RANGE**

84. **General Description.** Located at GR 200 872 in Area 2, the Mechanical Target Range (MTR) has 9 Firing Points and target emplacements out to 350 yards. A Troop Shelter and a parking area are located centrally behind the firing points on the range. Units can demand the DFT-ITS for use at the range or they may use standard targets in lieu of the DFT- ITS. A Target Operator Platform for the DFT-ITS is located adjacent to the troop shelter. Access to the range is through Gate 2H, which is a locked gate, which must remain locked or guarded at all times.

85. The Range Warden has a fenced off Target Storage Area directly behind the range and this area is Out of Bounds to users of the MTR.

86. When this range is Live, The area around D Tower and the D Tower Troop Shelter is Not Safe. The Radley Walters Firing Pad 2 is located immediately downrange of lanes 8 and 9 next to Baelstadt Road.

87. **Authorized Ammunition.** The following ammunition is pre-templated firing from the established firing point only:

- a. .22 Cal;
- b. .38 Cal;
- c. .40 Cal;
- d. 5.56mm;
- e. 7.62mm / .308 Cal;
- f. 9mm;
- g. Shotgun; and
- h. pyrotechnics.

88. If a unit wishes to fire from a different location than the established firing line or use a different wpn system than listed above then paragraph 41, Non - Standard Range Practices, shall be followed.

89. **Sentry.** A Sentry shall be placed at Gate 2H to control access to the range.

90. Extra tentage, for any reason, that is erected on the Range shall not be erected on the ground between the Firing Points and the end of the range.

### **KNOWN DISTANCE RANGE**

91. **General Description.** Located at GR 185 889 in Area 2, the Known Distance Range (KDR) has 7 firing lanes and various DFT-ITS tgt emplacements out to 1200 metres, as listed below. The elevated Firing Point is located just off the south shoulder of Veritable Road. The Fire Access Road from the Grenade Range runs up to the left flank of the Firing Point, passes directly behind the Firing Point and runs down to Veritable Road and then cuts off of Veritable Road and continues in a northerly direction towards Juliette Tower. The following tgt emplacements are available for users to populate:

- a. SIT emplacements for each lane every 100 metres starting at 300 metres and extending westerly out to 1100 metres;
  - b. 2 protective berms designed for a MIT rail, which extend the width of the range, one at 515 metres and another at 715 metres; and
  - c. three SVT emplacements at 1200 metres.
92. Units can demand the DFT-ITS for use at the range or they may use Fig 11, Fig 12 or any other authorized tgts in lieu of the DFT-ITS. All tgt emplacements are accessible by access roads, which branch off of Veritable Road.
93. A Troop Shelter and a parking area is located behind the firing point on the left flank of the range.
94. **Authorized Ammunition.** The following ammunition is authorized for firing on the range:
- a. 5.56mm;
  - b. 7.62mm;
  - c. 9mm;
  - d. .338 Cal;
  - e. .50 Match Anti Pers; and
  - f. pyrotechnics.
95. The range is pre-templated and the Left and Right Arc Markers are located at the extreme ends of the 515 metre protective berm. Both protective berms for the MIT tgt rail are within the established arcs of the range and the range is templated so that all lanes can track and engage tgts along the complete width of either berm.
96. **Automatic Fire Not Authorized.** There is no automatic fire authorized on this range, only repetition fire is authorized.
97. A sentry shall be placed on Veritable Road in a suitable location to control any traffic flow from the North or East.
98. Movement off the established roads and firing pad of the range, on to the ground North of, South of, or West of the Firing Point is prohibited due to UXO contamination. See the RTA Access and Use Policy, Annex C of the RSOs.
99. Extra tentage, for any reason, that is erected on the range shall not be erected on the ground between the Firing Point and the tgt emplacements. The tree line East of the range is considered a Type 3 area for UXO contamination. See The RTA Access and Use Policy Annex C of the RSOs.
100. When this range is Live, portions of Area 2, 3 and 4 fall underneath the Danger Area Overlay (DAO) of this range. Coordination between users of Juliette Tower and this range is especially critical because the DFT-ITS Mover Berm at Juliette Tower is underneath the DAO of this range.

## **GRENADE RANGE**

101. **General Description.** Located at GR 189 886 in Area 2, the Grenade Range has 2 Firing Points (Left and Right of the personnel assembly bay) and each Firing Point has 3 throwing bays (low, medium and high wall) and a preparation bay on either side of the personnel assembly bay. The control tower sits atop of the personnel assembly bay. There are 2 observation points located directly behind the firing points but these observation points have no overhead cover.

102. There is a wheelbarrow and two shovels located in the personnel assembly bay to assist units with filling in any holes created by exploding grenades in the Impact Area. A parking area with portable toilets and a Troop Shelter, which is outside of the 300 metre Safety Radius, is located at the entrance to the range.

103. **Authorized Ammunition.** The following ammunition can be fired on the range:

- a. C13 Fragmentation Grenades;
- b. M69 Practice Grenade (with Fuse M228);
- c. Artillery Simulators;
- d. Thunderflashes; and
- e. C19 DCDW.

104. **Demolition Kits.** Demolition Kits shall be taken to the range. Only qualified personnel, as listed in C-09-008- 002/FP-000, shall use these kits to destroy a blind.

105. **Targetry.** Units may place targets in the Impact Area of the range but targets in which a grenade may roll into and cannot be directly observed, without actually moving the target, are strictly forbidden. Targets of these types include tires, boxes, etc. All targets must be at least 20 metres from the throwing bay. No grenades shall be thrown purposely to land within 20 metres of the throwing bays. Grenades will be aimed to land directly to the front by the grenadier and not across the frontage of the range itself.

106. **Winter Training.** During winter training, grenades shall not be thrown into soft snow. Snow shall be cleared so as to expose hard ground within a 30 metre radius centred on the target area. If the snow is too difficult to clear, a hard surface of similar size shall be prepared by packing (or rolling) and icing the target area. When the surface is damaged it shall be repacked and re-iced before use.

107. **C19 DCDW.** The C19 DCDW must be placed outside of the Impact Area, 25 metres West from the throwing bays and the direction of fire shall be at 4800 mils towards the middle of Area 2, facing away from both the throwing bays of this range and the M203 Range.

108. **Safety Radius.** No unprotected military personnel or vehicles are authorized within the 200 metre Normal Safety Radius unless the range is Safe. Personnel utilizing the 2 observation points behind the throwing bays must stay within the confines of the wall separating them from the throwing bay and they must not step out to the left or right of that wall. Since there is no overhead protection, they must wear a helmet.

109. **Practice Grenades.** Practice grenades can be used outside of the Impact Area of the range as long as the personnel are safe from fragmentation grenades splinters and a 20 metre Danger Radius is maintained for the M228 fuse.

110. **Field Firing Ranges.** Field Firing Ranges for hand grenades may be conducted in the area of the Grenade Range to facilitate training requirements however these ranges will not be constructed in the Impact Area of the Grenade Range itself. See B-GL-381-1 Chapter 8 and Section 3 of this chapter for further details on Field Firing of grenades. Messer Trail shall be kept Positively Safe at all times.

## **M203 GRENADE RANGE**

111. **General.** The M203 Grenade Range (M203 Rge), which is located in Area 2 at GR 191 883, is designed for the firing of 40mm Low Velocity (LV) grenades from the M203A1 Grenade Launcher only.

112. **Description.** The range has 2 Firing Points. Each Firing Point has a Firing Trench and a 3 level Wall for the Prone, Kneeling and Standing positions. The 2 arc markers are located at the extreme far left and right ends of the Impact Area. The Left of Arc is 3732 mils and the Right of Arc is 4005 mils. The range is templated for firing from the right Firing Point to the Left Arc Marker and vice versa. The RSO platform has 2 protected observation ports to observe the grenades when they function. There are 2 ready walls available for follow up firing relays, located directly behind the RSO platform. A troop shelter is located in the Admin Area of the range.

113. **Minimum Engagement Ranges.** The minimum range for the C149 HE grenade is 75 metres. The minimum range for the M433 HEDP grenade is 165 metres. These two Minimum Range Lines are marked by coloured stakes placed in the Impact Area. Orange Stakes indicate the 75 metre Line and Red Stakes indicate the 165 metre line. These stakes shall not be directly engaged with either HE or Prac grenades. The minimum range for Practice grenades is 20 metres.

114. **UXO Destruction.** A Dud Destruction Kit, and Dud Destruction / UXO Destruction qualified personnel shall be aval to immediately destroy any HE duds created on this range. All duds shall be destroyed in accordance with B- GL-381-1 and C-09-008-002/FP-000 Destruction of Dud and Misfired Ammunition.

114. **HE Grenade Firing Restriction.** There is a sandy area between the firing point and the front edge of the Impact Area. At no time shall HE grenades be aimed to impact into this area. All HE grenades must land in the hard surfaced Impact Area. It is recommended to aim so as to impact long and then creep back to ensure no HE grenade impacts into this sandy area. If an HE grenade impacts into this sandy area, units shall suspend the firing practice and inform Range Control immediately. If the grenade has functioned, orders from Range Control to carry on with the practice shall be given. If the grenade has not functioned the firing practice shall be stopped. A range sweep shall be carried out immediately to locate and destroy the grenade as per para 4 above. Prac grenades may land in the sandy area, as they pose no UXO risk.

116. **Winter Training.** During winter training, grenades shall not be fired into soft snow. Snow shall be cleared so as to expose hard ground within a 30m radius centred on the target area. If the snow is too difficult to clear, a hard surface of similar size shall be prepared by packing (or rolling) and icing the target area. When the surface is damaged it shall be repacked and re-iced before use.

117. **Admin Area / Sentry.** The Admin area of the range is located 30 metres from Messer Trail on the south side of the range access road. There shall be no movement forward, of unprotected troops or vehicles, from the Admin Area while this range is Live. Comms between the Admin Area and the Firing Point is a unit responsibility. The sentry shall be located at the entrance gate to the range on Messer Tr.

118. **Targets.** Units may bring their own tgts to the range but they shall remove all tgts and debris upon completion of the practice. No scrap vehicle or similar targets shall be placed on this range. No

targets, that may hinder the destruction of a non-functioning grenade, shall be used (i.e. tires or containers) on this range.

119. **Range Sweep.** Upon completion of training, user units shall conduct a range sweep of the entire Impact Area and the sandy area directly in front of the Firing Point. All Practice grenades shall be returned to the ammunition compound as munitions scrap. All HE grenades shall be destroyed in situ as per para 112 above. All salvage shall be collected and returned to the ammunition compound.

## **GAS HUT**

120. **General Description.** The Gas Hut, Bldg CC-092, is located at GR 214 885 just off of Passchendaele Rd on the Garrison and shares a common access road with the Urban Ops Shoot House (UOSH) complex. CC-109, which is located inside the 100 metre Safety Radius, is the Troop Shelter for this facility. Power, water, sanitation and a parking area are available at Bldg CC-109. There are four rooms in the Gas Hut:

- a. the test chamber;
- b. the observation gallery; and
- c. two ante-rooms on located on either side of the test chamber which allow for ingress and egress to the test chamber.

121. **Test Chamber.** The test chamber is equipped with a power bar, a fan, a hot plate and pan to be used exclusively for the creation and distribution of the CS gas. The volume of the test chamber is 98 cubic metres. The floor is approx 20' x 20' square. Approximately 12 personnel can fit in the chamber while conducting the three authorized test procedures. The test chamber has been designed to keep all gas particles contained in that particular room, as long as the doors remain closed and contaminated personnel do not spread any CS particles. The test chamber is equipped with a powered exhaust system to remove any residue gas from the chamber. The exhaust system is operated from the observation gallery.

122. **Observation Gallery.** The observation gallery is sealed from the test chamber to allow unmasked personnel to observe the trg. The RSO for the range shall not be in the observation gallery but shall be in the test chamber to directly supervise the trg. There are two manually operated vents to allow outside air to flow through the observation gallery. It is recommended that these vents remain closed during trg unless the winds are favourable. The exhaust fan control for the test chamber is located in the observation gallery. The in-floor heating control for the complete bldg is also located in the observation gallery.

123. **Ante-rooms.** The two ante-rooms allow for ingress and egress of the test chamber and limited observation of the test chamber. The light switches for the test chamber are located in each ante-room. The north ante-room has been designated the Entry Door and south ante-room has been designated the Exit Door however any door can be used for egress in an emergency or if a trainee is overwhelmed by the CS agent.

124. **Authorized Ammunition.** CS Gas capsules are the only authorized ammunition to be used at this facility.

125. **Sentry and Flag Locations.** The sentry location is located at GR 215 885 which is 100 metres from the facility on the access road parallel to Bldg CC-86 of the UOSH complex. A gate is also located at the sentry location to assist in access control. Two other flags are located at GR 213 884 south west of the bldg and GR 213 886 northwest of the bldg. All flags shall be raised and the Sentry location shall be manned at all times while the range is occupied.

126. **Safety WRT the UOSH Complex.** Users of this facility must be vigilant to ensure that no CS gas enters the UOSH complex area. The Gas Hut is located within 100 metres of Bldg CC-86 of the UOSH complex. If for any reason the RSO of either facility believes that CS Gas is affecting personnel at the UOSH complex, that RSO shall order CHECK FIRE and inform the other RSO ASAP. The Gas Hut doors shall be closed and the exhaust fan shall be turned off. Range Control shall then be advised and Range Control will decide when trg will recommence at either facility after the gas has dissipated in the immediate area of the affected area. Personnel that have completed their trg in the Gas Hut must ensure that they do not contaminate personnel trg at the UOSH complex.

127. **Comms.** CS Gas trg is considered Live Trg thus all users shall man the Range Safety Net and shall complete all required requests and reports IAW Chapter 1.

128. **Clearances.** Once trg is completed all units shall inform Range Control that the Range is Safe. Prior to requesting a clearance from Range Control the unit shall ensure that the complete bldg is cleaned, both exterior ante-room doors are opened, the interior test chamber doors are closed and the test chamber will be ventilated for at least thirty minutes using the powered exhaust system before a Range Control patroller arrives. The appropriate paperwork shall be completed and turned into the Range Control patroller along with the keys for the facility. Once the clearance is completed all lights shall be turned off, all electrical appliances shall be turned off except for the powered exhaust system which is to remain running, the bldg shall be secured and then the unit shall request to close down on the Range Safety Net.

#### **URBAN OPS SHOOT HOUSE COMPLEX**

129. See Annex J for details.

## **SECTION 3 - FIELD FIRING / INDIRECT FIRE RANGES**

### **GENERAL**

130. Advanced Training Exercises, which can consist of Battle Inoculation, Field Firing Exercises and Battle Simulation, may be established in the RTA providing the Danger Area Overlay for the weapon system(s) in use fall completely within the Training Area(s) authorized for the exercise. The safety of all personnel be they participants, range staff, spectators or other RTA users shall be the primary concern when planning the exercise(s). All orders, regulations, publications, restrictions and drills must be strictly adhered to. B-GL-381-1 Chapter 8 gives specific detail on the conduct of Advanced Training Exercises.

131. Before commencing any Live Training, consult the RTA Access and Use Table at Annex C.

### **ORTONA URBAN OPS SITE**

132. See Chapter 4 Section 7 for details.

### **URBAN OPS VILLAGE**

133. See Chapter 4 Section 8 for details.

### **SENTRIES**

134. Sentries shall be placed to control access to the Firing Point(s), Gun Position(s), Mortar Baseplate(s) etc., or the start line of a Manoeuvre Box. This shall be their sole responsibility. These sentries shall be in communication with the Firing Point Officer. Sentries shall be briefed, as a minimum, on where to direct visitors and who is in charge of the Range. The layout of the Live Training Exercise and the ground will dictate the amount of sentries required. With the exception of the above mentioned sentries, the closed barriers and the raised flags will normally suffice as an indication to others that an Area is Live. When required, Range Control will order the placement of other sentries to control access to Live Areas.

### **UXO PRODUCING AMMUNITION**

135. UXO producing ammunition (Artillery projectiles, Mortar bombs, HEAT projectiles, rockets and missiles, AFV HE / Smk projectiles, bombs or any type of ordnance that contains any explosives) shall be fired so as to impact and ricochet into Areas 7 and 8 only. If in doubt, contact Range Control.

136. Due to the nature of the employment and the method of destruction of dud or blind hand delivered grenades, demolitions, Batsim and cratering charges, the restriction limiting use to Areas 7 and 8 does not apply to these munitions. If in doubt, contact Range Control.

### **BURN BOXES IN AREA 7 AND 8**

137. 3 burn boxes are established, one in Area 7 and two in Area 8 so that the spread of a fire caused by ammunition can be contained. See Chapter 2, RTA Fire Orders for details.

### **CHEMICAL AGENTS**

138. Range Control shall be notified 30 min prior to any chemical agent being fired in the RTA so that other units, who may be sharing the same areas, can be alerted.

## UXO PRODUCING AMMUNITION OVER OR ON THE DROP ZONES

139. No UXO producing ammunition shall impact onto DZ's Anzio, Dives Crossing, Eadie, Sand or Shorty. If the DZ's fall within the template of units using UXO producing ammunition, a post firing range sweep of the DZ shall be conducted by the unit. The result of the search shall be certified by the unit in writing to Range Control.

## DANGER AREA OVERLAYS (DAOs)

140. All Live Fire Training in the RTA will be properly templated as per B-GL-381-1, Chapter 2 or C-07-010-011/TP- 000, Canadian Forces Air Weapons Ranges. Electronic DAOs shall be produced in CFRIS using the Base Safety Map sub - program imbedded in the program. In the case of Air Weapons the Weapons Danger Zone program shall be used and then the final product imported into CFRIS. If there is any doubt or question as to what Danger Area Template (DAT) or Safe Distance is to be used to create the DAO(s), then the most restrictive DAT or safest distance shall be used.

141. **Hard or Ground Widths.** All DAOs shall be constructed using the hard width measurements for the particular ammunition DAT. Artillery units shall use the Hard Ricochet Templates for the particular weapon / ammunition system in use. Range Control may authorize the use of ground widths when the target and target area meet the specific requirements for use of ground widths.

142. All DAOs shall be presented to Range Control a minimum of **7 days** prior to the start of a Live Training event, for approval by Range Control staff only, or the training may be cancelled. Range Control may order the DAOs to be presented earlier to aid in de-conflicting TSRs. A copy of the authorized DAO(s) will always be available at Range Control and the unit is responsible to pick up the DAO(s) at Range Control prior to the commencement of the Live Trg. The RSO of record shall have in their possession the specific DAO(s) for that particular firing event or training.

143. The following information, filled into the Properties Tab by the unit, is the minimum required information on a CFRIS electronic overlay:

- a. the unit conducting the trg;
- b. the date time group the overlay will be used;
- c. the map and Trg Areas to be used (Arty units must indicate Impact Areas and Live Deployment Areas);
- d. the weapon and ammunition and fuses (if applicable) to be used;
- e. the firing point, firing line or movement box grid references (not required by Arty units, but if known then include);
- f. the arcs of fire (if applicable); and
- g. the name of the person who built the overlay (in the Prepared By box).

144. Due to the present limitations of CFRIS (not all weapon systems / ammunition available to CAF users are built into the program), manually constructed DAOs, produced in 1:50,000 scale, drawn on clear plastic with permanent ink, can be presented to Range Control, as per the timelines as mentioned above. The following information is required on manually constructed DAOs:

- a. the firing point, firing line or movement box from which the firing will take place;



- b. indicate graphically the outside perimeters of the Danger Area or the Safe Target Area for indirect weapon systems;
- c. the arcs of fire where applicable;
- d. the weapons and ammunition to be fired;
- e. date time group of the firing;
- f. any sentry locations if the MSR falls inside the Danger Area;
- g. three Grid Intersection Points (GIPs);
- h. the unit conducting the training; and
- i. the name of the person who constructed the template.

### **POSITIVE SAFETY AND THE MSR**

145. The Positive Safe Distance for all High Explosive ammunition shall be maintained from the MSR. Any requests for exceptions must be staffed 48 hrs prior to the template being submitted. The term Positive Safe Distance is synonymous with the term Fixed Safety Distance.

### **SELECTION OF TARGETS**

146. The following installations or features shall not be directly targeted:

- a. towers;
- b. horizontal control points;
- c. splinter proof shelters;
- d. firing points;
- e. buildings;
- f. telephone lines;
- g. power lines;
- h. road signs;
- i. roads;
- j. gates or barriers;
- k. mechanical target mechanisms and ancillary eqpt;
- l. cemeteries; and
- m. bodies of water/wetlands.

## **ARC OF FIRE MARKERS**

147. As the Manoeuvre Box or Firing Point(s) may not be set up on permanently established ranges, temporary Left and Right Arc Markers must be erected if the DAO is constructed thusly and placed so that all personnel involved in the exercise can easily identify the safety arcs. Do not confuse or use a DAO constructed with Arc Bearings with Arc Markers or vice versa.

## **CONSTRUCTION AND MAINTENANCE**

148. Advanced Training Exercise areas will be constructed and maintained by the user unit. On completion of firing a thorough sweep of the exercise area will be made to ensure the area is left clean, tidy, and clear of all live ammunition and or salvage and any field defensive stores or works are completely dismantled and removed from the RTA.

149. Before commencing any target construction, consult the RTA Access and Use Table at Annex C.

## **PLANNING AND PREPARATION OF FIELD FIRING EXERCISES**

150. B-GL-381 Chapter 8 gives specific direction for the conduct of field firing exercises WRT safety, planning and preparation. Each OIC Ex and or RSO must have a comprehensive knowledge of these procedures before starting any pre-planning or preparations for any field firing exercise. Range Control may be able to assist the unit however ultimately the responsibility falls to the unit to plan and execute safely.

## **FIELD FIRING OF HAND GRENADES**

151. On completion of construction of the field firing range for hand grenades and before firing is authorized, the range may be inspected by Range Control personnel before the firing practice is conducted. The Safety Staff for that particular range will accompany Range Control personnel during the inspection. B-GL-381-1, Chapter 8 gives specific detail on the conduct of field firing grenade ranges.

## **C-16 GRENADE MACHINE GUN (GMG) FIRING 40mm HV PPHE-RF and HEPD GRENADES**

152. The firing of the HE family of 40mm High Velocity (HV) grenades from the C-16 GMG can be carried out in Area 7 at one specific location and with limited arcs of fire. Range Control holds the DAO for this trg. This location minimizes the possibility of UXO contamination of the fire access roads in Area 7. To assist with this control measure the following procedures shall be strictly followed:

- a. the minimum engagement range is 500 metres;
- b. all roads within the ricochet area shall be swept by the unit conducting the trg at least 30 minutes after the last round has been fired;
- c. during the march out procedures the unit shall accompany the Range Control Patroller and the roads shall be inspected a second time to ensure no UXO are present on the roads; and
- d. all standard procedures WRT fd firing in the Petawawa RTA shall be followed.

## **COMBINED ARMS AND JOINT EXERCISES**

153. When two or more units are participating in a Live Fire Training Exercise, one of the units shall be tasked to provide the overall OIC Exercise and he or she shall coordinate the DAOs produced by each

unit participating. The DAOs shall be presented to Range Control a minimum of 14 days in advance to ensure proper coordination is completed.

154. Normally, the unit of the OIC Exercise will man the Range Safety Net and the other units involved will man an Exercise Safety Net, controlled by the OIC Exercise. Each other unit may have a specific net for their safety organization depending on the scope of the exercise.

### **DEMOLITION AND CRATERING TRAINING**

155. Demolition and cratering training can be conducted in any of the Impact/Training Areas. Some restrictions may be placed on the unit by Range Control as to where, what or which can be cratered or explosively demolished. B-GL-381-1, Chapter 7 gives specific detail on the conduct of demolition training.

156. **Maximum Charge for Demolition Training.** The equivalent to 100 Kg of C4 explosive, per individual shot, is the maximum allowable charge for all demolition training.

157. **Maximum Charge for Cratering Training.** During any specific trg event that involves a cratering task, the equivalent to 250 Kg of C4 explosives, per individual shot, is the maximum allowable charge. Units will present their plan to Range Control a minimum of 14 days prior to the training event for approval of what amount of explosive is to be used and which roads or trails that can be cratered. Major access roads normally shall not be cratered.

158. **Authority for Combat Loads.** Annex L Storage and Transportation of Ammunition within the RTA deals with ammunition combat loads for military exercises.

159. **Simulated Bridge Demolitions.** Simulated bridge demolitions with Live ammunition may be carried out provided the following rules are followed:

- a. any charges placed underwater or on the shoreline shall not be positioned so as to cause any damage to the structure and an Environmental Assessment shall be completed;
- b. Live ammunition, for example Detonation Cord, must not touch the structure;
- c. the maximum size of each charge will not be larger than 113 grams (1/4 lb); and
- d. a mixture of flour and explosives to create a visual effect shall not be used.

### **DEMOLITION TRAINING DAOs**

160. **General.** There may be occasions when certain Impact/Training Areas can be reduced for safety for demolition type training, similar to an Artillery Reduced Impact Area Overlay (RIAO). Basically, an Impact/Trg Area would have the maximum Safety Distance for the training being completed imposed on the boundary of the area allotted, thus “reducing” the Impact/Trg Area. Many factors have to be considered prior to a unit receiving authorization to use a RIAO for Demolition Training. Some of these factors are:

- a. is the area selected being shared with other units;
- b. are there any other DAOs affecting the area; and
- c. can the area be effectively controlled to ensure no other personnel enter the danger area.

161. **Other Restrictions.** All other restrictions WRT environmental orders, these orders and all other applicable regulations and orders must be strictly followed.

162. **Records.** If a RIAO is authorized, the unit must keep accurate records of exactly where all explosives were fired and indicate them on the appropriate Clearance Certificate. A Range Control patroller may have to inspect each firing point to ensure proper remediation drills were carried out.

163. Units must consider the RIAO method the exception rather than the norm and must be prepared to produce DAOs in the traditional fashion, i.e. one Firing Point = one DAO.

## INDIRECT FIRE WEAPONS

164. B-GL-381-1, Chapters 4 and 5, gives specific detail on the conduct of Artillery and Mortar training respectively. Reduced Impact Area Overlays (RIAO) shall be created for the authorized Impact and Ricochet areas allotted for the training. Direct Fire Exercises may use a RIAO and safety is carried out in the normal manner or the unit may create a Direct Fire DAO for the wpn system and projectile to be used. Units must remember that the burst distance is not normally included in the Danger Area Templates produced by DAEME 3-4-5.

165. **Deployment.** Indirect weapon systems may be deployed in and fired from Areas 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, H, I, K, L, FOB Warbler, the Urban Ops Village and the Ortona Urban Ops Site as long as it is safe to do so, IAW B-GL-381-1 Chap 4.

166. **Deployment in the Petawawa Research Forest (PRF).** Mortars and Artillery weapon systems may deploy in selected positions in the PRF but only Artillery weapon systems may be authorized to fire Live from these positions. The following regulations and restrictions shall be rigidly adhered to:

- a. booking requests shall follow the procedures as laid out in Chapter 4 Section 2 paras 10, 11 and 12;
- b. all restrictions indicated in Chapter 4 Section 2 para 9, Annex H and in this Chapter shall be strictly adhered to;
- c. access into and out of the PRF shall be through pre-authorized routes only travelling directly to or from the authorized gun position(s) and under no circumstances will troops or vehicles be authorized to “recce” other areas or routes in the PRF unless pre-authorized by the PRF Site Manager or a designated representative exclusively through Range Control;
- d. Sentries shall be placed so as to keep all non- exercise personnel(less Range Control staff) from entering the gun position while the guns are engaged in a Fire Mission;
- e. all roads in the PRF may have uncontrolled civilian traffic utilizing them so any specific area utilized as a Live gun position shall be considered civilian land and thus the following regulations that pertain to firing from civilian land onto DND controlled land must be strictly adhered to;
  - (1) as a minimum 105mm howitzers shall be deployed 100 metres and 155mm howitzers shall be deployed as per the direction given in B-GL-381-1 Chap 4; and
  - (2) only High Explosive projectiles fitted with impact fuzes or the electronic C32A1 fuze in Delay mode are used;

- f. the exception to the above sub-para e.(1) will be if a particular gun position is located in an area where uncontrolled civilian traffic is not normally expected and in this case sentries shall be posted, or if gates and flags are provided the gates shall be closed and the red flags raised, to keep any unauthorized civilian personnel from encroaching into the gun position;
- g. any unused propellant shall be removed from the gun position and returned to the Ammunition Compound or, if authorized, destroyed in an authorized manner outside of the PRF;
- h. all personnel deploying into the PRF shall receive a briefing on the regulations particular to this area and all incidents shall be reported immediately to Range Control;
- i. Range Control personnel shall conduct a marchout of the gun position with a representative of the unit (see Chapter 1 Section 2 paras 143 -145) once the gun group has departed that particular position; and
- j. if a projectile impacts or ricochets into the PRF, for whatever reason, the following procedures shall be strictly adhered to:
  - (1) CHECK FIRE shall be immediately ordered by the unit and that order shall stay in effect until rescinded by Range Control;
  - (2) Range Control will be contacted immediately and the suspected impact GR of the projectile will be sent ASAP to Range Control;
  - (3) the unit must conduct an intensive search of the suspected impact area of the projectile;
  - (4) the projectile shall be destroyed in a safe manner, IAW current dud destruction procedures before the exercise or training continues; and
  - (5) in the situation where the projectile cannot be readily found, the unit must be prepared to picket the area to stop anyone else from entering the danger area of the projectile until the projectile is found and destroyed in a safe manner, IAW current dud destruction procedures.

167. **Unsafe Rounds.** In the event of any unsafe round, i.e. a projectile that lands outside of the DAO, the OIC Practice will immediately investigate the cause and inform Range Control.

168. **Observation of Fire.** Artillery fire shall normally be observed by a qualified Forward Observation Officer, but as a minimum, a qualified OP Det Comd above the rank of Bombardier, shall observe the fire. Mortar fire shall be observed by an Advanced Mortar qualified Officer or an Advanced Mortar qualified NCM above the rank of Corporal.

169. **Targets in Open Areas Only.** Targets shall be selected in open areas of the authorized impact areas only. No concentrated fire shall be directed into wooded areas. During adjustment procedures, single rounds may fall in wooded areas as long as the Fire for Effect is directed into a non-wooded area.

170. **Firing Over or From Non DND Property.** Permission to fire over non DND property, in this case Highway 17, shall be sought from the respective Div Comd and HQ 4 CDSB Petawawa Ops Svcs. HQ 4 CDSB Petawawa Ops Svcs shall be informed of any unit firing from civilian property and

impacting into the RTA. These are control measures so that Range Control can advise other users of the RTA of that training and adjust the Range Schedule, if necessary.

### **AIR DEFENCE WEAPONS**

171. B-GL-381-1, Chapter 6 gives specific detail on the conduct of Live Air Defence exercises.

172. Firing of any Air Defence weapons can be carried out in the RTA when the area allotted is sufficient for the DAO of the weapon.

173. Sentries shall be placed to control access where necessary to restrict access to the Danger Area of the weapon system.

174. Operators of any targeting system must be located as such to control the targets and be in a Safe area outside of the DAO. Range Control shall be notified if a target system is lost and an approximate location shall be given.

### **AIR TO GROUND WEAPONS RANGES**

175. Air to Ground weapons from may be fired in the RTA when all aspects of safety as laid out in C-07-010-011/TP-000, Canadian Forces Air Weapons Ranges and, where applicable, B-GL-381-1 are strictly adhered to.

176. All UXO producing Bombs and Rockets shall be delivered to impact and ricochet into Areas 7 and 8 only.

177. The program Weapons Danger Zones (WDZ) shall be used to create all WDZs so that it can be imported into CFRIS. User units who have access to this program may forward to Range Control the WDZ file and a pdf file of the proposed trg.

178. The Air Weapons Range Licence for 4 CDSB Petawawa can be found in the Base Details / Documents section of CFRIS.

179. All Air Weapons Ranges shall be booked in the normal fashion as laid out in Chapter 1 of these orders.

### **HELICOPTER AERIAL DOOR GUNNERY TRAINING**

180. All ground targets shall be engaged at a minus (-) Line of Sight in relation to the weapon platform in use and the horizontal plane. If a target is to be engaged at an elevation equal to or greater than the weapon platform in relation to the horizontal plane, i.e. a plus (+) Line of Sight, then the appropriate Field Firing DATs found in B- GL-381-1 may be ordered to be used.

181. After any Helicopter Aerial Door Gunnery exercises, a range clearance shall be completed by the unit and verified by Range Control staff to ensure all spent casings, links and any live ammunition are cleared off any roads that lay beneath the movement/firing area of the associated DAO.

### **PROPELLANT BURN AREA**

182. Ammunition Techs may destroy unused propellant in Area 3 at GR 186 848. Procedures located in C-09-005-004/TS-000, Ammunition and Explosive Safety Manual Volume 4, Demilitarization and Disposal shall be followed. The area shall be booked in the normal fashion as laid out in Chapter 1 of these orders.

## **CHAPTER 6 - DIRECT FIRE TARGET SYSTEM**

### **SECTION 1 - GENERAL**

1. The Direct Fire Target System (DFTS) is comprised of the Integrated Targetry Suite (ITS) and the Portable Moving Target System (PMTS). Grn Petawawa only holds the ITS.
2. All relevant safety precautions and restrictions shall be observed, along with any special restrictions in this chapter as they relate to utilizing the DFTS.
3. Units are reminded that they may have a civilian operator present and shall follow all relevant safety restrictions that apply, i.e. Positive Safety when civilians are present during Live Training.
4. Permanent target emplacements (cribs and mover berms) for the ITS are located throughout Areas 2, 6 and 9. Contact either Range Control or the Target Services Support (TSS) team, local 5557, to obtain the locations of these cribs prior to conducting training in these areas.

### **INTEGRATED TARGETRY SUITE (ITS)**

5. **General.** The purpose of the ITS is to support weapons training which takes place after successful completion of the personal weapons test and basic familiarization training in the case of crew-served weapons. See para 13 below for booking procedures and Section 2 for more details on the system. The ITS system is comprised of the following components:

- a. Static Infantry Targets (SIT);
  - b. Static Vehicle Targets (SVT);
  - c. Moving Infantry Targets (MIT);
  - d. Moving Vehicle Targets (MVT);
  - e. Thermal Patches (various sizes and quantities);
  - f. Light Hostile Fire Simulators (L-HOFS);
  - g. Heavy Hostile Fire Simulators (H-HOFS);
  - h. Target Control Devices (TCD); and
  - i. Night Muzzle Flash Simulators (NMFS).
6. Range Control holds fifteen (120 volt, 12.5 amp, and 1.5 kilowatt) generators for units to use to power up the thermal patches. Each generator will run for approximately four hours under load. These generators are for use with the thermal patches only. Units are responsible to demand these generators from Range Control. A pre-issue inspection, with a representative from Range Control shall be conducted to insure serviceability and that all fluid levels are topped up. Users shall record the number of hours of operation. Upon return, the generators will be inspected for damage, cleanliness and fluid levels. Units are responsible for any POL products consumed during use.

### **PORTABLE MOVING TARGET SYSTEM (PMTS)**

7. This system is a stand-alone, remotely controlled moving target system used for Live Training with explosive ammunition. Grn Petawawa has not been issued with this system. See para 14 below on

how to book this system and Section 3 for more details of the system. The PMTS is comprised of the following components:

- a. Control Station;
- b. PMTS Prime Mover;
- c. PMTS Target Trailer and Thermal Target; and
- d. Generator Trailer and Generator.

## **TARGET MAINTENANCE FACILITY**

8. The Target Maintenance Facility (TMF), Bldg WTA-032, located at Paquette Gate shall be open from 0730 - 1600 hrs daily, Monday to Friday. The TMF will be manned, as required, to issue and receive targets and systems to / from user units outside of these hours based on the Range Booking Schedule.

## **CONCEPT OF OPERATIONS**

9. The TSS team is available to support the unit training. The overall objective is to assist units to effectively use training time and to optimize the training value obtained from the system. Dedicated range operators from the TSS team are available for the operation of the system, on a continuous basis, in support of unit training exercises. Units should strive to load their personnel on the Unit Operator Course (see below) and use their own operators as much as possible. When requested and depending on availability, the duties of TSS operators include:

- a. if available, attending the range recce with the OIC and providing advice on the best use of the equipment to meet the user units aims;
- b. assisting the OIC Exercise with scenario programming of the TCD as required;
- c. operating the range in accordance with directions from the OIC Exercise or providing support to the unit operator;
- d. gathering hit data and compiling results of unit performance; and
- e. providing hardcopy results.

10. As all the TSS operators are civilian employees, they are limited to civilian labour laws. The TSS Site Manager will coordinate the hours and quantity of operators based on the user unit requirements.

## **UNIT OPERATOR TRAINING**

11. The TSS team will provide recurring training courses (up to eight serials per year) for DND operators of the ITS system. It is highly recommended that units load their personnel on the training courses so that units can run basic Live Fire ranges internally. The more qualified unit operators there are available to run basic scenarios, the more support the TSS team can be provided to other users of the system. The course syllabus includes:

- a. basic introduction to the ITS components;
- b. basic installation of ITS sub-systems (batteries, target boards...etc);
- c. installing of L-HOFS, H-HOFS and NMFS;



- d. basic siting considerations;
- e. basic TCD and range operations; and
- f. a basic aide memoire for student retention.

## **USER UNIT RESPONSIBILITIES**

12. Units using the DFT ranges are responsible for the following:
- a. preparation of protective pits and berms (as required) to conduct exercises on a temporary, austere ranges (user units shall seek the advice of the TSS team as to the proper deployment and installation of the system);
  - b. providing work parties and vehicles to transport target lifters, target boards and/or batteries from the TMF to the range being used;
  - c. replacement and attachment of batteries (provided by the contractor);
  - d. replacement and attachment of targets which are damaged through the course of training (3D tgts will be provided by the contractor for the SIT and MIT only), tgts for the SVT and MVT are to be provided by the user unit however the attachment of thermal tgts is a contractor's responsibility;
  - e. provision of work parties to transport targets and ancillary equipment back to the TMF;
  - f. provision of work parties to clean DFT eqpt prior to return to the TMF;
  - g. fuelling of the MVT's (including providing the fuel);
  - h. snow /sand clearance for MIT's, MVT's, PMTS, and any crib covers for SIT'S and SVT'S being used;
  - i. assisting the TSS team in reporting malfunctions by tagging non-functional equipment;
  - j. visiting units must plan to arrive early enough so that all preparations for the range(s) can be accomplished prior to the training activity; and
  - k. include time for preparation and tear down in the initial booking.

## **RANGE BOOKING PROCEDURES DFTS**

13. **ITS Ranges.** All ITS ranges shall be booked through Range Control a minimum of four weeks in advance of the actual range day in the same manner as any other facility controlled by Range Control and by completing Section 3 of the 4 CDSB Petawawa Training Support request or the DFT-ITS Range Booking / Worksheet which can be found at either the Range Control ACIMS Site or in the Documents section of CFRIS. Failure to follow these basic deadlines may result in no support for the training.

14. **PMTS Ranges.** PMTS bookings shall be requested a minimum of three months in advance to Range Control, who will confirm availability through the TSS team. Units shall then send their request through their chain of command to Area HQ once the availability of the system is confirmed.

## **RETRIEVAL OF GUIDED MISSILE WIRES**

15. When wire guided missiles are fired, all of the guide wire spooled out by the missile(s) must be retrieved as it may preclude the target systems from working properly.

## **SECTION 2 - INTEGRATED TARGETRY SUITE**

### **GENERAL**

16. Four permanent ITS ranges are located in the RTA. Two ranges are located in Area 2 at Delta Tower/Radley Walters Range (GR 193 865) and Juliette Tower (GR 186 894), another fixed range is in Area 6 (Between Shaw Rd 1 and Shaw Rd 2) and a small arms Bush Lane in Area 9 (GR 184 993). To provide maximum flexibility, the ranges are not pre-templated so that user units may develop exercise scenarios that best fit their needs. For example, a unit may develop a section fire and movement range at Delta Tower and another unit may run a MG course using the subsystems located there. Expedient ranges can also be established in the RTA however care must be taken to ensure that the target systems and ancillary eqpt are safe from weapons and ammunition effects and that all safety precautions are adhered to.

### **RELOCATION OF THE ITS**

17. The ITS system may be relocated out of 4 CDSB Petawawa for up to 30 days with TSS team operator support. User units will absorb all costs (less operator wage costs) to deploy, support in location and re-deploy the equipment and TSS operator team.

18. The new contract W8486-093947/001/QF with Lockheed Martin starting 01 Apr 11 requires the use of a DND 626 for any DFT-ITS Off Site Deployments. A copy of the new contract is available on the Range Control Army on Line site and in CFRIS. Please read section 1 Para 1.1.2 for the process of completing the DND 626. Also included are the applicable paragraphs of Annex A to the DFTS Statement Of Work that directly apply to the Off Site Deployment and Annex D the Basis of Payment.

19. Please note that para 5 of Annex D indicates a 2% mark up on the Treasury Board Travel Directive policies that apply to the travel and living expenses for the contractor.

20. All cost estimates prepared by the DFTS Petawawa Site Manager will be priced at a ceiling price i.e. the maximum it could possibly cost to avoid amendment to the DND 626. In some cases, weather days / extra days should also be requested and priced on the DND 626.

21. The dates on the DND 626 shall include the travel days. If there is a possibility of any changes to the dates, a statement on the DND 626 should be included that reads similar to: "The exact period of performance of the deployment is to be mutually agreed upon between LM and the requesting unit."

22. You must include the contract number in your DND 626.

23. The system is radio controlled and the frequencies are licensed for the geographic area of 4 CDSB Petawawa, CTC Gagetown, 2 CDSB Valcartier, CFB Wainwright and 4 Can Div TC Meaford only. User units are responsible for requesting approval to use these frequencies outside of these areas. The ITS frequencies range from 380.075 MHz to 380.975 MHz.

### **AMMUNITION RESTRICTIONS FOR ITS**

24. Any CF Service ammunition that produces explosive after-effects behind the target board and over the target mechanism will destroy the target mechanism and therefore cannot be used with ITS. This particularly applies to:

- a. TOW live;
- b. ERYX live;

- c. grenades;
- d. artillery ammunition;
- e. explosive/incendiary 25mm rounds; and
- f. HE or HESH tank rounds.

25. Basically, only Practice and Ball ammunition may be fired at the ITS tgts. If in doubt, contact Range Control.

26. **Authorized Munitions (SIT/MIT).** The following munitions may be used with all static and moving infantry target systems, in single shot, burst and automatic modes of fire:

- a. .22 rimfire up to 75m;
- b. 5.56mm at 10 to 600m;
- c. 7.62mm at 10 to 1200m;
- d. 9mm ball at 10 to 150m;
- e. .338 Cal from 100 to 1800m; and
- f. .50 cal ball from 100 to 1800 m.

27. **Authorized Munitions (SVT/MVT).** The following munitions may be used with all static and moving vehicle target systems:

- a. .338 Cal from 100 to 1800m;
- b. .50 cal ball from 100 to 1800m;
- c. 25/30mm (non-explosive) cannon rounds from 100 to 2500m;
- d. 40mm LV and HV TP or TPT from 100 to 1000m.
- e. 76mm SH PRAC from 500 to 2000m;
- f. 84mm TPT from 75 to 1000m;
- g. 105mm TPDS Tank from 500 to 2400m;
- h. 105mm TPFDS Tank from 500 to 4000m;
- i. 105mm SH Prac How and Tank from 500 to 4000m;
- j. 120mm tank (training round) from 500 to 3000m;
- k. TOW missile (inert) from 1500 to 4000m; and
- l. ERYX missile (inert) from 200 to 600m.

### **SECTION 3 - PORTABLE MOVING TARGET SYSTEM (PMTS)**

#### **GENERAL**

28. The PMTS is located in CTC Gagetown and CFB Wainwright. The PMTS is deployable from these locations for use at other Bases. The Canadian Army Operational / Training priorities for the system are as follows:

- a. operational requirements;
- b. TOW concentrations;
- c. TOW or ERYX shoots; and
- d. other guided missile platforms (ADATS).

29. The PMTS can be deployed to 4 CDSB Petawawa for up to ten days. User Units are responsible that Training Areas are booked, routes cleared for the system, conducting a recce with the TSS and PMTS team leaders, providing communications between the OIC Exercise and the PMTS operator and removal of any target debris and missile guide wires.

#### **RANGE AREA REQUIREMENTS**

30. The PMTS requires a relatively level road in which to drive on, with a turnaround area at both ends of the road. Circular routes may be used in lieu of turn around areas. This system can be used in any area of the RTA provided the area is authorized for the ammunition type being used and the ground meets all the requirements of the system.

## CHAPTER 7 – LASERS AND LASER SAFETY

### GENERAL

1. All lasers are considered weapons and thus shall be handled accordingly.
2. All Class 3B and Class 4 lasers shall be properly templated.
3. **Reference Material.** In addition to the references given in B-GL-381-1, Chapter 10, all Laser Safety Officer's (LSO) shall also be familiar with the following publications:
  - a. CF Health Service Policy & Guidance 4440-16 Annex E – Lasers;
  - b. STANAG 3606 ARSP – 4 Laser Safety Evaluation for Outdoor Military Environments;
  - c. Canadian Army Order (CAO) 11-97 Laser Safety Program;
  - d. 1 Canadian Air Division (CAD) Order 1-803 Laser Safety Programme;
  - e. the Defence Administrative Orders and Directives (DAOD) 2050-0 Laser Safety and 2050-1 Laser Safety Program: and
  - f. the current Range Laser Safety Survey Report for 4 CDSB Petawawa Range and Training Area.
4. The Range Laser Safety Survey Report for 4 CDSB Petawawa can be found in the Base Details/ Documents section of CFRIS.
5. If there is any doubt between any publications WRT laser safety, the most restrictive publication, order or directive shall be followed.
6. All units who use or wish to use lasers for their training shall inform Range Control of all lasers held by the unit so the proper safety measures can be verified prior to use in the RTA. This is of particular concern for hand held lasers, any laser trials and any foreign / visiting nation lasers.
7. The following Lasers and associated Nominal Ocular Hazard Distances are authorized for use in the RTA IAW the Range Laser Safety Report:
  - a. PLDR, NOHD = 14 Km;
  - b. PLDR 2, NOHD = 34.3 km
  - c. GLTD II, NOHD = 20 km;
  - c. Sniper ATP, NOHD = 26.8 km;
  - d. IZLID 1000, NOHD = 854 metres;
  - e. AN/PEQ-2A, NOHD = 220 metres;
  - f. AN/PEQ-4, NOHD = 460 metres;
  - g. TO-46 (mounted on a RAVEN MUAS), NOHD = 4 metres; and
  - h. MX-15HDI (mounted on a CH-147F), NOHD = 413 metres.

## LASER HAZARD ZONE

8. The Laser Hazard Zone (LHZ) is synonymous with the terms Danger Area Overlay, Laser Surface Danger Zone and the Nominal Hazard Zone. The LHZ is defined as the area in which the laser radiation may exceed the Maximum Permissible Exposure for personnel. The LHZ is dependent on the following factors:

- a. the type of laser to be used;
- b. the associated NOHD and Beam Divergence of the laser;
- c. the reflecting properties of the target and target area;
- d. the platform on which the laser is mounted;
- e. the terrain in the target area; and
- f. if any magnification viewing devices are to be employed.

## CONSTRUCTION OF THE LHZ

9. **Beam Divergence.** Each individual laser system has a beam divergence specific to that laser. If there is any question to the size, in mils, of the beam divergence then contact Range Control.

10. **Beam Buffer Zone.** The Beam Buffer Zone varies on the stability of the laser system:

- a. 5 mils for a rigid stationary mount, tripod or platform where accurate aiming can be guaranteed;
- b. 10 mils for a laser supported on sandbags or using other improvised methods; and
- c. 15 mils for unsupported hand-held lasers.

11. **Horizontal and Vertical Buffer Angles.** The Beam Divergence and the Beam Buffer Zone combined together make the Horizontal and Vertical Buffer Angles. Both angles are added to outside of the defined left and right arcs of fire and, when required, the lower and upper Lines of Sight of the Laser to be used.

12. **Length or Range.** The length or range of the LHZ is dependent on the backstop, the NOHD or the Laser Hazard Distance (the NOHD x the magnification of the optical devices in use that do not have proper filters).

13. **Backstop.** If a suitable backstop does not fully capture the LHZ then the complete NOHD or the Laser Hazard Distance must be applied. The OIC Ex and the LSO are responsible to ensure that all targets to be lased or laser designated lie within the LHZ and that the laser in use does not exceed the LHZ established for the training.

14. CFRIS Base Safety Map does not have a generic LHZ drawing function however with careful manipulation a LHZ can be created using Restricted Area Overlays and Danger Area Overlays. Contact Range Control for further details.

## CONDUCT OF LASER TRAINING

15. All applicable drills and safety procedures, as published in any related reference material, for the laser being used shall be strictly followed at all times.

16. **Sentries.** It is imperative that that no unprotected troops enter the LHZ while lasers are in use. Extra sentries may be required when using ground based lasers depending on the firing location, the target location and type of laser being used. An example would be lasers in use in Area 8 at West Tower Hill and a sentry would be required to ensure no traffic approaches the LHZ from the East through Gate 8J.

17. **Signage.** The OIC Ex and the LSO of the unit firing are responsible to ensure the appropriate signage that is required while lasers are in use in the RTA are in place at the controlled entrance outside of the LHZ to the laser firing point.

18. **Laser Firing Logs.** Units shall maintain an up to date Laser Firing Log whenever laser operations occur. These logs should contain information on the laser being used, the start and end timings, firing locations, target locations, type of target and any other information that may be pertinent in case of a laser injury.



## Annex A

### 4 CDSB Petawawa Range Standing Orders

#### **RTA FORMS AND CERTIFICATES**

1. There are nine appendixes to Annex A. These nine appendixes are required to be completed by the user units to request certain types of training within the RTA and to complete clearances of the facilities / ranges / areas used within the RTA.

2. The nine appendixes are:

- a. APPENDIX 1 - Excavation, Digging, Blasting, Vegetation Removal, Earthmoving, Obstacle Request Form;
- b. APPENDIX 2 - Bivouac / Hide Site Clearance Form;
- c. APPENDIX 3 - Ortona Urban Ops Site Clearance Certificate;
- d. APPENDIX 4 - Urban Ops Village Clearance Certificate;
- e. APPENDIX 5 - Dry Training RTA Clearance Certificate;
- f. APPENDIX 6 - Live Fire Training RTA Clearance Certificate;
- g. APPENDIX 7 - 4 CDSB Petawawa Ammunition Control Certificate;
- h. APPENDIX 8 - Replacement Class Screening Report for Tree Cutting;
- i. APPENDIX 9 - Base Washrack Operating Instructions and Clearance Certificate; and
- j. APPENDIX 10 - Survival Training Request Form.

3. Units shall reproduce these appendixes locally and submit the completed form as directed in the applicable chapters of these orders.

Appendix 1 to Annex A

4 CDSB Petawawa Range Standing Orders

**EXCAVATION / DIGGING, BLASTING, VEGETATION REMOVAL, EARTHMOVING,  
OBSTACLE REQUEST FORM**

Date(s) of Use: \_\_\_\_\_

Unit: \_\_\_\_\_

Area: \_\_\_\_\_ Grid Reference: \_\_\_\_\_

<u>Type of Activity (circle each applicable item)</u>	<u>Area Required (M<sup>3</sup>)</u>
Excavation of Trenches	_____
Excavation of Major Field Fortifications	_____
Tree Felling / Abatis (trees less than 9cm DBH)*	_____
Terrain Blasting	_____
Underwater / Ice Blasting	_____
Removal of Vegetation / Grubbing	_____
Earthmoving	_____
Obstacles	_____

Submitted By: \_\_\_\_\_ Date: \_\_\_\_\_

Authorization: \_\_\_\_\_ Date: \_\_\_\_\_

\* Note: 9cm DBH is 28 cm circumference (approx circumference of a softball). If cutting of trees greater than 9cm DBH is required, complete Appendix 8 to Annex A Replacement Class Screening Report.

Appendix 2 to Annex A

4 CDSB Petawawa Range Standing Orders

**BIVOUAC / HIDE SITE CLEARANCE FORM**

1. Camp General Cleanliness:

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2. Latrines:

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3. Stores/Equipment:

a. Wire: Wire obs, comms wire, etc.:

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b. Signs: Parking, In/Out routes, etc.:

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c. Pickets:

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4. Sumps / Ablution Areas: filled in and mounded.

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5. Garbage: removed and area policed.

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6. Trenches: filled in and mounded.

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7. Misc Tracks, Ruts, Holes, etc.:

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UNIT : \_\_\_\_\_ LOCATION : \_\_\_\_\_

Unit Rep (sign over printed name): \_\_\_\_\_

Range Control Rep (Sign over printed name): \_\_\_\_\_

Appendix 3 to Annex A

4 CDSB Petawawa Range Standing Orders

**ORTONA URBAN OPS SITE CLEARANCE CERTIFICATE**

1. Units are to ensure that the Site has been cleaned prior to the march off and shall provide a small work party, supervised by a minimum rank of MCpl, to sort out any problem areas during the clearance. Any bldgs that have the Range Control security seal broken shall be included in the clearance, regardless if the unit did not use those bldgs during their training.
2. Units are responsible to close all windows and doors and ensure that all master power switches in the Site Power Room for the bldgs and lights are turned off once the clearance inspection is complete. Range Control staff shall secure the bldgs by placing a security seal on each door.
3. The fol points are to be met before a march out is completed:
  - a. all room and hallway lights are turned on and all doors are to be open prior to the inspection;
  - b. all floors, attics and basements areas are to be clear of garbage, brass, links, and salvage. The gravel areas on the first floor are to be raked and all other floors and stairwells are to be swept;
  - c. all graffiti and stickers are to be removed from the walls or floor areas as required;
  - d. all furniture is to be removed from the building site and shall be accounted for and inspected by a Range Control representative prior to being placed in the sea container provided;
  - e. all outside areas surrounding the site are to be cleared of all ammo salvage, garbage, lumber, plywood and any other items that were used during the trg;
  - f. all trenches to be filled in and all manoeuvre damage to be corrected; and
  - g. all Duds / Blinds / UXOs not destroyed by the unit are to be appropriately marked and the ammo type and grid reference shall be reported to Range Control.

<b>Bldg #s / Name</b>	<b>Faults</b>
1. Service Station	
2. Town House	
4. House	
6. Office Bldg	
8. Warehouse	
9. Bank	

10. Business Apt	
11. Town Hall	
12. Office Bldg	
13. House	
14. House	
15. House	
17. Retail Store	
18. Town House	
19. Retail Store	
20. House	
23. Town House	
32. House (Hamlet)	
33. House (Hamlet)	
34. House (Hamlet)	

4. Unit: \_\_\_\_\_ Date: \_\_\_\_\_ OIC EX: \_\_\_\_\_

(SIGN ABOVE PRINTED NAME)

5. Range Control Patroller: \_\_\_\_\_

(SIGN ABOVE PRINTED NAME)

Appendix 4 to Annex A

4 CDSB Petawawa Range Standing Orders

**URBAN OPS VILLAGE CLEARANCE CERTIFICATE**

1. Units are to ensure the Urban Ops Village (UOV) has been cleaned prior to the march off and shall provide a small work party, supervised by a minimum rank of MCpl, to sort out problem areas during the clearance. All bldgs will be included in the clearance, regardless if the unit used those bldgs during their training.
2. The following directions and standards are to be met for a march out:
  - a. all windows and doors are to be open prior to the inspection and shall be closed by the unit upon completion of the Range Control clearance inspection;
  - b. all floors, balconies and roof tops (that are accessible by a trap door) are to be clear of garbage, brass, links, and salvage. All floors are to be swept;
  - c. all graffiti and stickers are to be removed from the walls or floor areas as required;
  - d. all outside areas surrounding the site are to be cleared of all brass, links, salvage, garbage, lumber, plywood, landline and any other items that were used during the training;
  - e. all trenches created by the unit are to be filled in and manoeuvre damage to be corrected; and
  - f. all Duds / Blinds / UXOs not destroyed by the unit are to be marked with white mine tape, the grid reference will be noted on the Range Clearance form. Only Range Control will order a unit to disregard the destruction order as indicated in the RSO for this facility.

<b>Bldg</b>	<b>Faults</b>
1.	
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3. Unit: \_\_\_\_\_ Date: \_\_\_\_\_ OIC EX: \_\_\_\_\_

(SIGN ABOVE PRINTED NAME)

4. Range Control Patroller: \_\_\_\_\_

(SIGN ABOVE PRINTED NAME)

Appendix 5 to Annex A

4 CDSB Petawawa Range Standing Orders

**DRY TRAINING RTA CLEARANCE CERTIFICATE**

1. A work party is to remain with the OIC Exercise or his rep (minimum rank of MCpl) until the clearance is complete.
2. All keys to any bldgs, troop shelters or gates used and this form are to be turned in to the Range Control personnel once the clearance is complete.
3. All training area(s) or training site(s) used will be inspected by Range Control personnel with the OIC Exercise or his rep prior to departing the training area or training site.
4. Report all training locations / defects / deficiencies / damages on this form.
5. No graffiti in any bldg or structure.
6. No permanent modifications of any kind to any bldg or structure. Any additional equipment must be removed by end of practice.
7. The following points make reference to specific sites and / or specific Dry Training and will be rigidly adhered to:
  - a. troop shelters: floors swept, garbage cans emptied, garbage removed, windows closed, all lights out, doors locked, ensure wood stove extinguished and ashes removed;
  - b. field defensive stores, obstacles, trenches, craters, disturbed ground, wire, garbage, etc.: all must be dismantled, filled in and / or removed from the RTA upon completion of the training. Rule of thumb is "Leave the RTA in better condition than you received it in";
  - c. ammunition salvage: all salvage and brass will be recovered and returned to the Base Ammo Compound. Do not mix ammunition salvage and garbage, if in doubt, contact the Base Ammo Compound;
  - d. Rappel Tower: all garbage removed, any faults reported below with a detailed description of fault; and
  - e. Rappel Site: all garbage removed, any faults reported below with a detailed description of fault.
8. Site(s) / Trg Area(s) (give Grid Ref for specific locations):

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9. Defects noted:

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10. Unit: \_\_\_\_\_ Date: \_\_\_\_\_ OIC EX: \_\_\_\_\_

(SIGN ABOVE PRINTED NAME)

11. Range Control Patroller: \_\_\_\_\_

(SIGN ABOVE PRINTED NAME)

## Appendix 6 to Annex A

### 4 CDSB Petawawa Range Standing Orders

#### **LIVE FIRE TRAINING RTA CLEARANCE CERTIFICATE**

1. A work party is to remain with OIC Practice / RSO or his rep (minimum rank of MCpl) until the clearance is complete.
2. All keys, this form and the Ammunition Control Certificate are to be turned in to the Range Control personnel once the range clearance is complete.
3. The Range or Training Area(s) used will be inspected by Range Control personnel with OIC Practice / RSO or his rep prior to departing the Range or Training Area(s).
4. Firing Lanes used on B, C, D, E, Q, X and Y Ranges must be indicated on the Ammunition Control Certificate in the space provided.
5. Report all training locations / defects / deficiencies / damages on this form.
6. All flags to remain on range. All red flags down and tied around post. No graffiti in any bldg or structure. No modifications of any kind to any bldg or structure. Any additional equipment must be removed by end of practice.
7. The following points make reference to specific sites and / or Live Training and will be rigidly adhered to:
  - a. Gallery Range firing points: all brass picked up, support posts replaced, sandbags removed, garbage removed;
  - b. Markers Gallery (Butts): green flag raised at the Stop Butt, all covers replaced over tgt frames (care must be taken in winter with tgt frame covers), all portholes closed, all tgt frames at half mast, garbage cans emptied, floors swept, all tgts and stores removed completely from the butts, all lights out and doors locked;
  - c. Target Sheds: all tgts patched / repaired, tgts grouped by type, piled neatly, all N/S tgts placed outside at entrance to the butts, one green and one red firing point flags placed in appropriate location, tgt indicators placed in appropriate location, tgt patches and wedges placed in appropriate container, brooms / dustpans / shovel and bucket placed in appropriate location;
  - d. Troop Shelters: floors swept, garbage cans emptied, garbage removed, windows closed, all lights out, doors locked, ensure wood stove extinguished and ashes removed, vehicle park clean, place broom / dust pan / shovel and bucket in Target Shed;
  - e. Grenade Range: holes in Target Area to be filled in, throwing bays, safety bays and control tower cleaned, area around Range swept for garbage;
  - f. Field Firing Ranges / Exercises: all firing position(s) and administration areas to be cleaned and all targetry placed downrange to be removed. If using Direct Fire Targetry (DFT) System you must clear with the DFT System personnel;

- g. field defensive stores, improvised target emplacements, trenches, craters, disturbed ground, wire, targets, garbage, etc.: all must be dismantled, filled in and or removed from the RTA upon completion of the training. Rule of thumb is “Leave the RTA in better condition than you received it in”; and
- h. ammunition salvage: all salvage and brass will be recovered where feasible and returned to the Base Ammo Compound. Do not mix ammunition salvage and garbage, if in doubt, contact the Base Ammo Compound.

8. Range / Trg Area(s) used (give Grid Ref for specific locations):

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9. Defects noted:

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10. Unit: \_\_\_\_\_ Date: \_\_\_\_\_ OIC EX: \_\_\_\_\_

(SIGN ABOVE PRINTED NAME)

11. Range Control Patroller: \_\_\_\_\_

(SIGN ABOVE PRINTED NAME)

Appendix 7 to Annex A

4 CDSB Petawawa Range Standing Orders

**4 CDSB PETAWAWA AMMUNITION CONTROL CERTIFICATE**

1. To be completed by OIC Practice.
2. To be submitted to Range Control personnel.
3. Report of Ammunition Expended:

AMMO TYPE	LOT #	QTY DRAWN	QTY EXP'D	FIRING LANES USED GALLERY RANGES ONLY	RTA FIRED FROM FIELD FIRING ONLY	RTA FIRED INTO FIELD FIRING ONLY	# OF DUDS THAT OCCUR	# OF DUDS DESTR

4. The following blinds occurred **during the practice** and, **after a careful search**, could not be located or if located could not be destroyed:

CALIBRE	LOT #	FUZE LOT #	APPROX LOC

Old blinds found and destroyed:

CALIBRE	LOT #	FUZE LOT #	APPROX LOC

5. In all cases of misfired or unexploded ordnance, the appropriate action has been taken in accordance with the applicable manuals, regulations and orders.
6. All defective ammunition has been reported to the ATO or his representative(s).
7. Any blind, dud, or misfire, which is not destroyed, shall be guarded by a sentry provided by the user. Range Control may authorize the removal of the sentry if it is considered that the UXO poses no threat to other range users or the public.
8. I certify that I supervised the training on this date and that the statements made in this report are correct. Before leaving the range the location was free of live ammunition except as noted above.
9. I further certify that:
  - a. all personnel and weapons have been inspected;
  - b. all ammunition drawn has been returned except as stated in paras 3 and 4 above;
  - c. if any ammunition failures occurred a CF 410 Ammunition and Explosives Defect and Malfunction Report has been completed IAW A-GG-040-006/AG-002 DND Ammunition or Explosives Accident / Incident / Defect / Malfunctioning Reporting;
  - d. all brass, ammunition containers and salvage have been disposed of IAW regulations;
  - e. all training was in compliance with RSOs;
  - f. all accidents or unusual incidents have been reported to Range Control; and
  - g. each individual has declared that they possess no live rounds, empty casings, explosives, grenades, projectiles, propellant, fuzes, blank rounds, pyrotechnics, components of any of the above mentioned items or ammunition components of any type.

OIC Practice / RSO:

S/N \_\_\_\_\_ RANK \_\_\_\_\_ NAME & INT \_\_\_\_\_  
 (SIGNATURE ABOVE PRINTED NAME)

UNIT \_\_\_\_\_

DATE \_\_\_\_\_

RANGE / TRAINING AREA \_\_\_\_\_

NATURE OF PRACTICE \_\_\_\_\_

Appendix 8 to Annex A

4 CDSB Petawawa Range Standing Orders

**TREE CUTTING REQUEST FORM**

1. Complete this abbreviated Environmental Assessment to cut trees greater than 9cm DBH (28 cm circumference). Once complete, submit to Range Control.

2. Date(s) of Use: \_\_\_\_\_ Unit: \_\_\_\_\_

3. Area: \_\_\_\_\_ Grid Reference: \_\_\_\_\_

4. Activity: \_\_\_\_\_

5. Submitted By: \_\_\_\_\_ Telephone #: \_\_\_\_\_ Date: \_\_\_\_\_

6. Obtain the following authorizations:

a.  RPOU (O) Det Petawawa Forestry Mgr approval obtained;

b.  Attempt to cut poplar trees only;

c.  Avoid cutting white pine;

d.  Take wood to troop shelter afterwards; and

e.  Wood is merchantable and a timber permit is required.

f. RPOU (O) Det Petawawa Forestry Manager comments:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

g. RPOU (O) Det Petawawa Forestry Mgr Approval: \_\_\_\_\_ Date: \_\_\_\_\_

h.  4 CDSB Env Svcs approval obtained;

i.  No Species at Risk Concerns;

j.  Adhere to checked Mitigation Measures see Table 1; and

k. Additional 4 CDSG Env Svcs comments:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

7. 4 CDSG Env Svcs Auth: \_\_\_\_\_ Date: \_\_\_\_\_

Note: Once authorized by 4 CDSG Env Svcs, unit OPI is agreeing to all conditions and measures mentioned above.

Table 1: Tree Cutting Mitigation Measures.

Implement all checked mitigation measures.

Item	Description
	Do not cut trees within 30 metres of a waterbody.
	Do not fell trees into water.
	Ensure cutting does not occur outside of approved area.
	Choose a site where there are no known Species at Risk.
	Ensure personnel are aware of the potential presence of Species at Risk as per BAI 6.007 Annex K.
	Report Species at Risk sightings to Range Control.
	Do not cut trees with bird nests.
	Choose a site that would not negatively affect access to or functionality of water monitoring wells.
	Retain trees on slopes to prevent soil erosion and possible sedimentation.
	Harvested area shall not exceed 100 hectares.
	Ensure Base Environment has received a signed copy of the Timber Permit/Timber Sale Agreement outlining the Project site and details (if applicable).
	Install silt fences (erosion control measures) on potentially impacted waterbodies. Maintain and monitor.
	Ensure spill kits are on-site at all times. Ensure kits are the appropriate size for the machinery used.
	Incorporate secondary containment into HAZMAT (eg. gas, diesel, oil) storage.
	Review and communicate the spill reporting requirements outlined in the Base/ASU Spill Response Flow Chart in BAI 6.007 to all site personnel.
	Contain and clean up HAZMAT spills quickly and effectively.
	Ensure equipment is not operated/parked/stored within 30 metres of a waterbody.
	Machinery shall be in good working order. Inspect vehicles and equipment for leaks. Use drip pans.
	Restrict vehicle and equipment refuelling to a designated area more than 30 metres from a waterbody. Use spill pans.

Appendix 9 to Annex A

4 CDSB Petawawa Range Standing Orders

**BASE WASHRACK OPERATING INSTRUCTIONS AND CLEARANCE CERTIFICATE**

1. Operating Instructions:
  - a. all large clumps of mud should be removed before using this facility as the catch basins can fill up very quickly and clog the drain pipe; and
  - b. the red handle is to be turned to the vertical to allow water to flow.
2. Clearance Instructions:
  - a. clean the surrounding ground / pavement of all debris and garbage;
  - b. spray the pavement immediately surrounding the catch basin to clean the residual dirt into the catch basin, lift the grates and clean catch basin so you can see the drain pipe;
  - c. clean and neatly hang all hoses and spray nozzles on their respective holder; and
  - d. turn off water pressure; and
  - e. use the checklist to indicate any damages or N/S equipment.

<b>Facility</b>	<b>Clean</b>	<b>Fault</b>
BAY 1		
HOSE A		
HOSE B		
BAY 2		
HOSE A		
HOSE B		
BAY 3		
HOSE A		
HOSE B		
BAY 4		
HOSE A		
HOSE B		

MISC COMMENTS

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3. Unit: \_\_\_\_\_ Date: \_\_\_\_\_ OIC EX: \_\_\_\_\_  
(SIGN ABOVE PRINTED NAME)

4. Range Control Patroller: \_\_\_\_\_  
(SIGN ABOVE PRINTED NAME)

Appendix 10 to Annex A

4 CDSB Petawawa Range Standing Orders

**SURVIVAL TRAINING REQUEST FORM**

- 1. Date(s) of use: \_\_\_\_\_
- 2. Unit: \_\_\_\_\_ OPI: \_\_\_\_\_ Local: \_\_\_\_\_
- 3. Area: \_\_\_\_\_ Grid Reference: \_\_\_\_\_

4. Requested Activities: (check all that apply)

- Tree cutting < 9cm for fires      Approx # \_\_\_\_\_ # of days fuel required \_\_\_\_\_
- Tree cutting < 9cm for shelters      Approx # \_\_\_\_\_
- Snaring
- Fishing

5. Additional Details:

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6. Env Svcs Comments:

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7. Env Svcs Approval      Signature: \_\_\_\_\_ Date: \_\_\_\_\_

\*Note: Once approved by 4 CDSB Env Svcs, unit OPI is agreeing to all conditions and mitigation measures provided in this form.

**Standard Mitigations and Procedures**

8. Snaring

- Only snowshoe hares are to be targeted and there are no daily catch or possession limits.
- Snares must be constructed of copper or brass wire between 22 and 24 gauge and the opening of the snare wire loop must be 10 cm (4 in) or less in diameter.
- Information regarding any wildlife that was snared must be submitted to Env Svcs.

9. Additional Mitigations:

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10. Fishing

- Only fish that are in season are to be targeted and all catch/possession limits for a Sports License in Fisheries management Zone 15 must be followed.
- All fishing must be conducted within the requested area.
- Catch and release must be practiced unless the unit requests otherwise.
- All fish that are incidentally killed should be consumed.
- **SAR concerns:** Lake Sturgeon, a provincially Threatened species for which no open fishing season exists may not be targeted or captured. If Lake Sturgeon are captured incidentally while fishing for other species, they must be released immediately without photos or delays that may obstruct fish recovery time.
- Details regarding fish that were caught must be submitted to Env Svcs after completion of the exercise.

11. Additional Mitigations:

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12. Tree Cutting for Shelters and/or Fires

- Only immature trees under 9cm dbh (softball diameter) are to be cut.
- Only remove trees from the approved area.
- Limit the overall amount of trees removed to only what is actually necessary to build the shelters/fires.
- Use deadfall or dead standing trees where possible.
- Do not unnecessarily damage trees that are not being removed for shelter/fire building.
- Ensure tree removal is spread out within the requested area of cutting (as to not clear one entire area).
- Do not cut within 30m of any waterbody.

13. Additional Mitigations:

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Annex B

4 CDSB Petawawa Range Standing Orders

**CALL SIGNS - RANGE SAFETY NET**

**4 CDSB PETAWAWA**

4 CDSG COMD 99  
 DCOMD 99A  
 FSM 99C  
 CO OPS SVCS 9  
 DCO OPS SVCS 9A  
 SNR OPS O 9B  
 OPS SVCS RSM 9C  
 OPS O 9D  
 OPS WO 9E  
 4 CDSG ENV O 9F  
 SPARES 9G-Z

**RANGE CONTROL**

DUTY DESK RGE CON  
 RCO 8  
 RCSM 8A  
 SNR PTLR 8B  
 STORES 8C  
 UXO DESTR 8D  
 GIS ANALYSTS 8E-F  
 SPARES 8G-Z  
 RTA PATROLS 81-88

**4 CDSB AMMO CMPD**

SNR AMMO TECH 80  
 SPARES 80A-D

**HQ 2 CMBG**

BDE COMD 90  
 COS 90A  
 G3 90B  
 BDE SM 90C  
 G3 TRG 90D  
 G3 AVN 90E  
 RRBs 90F-G  
 SPARES 90H-Z

**1 RCR**

CP 1  
 CO 1A  
 DCO 1B  
 BN HQ 1C  
 DUKES COY 1D

B COY 1E  
 CHARLES COY 1F  
 E COY 1G  
 RECCE PL 1H  
 F COY 1J  
 SIGS PL 1K  
 SNIPER SECT 1L  
 SPARES 1M-Z

**RCO**

CP 2  
 CO 2A  
 DCO 2B  
 RHQ 2C  
 A SQN 2D  
 B SQN 2E  
 D SQN 2F  
 HQ SQN 2G  
 UAV GHOST 1,2, etc.  
 SPARES 2H-Z

**2 RCHA**

CP 3  
 CO 3A  
 DCO 3B  
 HQ BTY 3C  
 D BTY 3D  
 E BTY 3E  
 F BTY 3F  
 Y BTY 3G  
 UAV STALKER 1,2, etc.  
 SPARES 3H-Z

**2 CER**

CP 4  
 CO 4A  
 DCO 4B  
 HQ SQN 4C  
 23 SQN 4D  
 24 SQN 4E  
 25 SQN 4F  
 26 SQN 4G  
 28 SQN 4H  
 SPARES 4I-Z

**3 RCR**

CP 5  
 CO 5A  
 DCO 5B  
 BN HQ 5C  
 M COY 5D  
 N COY 5E  
 O COY 5F  
 Q COY 5G  
 HVY WPNS PL 5H  
 RECCE PL 5J  
 R COY 5K  
 SIGS PL 5L  
 SNIPER SECT 5M  
 SPARES 5N-Z

**2 SVC BN**

CP (LOG OPS) 6  
 CO 6A  
 DCO 6B  
 BN HQ 6C  
 SUPPLY COY 6D  
 AMMO PL 6E  
 ADM COY 6F  
 MAINT COY 6G  
 TN COY 6H  
 NSE 6J  
 TRG COY 6K  
 SPARES 6L-Z

**2 FD AMB**

CP 7  
 CO 7A  
 DCO 7B  
 HQ 7C  
 MED COY 7D  
 AMB COY 7E  
 SVCS PL 7F  
 DENT COY 7G  
 SPARES 7H-Z

**2 MP PI**

CP 10  
 FD DET 10A  
 GRN DET 10B

SPARES	10C-Z	1 SOC	15D	BATTLE 9er etc.
<b>427 SOAS</b>		2 SOC	15E	
CP	11	3 SOC	15F	<b>CSOTC</b>
CO	11A	CSC COY	15G	CO
DCO	11B	TRG COY	15H	DCO
SHQ	11C	CSS COY	15J	SSM
2 SOA FLT	11D	UAV RAGNOR 1, 2, etc.		CRSES
1 SOA FLT	11E	RGE CONSTR	15K-M	
4 SOA FLT	11F	SPARES	15N-Z	<b>CA INT REGT</b>
5 SOA FLT	11G			12 ASIC
SPARES	11H-Z	<b>4 CDSG SIGS</b>		
AC to use FIXED C/S: LION		SHQ	16	<b>VISITING UNITS</b>
11, LION 29, LION 9er etc.		CO	16A	22 - 29
MUAS will use Flight		DCO	16B	
Advisory as it's C/S		MOB RAD	16C	<b>RESERVES</b>
		LINE CREW	16G-J	30 - 55
		TECH MAINT	16K-M	
<b>2 CMBG HQ &amp; SIGS</b>		SPARES	16N-Z	<b>CIVILIAN POLICE</b>
CP	12			RCMP
CO	12A	<b>1 CDN FD HOSP</b>		OPP
DCO	12B	CP	17	
SHQ	12C	CO	17A	<b>CADETS</b>
A TP	12D	DCO	17B	58 - 59
B TP	12E	SVC COY	17C	
SP TP	12F	TMT COY	17D	<b>SPARES</b>
SPARES	12G-Z	SPARES	17E-Z	70 - 79
				91 - 98
<b>4 CDSG GASF</b>		<b>CFJSR PET DET</b>		<b>DROPZONE</b>
PL COMD	13	LCF	18	<b>CONTROLLER</b>
1 SECT	13A	LCV	18A-B	C/S "DZ NAME" ie:
2 SECT	13B	MINI CON	18C-D	DZ ANZIO, etc...
3 SECT	13C	DUMP	18E	
SPARES	13D-Z	VAN	18F	<b>GALLERY RANGES/ FIRING PADS / TRG SITES</b>
		CREW CAB	18G	Use name of Range or Site: A
<b>4 DIV TC PET DET</b>		PORT 1	18H	Rge, J Twr, UOS, Bush Lane,
LDRSHP COY	14	PORT 2	18J	MTR, etc...
CO	14A			
PLQ INF	14B-D	<b>450 TAC HEL SQN</b>		<b>RPOU GRDS MGMT</b>
PLQ ARMY	14E-G	CP	19	Trg Area 1, 2, 3, etc.
SPARES	14H-M	CO	19A	Range Warden
CSS TRG COY	14P	DCO	19B	Range Carpenter
CSS TRG COY OC	14Q	SHQ	19C	
SPARES	14R-Z	A FLT	19D	<b>DFT-ITS SP TEAM</b>
		B FLT	19E	BASE STN
<b>CDN SPEC OPS REGT</b>		LOG SP FLT	19F	OPERATORS
CP	15	MAINT FLT	19G	SITE MGR
CO	15A	SPARES	19H-Z	
DCO	15B	AC to use Fixed C/S:		
REGT HQ	15C	BATTLE 11, BATTLE 29,		

## Appendix 1 to Annex B

### 4 CDSB Petawawa Range Standing Orders

#### **BASIC RADIO PROCEDURES FOR CIVILIAN CONTRACTORS GENERAL INFORMATION**

1. Before entering the 4 CDSB Petawawa RTA all units or organizations must join the Range Safety Net. Range Control may allow certain organizations access to the RTA without joining the net, however that is a decision, based on a risk analysis, made by Range Control Senior Staff.
2. Once you have joined the Safety Net you must maintain communications with Range Control. You shall conduct a Radio Check, every hour, on the top of the hour.
3. When you have completed your task and have left the RTA, you must Close Down (leave the Safety Net) on the Safety Net. All your personnel must have left the RTA before you and are accounted for, before you Close Down.
4. Ensure you use Freq 48.70 MHZ while in Areas 1, 2, 3, 4, K, or L and all Areas East of Hwy 17. Use Freq 49.90 MHZ while in the remainder of the RTA. A good Rule of Thumb is: "When you pass the Ammunition Compound or Mountbatten Bridge heading West, flick to Freq 49.90 MHZ."

#### **TO JOIN THE SAFETY NET**

5. The procedure to join the Safety Net is as follows:
  - a. "Range Control this is your Call Sign (for example 72 is pronounced seven two), Reporting into Net, Radio Check, Over";
  - b. "Range Control, Loud and Clear (or "Weak but Workable"; "Broken but Workable"; or "Broken and Un - workable, Check your means, Out"), verify unit and area of training, Over";
  - c. "your Call Sign, Loud and Clear, ORMG, Areas B, C, D, E and L, Over"; and
  - d. "Range Control, Roger, Join Net Now, Out."

#### **CONDUCTING A RADIO CHECK**

6. The procedure to conduct a Radio Check is as follows:
  - a. "Range Control this is your Call Sign, Radio Check, Over;"
  - b. "Range Control, Loud and Clear (Weak but Workable, Broken but Workable...etc), Over;" and
  - c. "your Call Sign, Loud and Clear, Out."
7. If you do not receive a response to your Radio Check from Range Control, try 2 more times to send a Radio Check as described above. If still nothing is heard from Range Control, then send the phrase "your Call Sign, Nothing Heard, Out." It is possible you are in a "dead zone" (similar to cell phone coverage), try to move to higher ground and attempt again to contact Range Control.
8. You may also be transmitting at the same time as other users of the RTA so listen carefully before you transmit.

9. If you still cannot contact Range Control keep moving closer to Range Control until you re-establish contact. Let Range Control know what has occurred and you will receive further direction from Range Control.

10. If there is an Emergency Telephone nearby your location you can use that to contact Range Control. Perhaps your cell phone will work as well.

#### **CLOSING DOWN ON THE SAFETY NET**

11. The procedure to follow to Close Down is as follows:

- a. “Range Control this is your Call Sign, all my personnel are back in Base (or have left the Training Area), request permission to Close Down, Over”; and
- b. “your Call Sign this is Range Control, I confirm you and all your personnel are back in Base (or have left the Training Area), Close Down now, Out”.

12. If you are temporarily leaving the RTA (to pick up equipment for example) and plan to return shortly, you can continue to monitor (stay on) the Safety Net or you can Close Down and re-join the Safety Net again. Remember, if you still have personnel in the RTA you cannot Close Down on the Safety Net.

Annex C

4 CDSB Petawawa Range Standing Orders

**RANGES AND TRAINING AREA ACCESS AND USE TABLE**

Risk Areas	TYPE 1	TYPE 2	TYPE 3	TYPE 4
Definition	High Risk  Extremely Dangerous  Dedicated UXO Impact Areas where manoeuvre trg is very restricted.	Medium Risk  Dangerous  Manoeuvre and previous UXO Impact Areas.	Moderate Risk  Moderately Dangerous  Areas where there is no assurance the area is free from UXO.	Low Risk  Limited Danger  Areas where it is extremely unlikely that UXO producing ammunition was used.
Training Area / Rge	Areas:  2, 4 (East of Tucker Lake), 7, 8,  9, Green Island and A Range.  See the Access and Use Map Trace.	Areas:  A small portion of Area 1 and 2,  3, 4, 5, 6, 7,  8, 9, a small portion of Area C, D, E, K and L.  See the Access and Use Map Trace.	Areas.  The majority of Area 1, A, B, the majority of Area C, F, G, H, I, J, K, L, B Rge, C Rge, D Rge, E Rge, Q Rge, X Rge and Y Rge.  See the Access and Use Map Trace.	Areas.  F and G (Petawawa Research Forest).  See the Access and Use Map Trace.
Vehicle Movement	Safety Briefing required.  <b>Armd Veh:</b> No restriction.  <b>Soft Skinned Vehicles:</b> Restricted to roads or UXO cleared areas only.	Safety Briefing required.  No restriction.	Safety Briefing required.  No restriction.	Safety Briefing required.  No restriction.
Troop Movement	Safety Briefing required.	Safety Briefing required.	Safety Briefing required.	Safety Briefing required.



Risk Areas	TYPE 1	TYPE 2	TYPE 3	TYPE 4
Troop Movement	<p>Restricted to roads or UXO cleared areas only.</p> <p>All UXO clearance operations shall follow procedures as directed in B-GL-381-003/TS-000 Rge and UXO Clearance Handbook.</p>	No restriction.	No restriction.	No restriction.
Military Digging	<p>Safety Briefing required.</p> <p><b>Armd Veh:</b> No restriction.</p> <p>Mandatory use of White Light if digging at night.</p> <p><b>Soft Skinned Vehicles / Hand digging:</b> Not authorized.</p> <p>Any exceptions will require Level 2 UXO Clearance.</p>	<p>Safety Briefing required.</p> <p><b>Armd Veh:</b> No restriction.</p> <p><b>Soft Skinned Vehicles / Hand digging:</b> Continuous visual surface sweep while digging.</p> <p>Mandatory use of light if digging at night.</p>	<p>Safety Briefing required.</p> <p><b>Armd Veh:</b> No restriction.</p> <p><b>Soft Skinned Vehicles / Hand digging:</b> Continuous visual surface sweep while digging.</p>	Safety Briefing required.
Civilian & Contractor Access / Recreational Use / Forestry Ops	<p><b>Civilian &amp; Contractor Access:</b> Safety Briefing required.</p> <p>Level 2 UXO Clearance if digging.</p> <p>Must be escorted / supervised while in the area.</p>	<p><b>Civilian &amp; Contractor Access:</b> Safety Briefing required.</p> <p>Level 2 UXO Clearance if digging.</p> <p><b>Recreation Use:</b> Not authorized.</p> <p><b>Forestry Ops:</b> Summer, Spring</p>	<p><b>Civilian &amp; Contractor Access:</b> Safety Briefing required.</p> <p>Level 2 UXO Clearance if digging.</p> <p><b>Recreation Use:</b> B, C, D, E, Q and Y Rges authorized for the Grn</p>	<p><b>Civilian &amp; Contractor Access:</b> Safety Briefing required.</p> <p><b>Recreation Use:</b> As per RSOs Chapters 1 and 4.</p> <p><b>Forestry Ops:</b> No restriction.</p>

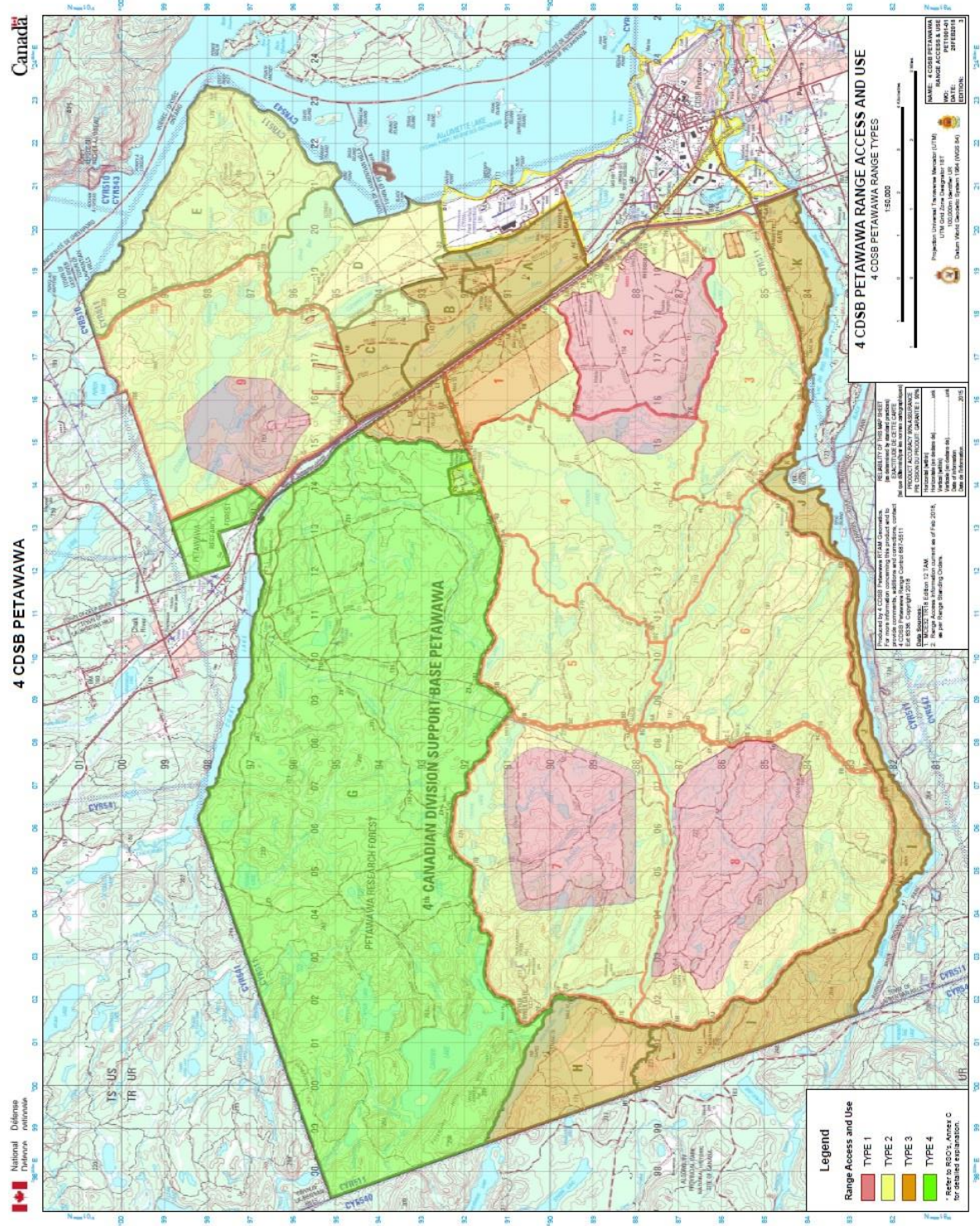
Risk Areas	TYPE 1	TYPE 2	TYPE 3	TYPE 4
<p>Civilian &amp; Contractor Access / Recreational Use / Forestry Ops</p>	<p>Restricted to roads or UXO cleared areas only.</p> <p><b>Recreation Use:</b> Not authorized.</p> <p><b>Forestry Ops:</b> Forestry Ops includes marking, cutting, trimming, scarifying and planting (by hand or by machine) is not authorized.</p>	<p><b>&amp; Fall:</b> A decision will be made on a case by case basis if a Level 2 Clearance, Level 1 Clearance, or a Visual Surface Sweep will be required immediately prior to any Forestry Ops.</p> <p><b>Winter:</b> Forestry Ops not authorized.</p> <p>Level 2 UXO Clearance if scarifying deeper than 6 inches.</p>	<p>Petawawa Shooting Club.</p> <p>No recreation use of any other area in the RTA.</p> <p><b>Forestry Ops:</b> Visual Surface Sweep conducted immediately prior to any Forestry Ops.</p> <p>Level 2 UXO Clearance if scarifying deeper than 6 inches.</p>	
<p>Range Clearance Requirement</p>	<p>A Level 1 UXO Clearance may downgrade the Area to a Type 2.</p> <p>All UXO clearance operations shall follow procedures as directed in B-GL-381-003/TS-000 Rge and UXO Clearance Handbook.</p>	<p>A Level 1 UXO Clearance may downgrade the Area to a Type 3.</p> <p>All UXO clearance operations shall follow procedures as directed in B-GL-381-003/TS-000 Rge and UXO Clearance Handbook.</p>	<p>A Level 2 UXO Clearance may downgrade the Area to a Type 4.</p> <p>All UXO clearance operations shall follow procedures as directed in B-GL-381-003/TS-000 Rge and UXO Clearance Handbook.</p>	<p>N/A</p>

Risk Areas	TYPE 1	TYPE 2	TYPE 3	TYPE 4
Fire Fighting	<p>Safety Briefing required.</p> <p>Fires to be fought from roads / breaks at least 300m from the fire line using backfires / sprinkler systems.</p> <p>Aircraft not allowed within 1000' from the fire line.</p>	<p>Safety Briefing required.</p> <p>Fires to be fought from roads using backfires.</p> <p>Water bombing permitted.</p> <p>Aircraft not to loiter within 1000' from the fire line.</p>	<p>Safety Briefing required.</p> <p>Fires may be fought at the fire line.</p>	

Annex D

4 CDSB Petawawa Range Standing Orders

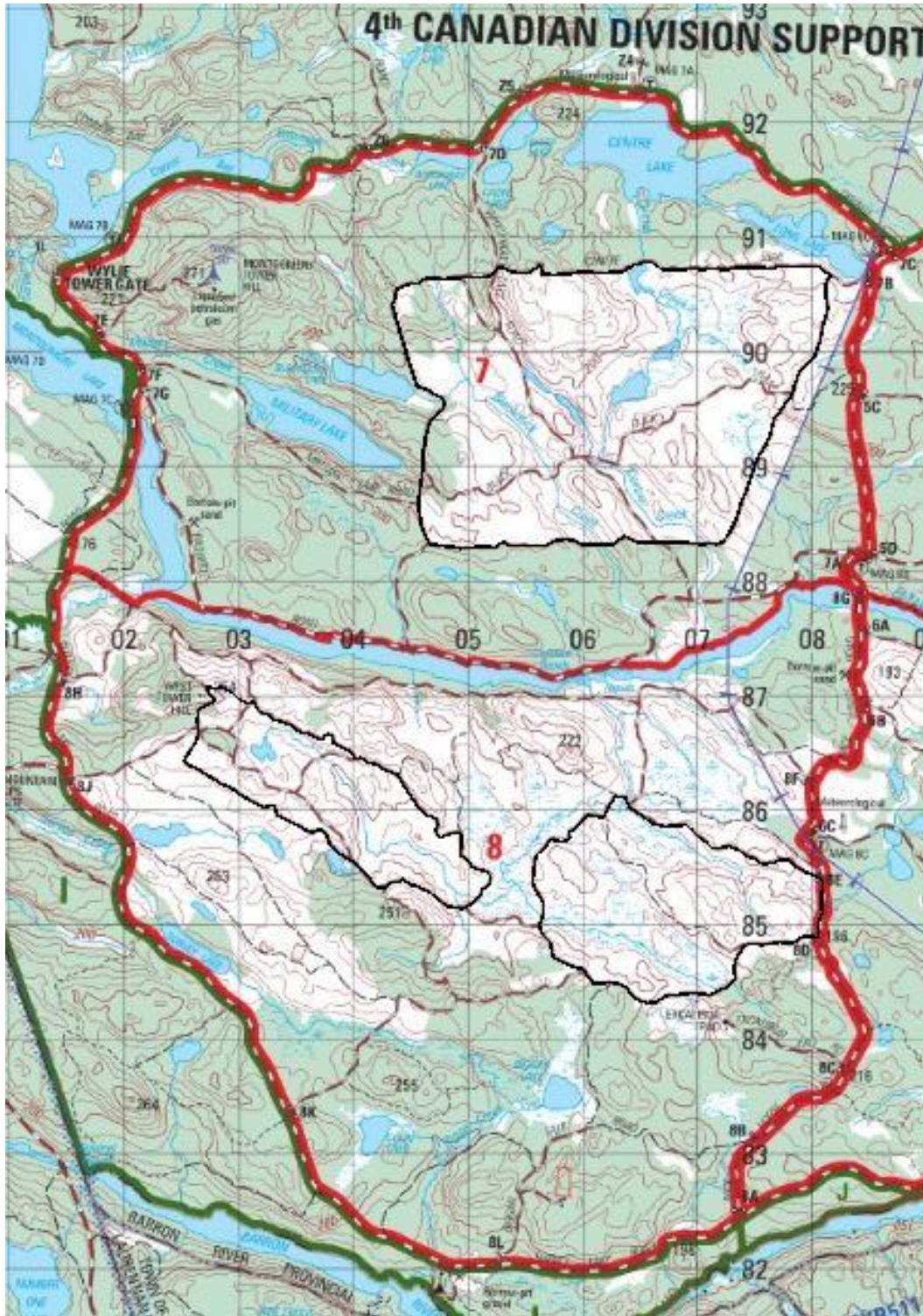
RANGES AND TRAINING AREA (RTA) ACCESS AND USE MAP TRACE



Annex E

4 CDSB Petawawa Range Standing Orders

**BURN BOXES IN AREA 7 AND 8**

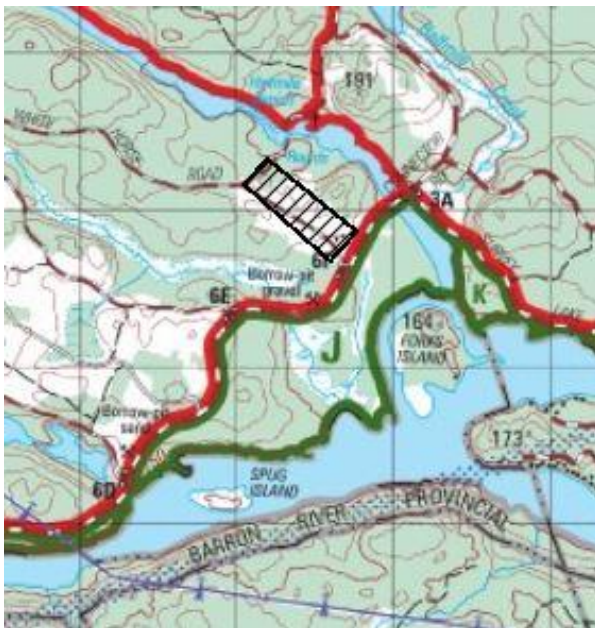




3. DZ Crosscheck and DZ Holstein, located in Area H:



4. DZ Crosseye, located in Area 6:



5. DZ Daniel, located in Area D:



6. DZ Dives Crossing, located in Area D:







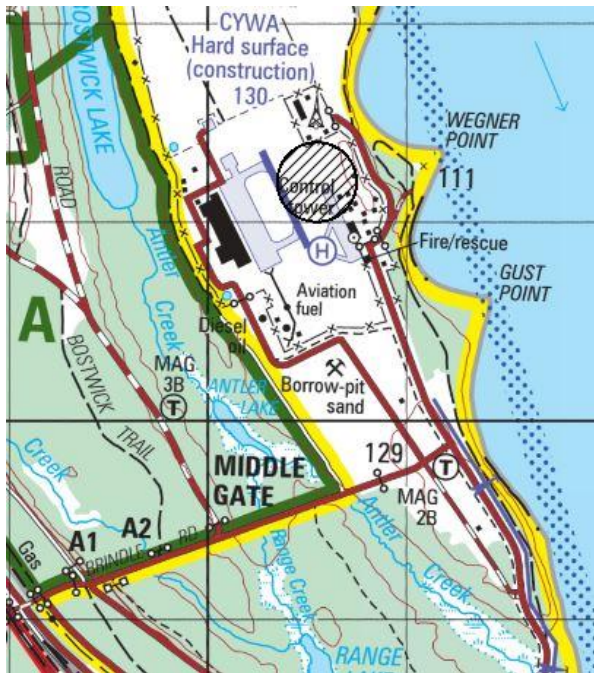
9. DZ Greenfield, located on the Base Sports Field:



10. DZ Lamure Bay, located in the Ottawa River:



11. DZ Lions Gate, located on Base near 427 SOAS lines:



12. DZ Racehorse, located in Area 6:



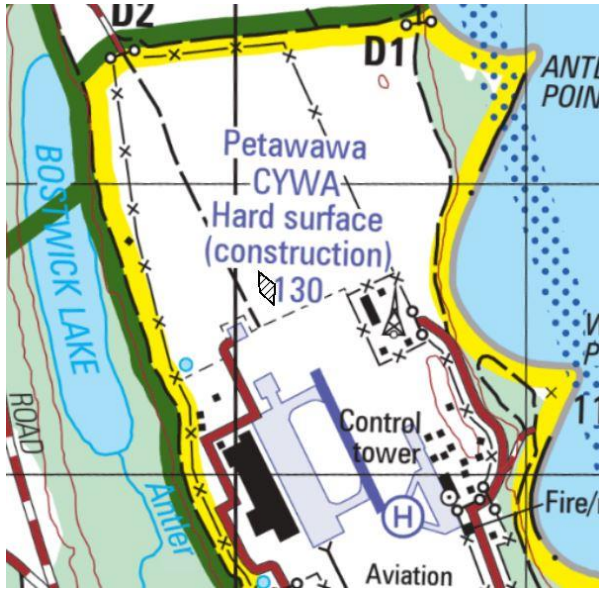
13. DZ Sand, located in Area 1:



14. DZ Shorty, located in Area D:



15. DZ Viking, located on Base near 450 Sqn lines:



Annex G

4 CDSB Petawawa Range Standing Orders

**ACTIVITIES REQUIRING ENVIRONMENTAL REVIEW IN THE 4 CDSB PETAWAWA RTA**

1. The table below lists the common activities in the 4 CDSB Petawawa RTA and identifies those that require an environmental review.
2. For activities not listed in the table, follow 4 CDSG AI 6.103 – Environmental Impact Assessment and consult with your Unit Env O and the 4 CDSB Env O.
3. Questions on the environmental review are to be directed to the 4 CDSB Env O.

Activity	Environmental Aspect	Environment Review Required
Firing large calibre ammunition, rockets, missiles, grenades	Firing and impact effects (e.g. noise, shrapnel, fire risk, UXO, blast effects, reduction in timber value, use of firing point)	No
Pyrotechnics	Noise, fire risk, blast effect	No
Small calibre ammunitions	Noise, reduction in timber value, loose casings, ammo boxes and belt links	No
Operation of wheeled or tracked vehicles	Ruts, pivot turns, soil compaction, damage to trees in bivouac sites	No
Water training (diving, underwater cutting, pier reinforcement training, use of watercraft)	Sedimentation	No
Water training (underwater demolitions, boat scuttling, underwater concrete pouring, salvage operations)	Sedimentation, habitat damage, destruction of fish and fish habitat, obstruction to navigation	Yes
Water training (amphibious vehicles, fording, refuelling of boats on the water, rafting, wet gap bridging)	Sedimentation, site preparation, fuel spills, potential loss of vehicles, shoreline vegetation and slope disturbance	Yes
Any military training activities requiring tree cutting over 9cm DBH	Loss of small numbers of trees may have a possible impact to breeding birds and Species at Risk	Yes

Training Area Land Management (construction of telecommunications towers)	Significant alteration of local scenery, hazard to aviation, effects on existing users	Yes
Training Area Land Management (beaver control through licensed trapper, dust control on roads, pesticide/insecticide / herbicide application)	Effects on populations of fur bearing mammals, fish habitat, effects on grazing animals and a possible impact to breeding birds and Species at Risk	Yes
Training Area Land Management (forestry, road construction, culvert installation, bridge construction, gravel extraction, construction of fire breaks)	Disturbance to fish or animal habitat, noise, dust, water quality)	Yes
Training Area Land Management (use of sewage sludge for re-vegetation)	Effects on ground nesting or burrowing animals, temporary effects on vegetation	No
Training Area Land Management (prescribed burns)	Effects on ground nesting or burrowing animals, temporary effects on vegetation	Yes
Management of Non-POL hazardous materials	Spills during transport/storage/ dispensing. disposal, recycling	No
Management of Non-POL hazardous materials	Spills during transport/storage/ dispensing. disposal, recycling	No
Management of POL	Spills during transport/storage/dispensing. disposal, recycling	No
Management of Non-Hazardous Waste (grey water, solid human waste, garbage)	Groundwater contamination, human exposure, visually offensive	Yes
Demolition training (on land)	Blast effects, shrapnel in trees, debris, craters in roads	No
Demolition training (on / under / near water)	Effects on fish and fish habitat	Yes

Air Mobile and Parachute Operations	Low level and night time flying	No
Mobile Bath and Laundry Unit (MBLU)	Taking of water, flushing/cleaning of unit, disposal of grey water	Yes
Reverse Osmosis Water Purification Unit (ROWPU)	Taking of water, flushing/cleaning of unit, disposal of grey water	Yes

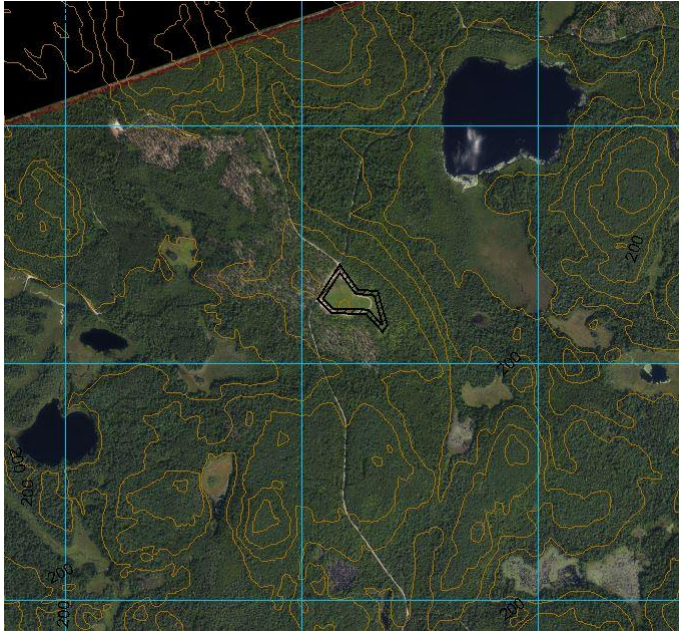


Annex H

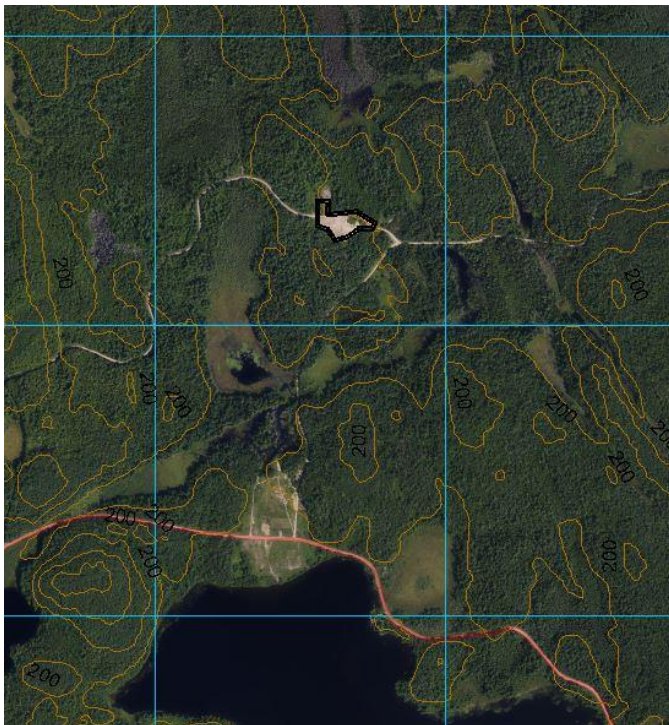
4 CDSB Petawawa Range Standing Orders

**SPECIFIC AREAS IN THE PETAWAWA RESEARCH FOREST (PRF)**

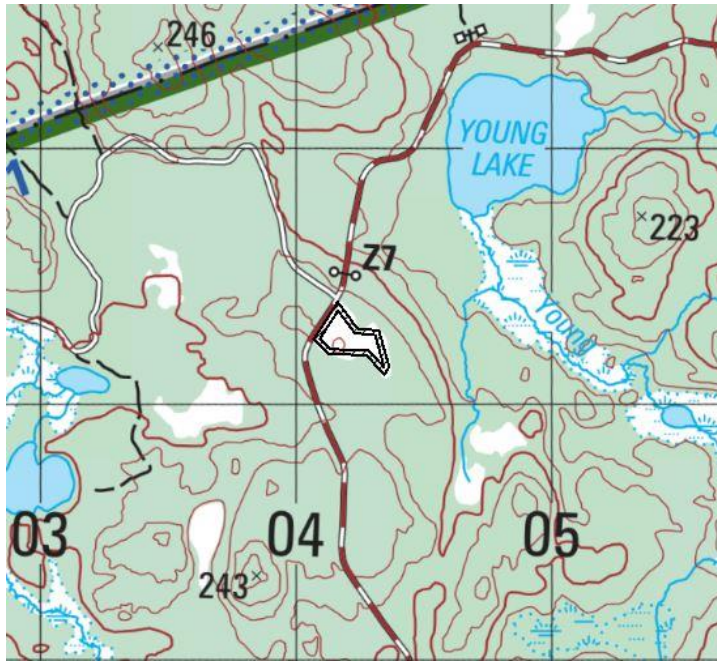
Position 002: Grid Square 04 96.



Position 004: Grid Square 06 93.



Position 002:



Access to and from Position 002 shall be Orange Road, through Gate Z-6, Ridge Road, and Cartier Lake Road only.

Position 004:



Access to and from Position 004 shall be Orange Road, through Gate Z-4, and Link Road only.

## Annex I

### 4 CDSB Petawawa Range Standing Orders

#### URBAN OPS SHOOT HOUSE COMPLEX

##### DESCRIPTION

1. **General.** Located at GR 215 885 just off of Passchendaele Road, the Urban Ops Shoot House (UOSH) Complex consists of three separate shoot houses and a troop shelter. The complex is designed to allow soldiers to conduct interior Close Quarter Battle (CQB) Drills with Ball and Frangible ammunition.
2. **Building Design.** All three shoot houses are covered by a ballistic roof that is designed to contain all misdirected projectiles and to provide some environmental protection. The ballistic roof is constructed with open sides to allow air to freely flow through the facility and there are ventilation fans in each ceiling which are controlled at an electrical panel. The bldgs walls are constructed with 50 mm Linatex MA45 rubber wall panels which are attached to 13 mm AR 500 armoured steel walls. The rubber wall panels are separated from the steel walls by a 13 mm air gap and it is in this gap that the bullets and any fragments ricochet and then fall to floor. This gap is covered off at the top of the walls by a 13 mm AR500 armoured steel sill. The concrete floor of the facility is also covered by Linatex rubber panels, without a gap, to provide containment from misdirected projectiles and to provide a sure footing for users of the facility. The bldgs have been designed for target engagements from floor level only. The bldgs were not designed for shooting over the room or hallway walls or from the catwalk.
3. **Electrical Power.** The three shoot houses have electrical power and lights however the troop shelter currently does not.
4. **Bldg CC-83.** Bldg CC-83 is the original bldg and is configured with four equally sized rooms and each room has two doors of which one is a sliding door with the same ballistic rubber which covers the walls. There are two crossing hallways with an Entrance / Exit Ballistic Barrier at either end of each hallway which provides four entry points into the bldg.
5. **Bldg CC-86.** Bldg CC-86 is configured with four differently sized rooms with a “T” shaped hallway system which provides three entry points into the bldg.
6. **Bldg CC-87.** Bldg CC-87 is configured with six rooms with three individual rooms located on one side of the main hallway and three interconnected rooms, which run the complete length of the bldg, are located on the other side of the main hallway. This bldg is also configured with a “T” shaped hallway system which provides three entry points into the bldg.
7. **Troop Shelter Bldg CC-85.** The troop shelter for the facility is located approx 30 metres East of the entrance gate.
8. **Snow Accumulation.** During the winter months snow may blow in and accumulate under the ballistic roof in the entrances to the shoot houses, the hallways and the rooms. It is the user unit’s responsibility to remove this snow. Units can request snow removal for the troop shelter area as per the BCE SNIC plan.

##### SIGN IN CERTIFICATE

9. The Officer In Charge of the Practice (OIC Practice) or the Range Safety Officer (RSO) of any training that is scheduled for this complex must complete the Urban Ops Shoot House Complex Sign In

Certificate prior to signing for the keys for the complex. The Urban Ops Shoot House Complex Sign In Certificate is located at Appendix 1 to this Annex.

## QUALIFICATIONS

10. **User Qualifications.** All CF personnel who use this facility must be Personnel Weapons Test (PWT) level 4 qualified on the weapon to be used and must have successfully completed workup training which shall include ICQB training with blank and CEASS ammunition in a close quarter environment such as the Urban Assault Course, the Urban Ops Village or the Ortona Urban Ops Site. The work up training must have been completed within one month and the PWT level 4 training within twelve months.
11. **Range Safety Officer (RSO) Qualifications.** B-GL-381-1 Chapter 1 Section 1 gives the qualification requirements to be appointed as an OIC Practice or a RSO. Safety is paramount while this facility is being used and all personnel appointed to the position of OIC Practice or RSO must possess the comprehensive and current knowledge of the orders and procedures required for the safe use of this training facility and the applicable drills and procedures used on this type of training facility.
12. **A/RSO Qualifications.** Any personnel appointed as A/RSOs must meet the following conditions:
  - a. must be appointed by the CO;
  - b. hold rank of Cpl or higher;
  - c. be qualified Primary Leadership Qualification Course;
  - d. be qualified on the weapons or weapons system being used in the exercise by virtue of either a formal course or a combination of unit training and experience that meets with the approval of the CO of the unit; and
  - e. demonstrate the knowledge and skills to carry out the duties for the specific task.

## SAFETY PROCEDURES

13. **RSO Catwalk.** Each shoot house has a catwalk suspended over the hallways to allow the OIC Exercise and the RSO(s) to move freely and observe all facets of the training within each bldg. At no time shall the catwalk be used as an observation gallery for visitors.
14. **Range Flags.** In addition to the flag located at the entrance to the complex, there is a set of red and green Range Flags pre-positioned at the top of each catwalk stairway. Standard drills on flying the red and green flag shall be observed.
15. **Loudhailer.** The RSO shall have in his possession a loudhailer set to “Siren” (or any other suitable device, like an air horn) to create a loud audio warning that can be heard by all participants which shall indicate an immediate Check Fire / Stop Firing. Range Control has a loudhailer available that units can sign for prior to the training.
16. **Review of Safety Commands.** All safety commands and signals shall be reviewed prior to going Live in the facility.
17. **A/RSOs.** Each stack (pair) of shooters shall have an A/RSO following directly behind to exert safety commands when required.

18. **Maximum Users.** A unit may allow as many shooters into a shoot house as long as the two to one ratio of shooters and A/RSO as mentioned in para 17 above is maintained.

19. **Complex Range.** If the number of shooters exceeds ten, or if more than one bldg is being used concurrently for Live Training, then the practice is to be considered a Complex Range and shall have an OIC Exercise appointed as well as sufficient RSOs and A/RSOs in each bldg used to oversee all aspects of safety associated with the training. The OIC Ex / RSO(s) must ensure that individuals or stacks cannot inadvertently engage other individuals or stacks inside the shoot house.

### **SAFETY WRT THE PROXIMITY OF THE GAS HUT**

20. The Gas Hut is located very close to the complex, especially Bldg CC-86 which is within the 100 metre safety distance for CS Gas trg. Bldg CC-86 shall not be used or occupied while the Gas Hut is Live.

21. If for any reason the RSO believes that CS Gas may affect the UOSH complex, the RSO shall order CHECK FIRE and inform the other RSO ASAP. The UOSH RSO shall order STOP and UNLOAD to any personnel that may be affected by CS Gas.

22. Range Control shall then be advised and Range Control will decide when the trg will recommence at either facility after the gas has dissipated.

### **NO FIRE ZONES**

23. There are red No Fire Zones (NFZ) painted on the top of each room wall and applicable hallway wall that is authorized for engaging targets. No projectiles shall be deliberately directed to strike into the NFZ whatsoever.

24. **Floors.** There shall be no projectiles deliberately directed to strike the rubber flooring of the shoot houses. This will cause damage to the concrete floor and will eventually lead to gaps between the rubber flooring and the concrete and in certain areas, gaps between the floor and the steel containment walls.

25. **Sliding Doors and Door Frames.** All sliding doors and door frames that are part of the permanent structure of each bldg shall only be engaged by Frangible ammunition. Ball ammunition cannot be properly “captured” by the method the rubber is attached to these structures.

### **ENGAGEMENT AREAS**

26. Engagement Areas. All target engagements shall be limited to within the shoot house rooms and hallways that are painted with a red NFZ. There shall be no target engagements in any hallway that does not provide 100% containment of projectiles or ricochets.

27. The bldgs have been designed for target engagements from floor level only. No shooting will occur over the room or hallway walls or from the catwalk.

28. The rule of thumb shall be: If no red NFZ is indicated or present then no target engagements shall take place.

29. **Target Positioning.** Targets may be fastened to the rubber wall panels however they must be moved to a different location in the room after each firing serial has passed through in order to ensure that the effects of the ball ammunition is not concentrated on a single area of the steel wall and the rubber panel(s).

30. **Bullet Traps.** If a unit wishes to employ a bullet trap that they have built or acquired, then that particular bullet trap shall be tested on a gallery range with a representative from Range Control present to ensure that the trap functions in an acceptable manner and will not constitute a ricochet hazard.

31. **Bullet Trap Positioning.** The placement of bullet traps, if employed, is critical and shall be verified from all angles of attack to ensure that if the bullet trap is missed by a wide shot:

- a. no projectile shall enter into the NFZ; and
- b. no projectile shall strike the floor.

32. It is critical that the line of fire or angle of engagement between the muzzle and any bullet trap is closely scrutinized during range set-up and preparations so that shooters do not inadvertently engage any exposed metal of the sides or back of the bullet trap.

### **ADDITIONAL TRAINING PROPS**

33. Units may bring furniture and props, including replicated defensive preparations, into the bldgs to augment the training scenario. Props shall not pose a ricochet or fragmentation hazard nor shall they be positioned in such a way as to impede safe movement by the training audience. The attachment of any prop or partition to the bldg walls or hallways shall not affect any of the structural components of the bldg nor shall it affect the ricochet absorbing properties of the bldg. All props must be removed by the user unit prior to the march-out inspection.

### **FIRE ORDERS AND THE READY LINE**

34. Painted inside the entrance of the hallway at each of the entry points is a red Ready Line which has been established to assist RSOs in controlling and maintaining weapons safety. Normally, all weapons shall only be made READY for firing, i.e. a round in the chamber, when the weapon has reached or passed this line.

35. If the safety of the troops and any other personnel within the Danger Area of the weapons being used are not endangered, the RSO is empowered to permit weapons to be loaded in a controlled area and weapons can be made READY before the firer reaches the red Ready Line provided the safety catch is on SAFE and strict control of the weapon to ensure it is pointed in a safe direction shall be maintained at all times. The applicable Application of Fire orders i.e. WATCH AND SHOOT or WATCH OUT, can only be given when the shooter(s) have reached or are past the red Ready Line.

36. The use of proper Fire Orders and Safety Orders is paramount and these orders shall be rehearsed prior to using the facility with Ball or Frangible ammunition.

37. **Unload / Inspection of Weapons.** At the completion of the training event or the training scenario all weapons shall be unloaded and inspected in accordance with the drills laid out for that particular weapon before that weapon passes back over the Ready Line.

### **AUTHORIZED AMMUNITION**

38. Absolutely no Tracer Ammunition or any ammunition that may cause heat or is designed to burn shall be used in this facility. No sources of heat shall be placed in the facility.

39. The following ammunition may be used in the facility:

- a. 5.56mm Ball and Blank;

- b. 9mm Ball and Blank;
- c. 5.56mm and 9mm Frangible ammunition;
- d. 12 Gauge Frangible ammunition (see para 40 below);
- e. Explosives (see paras 41 - 45 below); and
- f. 1 Bang and 9 Bang flash bang distraction devices.

40. **Door Breaching with 12 Gauge Frangible Ammunition.** Temporary wooden door frames may be brought to the facility to practice door breaching techniques with 12 gauge Frangible ammunition. The door frames must be placed past the Ready Line and at the entrance to one of the rooms. The attachment of the door frames to the bldgs shall not affect any of the structural components of the bldg nor shall it affect the ricochet absorbing properties of the bldg. Careful placement and shooting techniques must be exercised to ensure there is no damage to any of the rubber panels by fragmentation of the wooden doors.

### **EXPLOSIVE BREACHING**

- 41. Depending on the amount and type of explosive used, explosive breaching techniques can only be carried out at the south entrance, closest to the earth berm, of Bldg CC-83 only.
- 42. Units must verify with Range Control prior to the training event on what type and amount of explosive to be used and Danger Area Overlays shall be constructed and verified by Range Control.
- 43. Temporary door frames only shall be used and the attachment of these door frames shall not affect any of the structural components of the bldg nor shall it affect the ricochet absorbing properties of the bldg.
- 44. Careful placement of the door frames must ensure there is no damage to any portion of the bldg by fragmentation of the wooden doors or by any explosive overpressure.
- 45. Explosives shall not be employed inside any bldgs.

### **SENTRY**

- 46. A Sentry shall be placed at the entrance gate, near the range flag of the facility to control access.

### **INSPECTIONS**

- 47. **Pre-use Inspection.** The rubber wall panels shall be inspected prior to all live fire practices. The OIC Practice and RSO (if assigned separately) shall confirm the serviceability, security of attachment and coverage of all seams and any ricochet hazards. The OIC Practice and RSO (if assigned separately) shall also check the exterior wall surfaces for evidence of dimpling, cracking or penetration. Evidence of dimpling may require the repositioning of any targets away from the dimpled area.
- 48. **Faults.** All faults noted on the Pre-use Inspection shall be reported immediately to Range Control and the unit shall not "Request Permission To Go Live" until Range Control has responded to any of the faults reported. The worse-case scenario is that the affected room may be closed for use until the fault is repaired or targets may be re-positioned away from the fault area.
- 49. **March-out Inspection.** Range Control personnel shall carry out a detailed inspection of the facility after the training is completed. This facility will be treated in a similar fashion to a gallery range

and the appropriate clearance forms shall be completed and turned into Range Control.

50. **Engagement Rooms or Hallways.** Units shall report the number and calibre of rounds fired in the facility in each room and or hallway. Units shall report the location, the number and calibre of any rounds that strike any of the No Fire Zones or Areas. It would greatly assist the maintenance inspections if units could indicate to Range Control which walls of each room were used during the training.



Appendix 1 to Annex I

4 CDSB Petawawa Range Standing Orders

**URBAN OPS SHOOT HOUSE COMPLEX SIGN IN CERTIFICATE**

1. This certificate shall be completed only by the Officer In Charge of the Practice (OIC Practice) or the Range Safety Officer (RSO).
2. The keys shall only be issued to the unit after the OIC Practice or the RSO for the specific training event has completed this certificate.
3. I hereby certify that:
  - a. I have read all applicable publications relating to the weapons and ammunition that are to be used at this facility for the training event;
  - b. I have read all applicable chapters or amendments to B-GL-381-001/TS-000 Operational Training, Training Safety that pertain to the training event that I will be supervising;
  - c. I have read the CFB Petawawa Range Standing Orders that pertain to the training event that I will be supervising; and
  - d. if, for whatever reason, I must relinquish my position of OIC Practice or RSO to any other qualified personnel then I shall ensure that Range Control is made aware of this and that person(s) must report to Range Control and sign a new certificate.
4. Range Control staff shall retain this certificate and attach it to the associated Ammunition Control Certificate that has been completed by the unit for the same training event.

**OIC PRACTICE / RSO:**

S/N \_\_\_\_\_ RANK \_\_\_\_\_ NAME & INT \_\_\_\_\_

(SIGNATURE ABOVE PRINTED NAME)

UNIT \_\_\_\_\_

DATE \_\_\_\_\_

Annex J

4 CDSB Petawawa Range Standing Orders

**4 CDSG TRG SAFETY WAIVER APPROVAL FORMAT**

Ser	WAIVER TYPE	Sr Ops O	CO Ops Svcs	Comd 4 CDSG	Remarks
1	Open fire request in the RTAs*	X			
2	Tpt blank ammo on garrison property	X			
3	Load blank ammo on garrison property	X			
4	Fire blank ammo on garrison property	X			
5	Helicopter landing on garrison property	X			
6	Low flying request over garrison property	X			
7	Foreign weapons use in the RTAs*	X			
8	Off-Garrison Training (less LUAs)	X			
9	Alcohol use in the RTAs*		X		Issuing of spirits is captured in AI 2.056, Grn Pet Alcohol Policy
10	Tpt live ammo on garrison property		X		
11	Dud producing ammo*		X		
12	Requests during periods of high Fire Weather Index (FWI)*		X		
13	Civilian authorization in the RTAs*		X		
14	Requests during periods of extreme and extreme+ Fire Weather Index (FWI)*			X	ie. Request to lift restriction on specific ammo/pyro nature
15	Requests for other specific exceptions to items within Trg Safety*			X	
16	Fire indirect (live) from Garrison property, or over Hwy 17.			X	Requires 4 Cdn Div Comd approval

\*Note: This applies to all 4 CDSG RTAs: Petawawa, Winona, Cedar Springs and Burwash.

## Annex K

### 4 CDSB Petawawa Range Standing Orders

#### AIRSPACE COORDINATION

##### SECTION 1 - GENERAL

1. CYR 511 lies over the majority of the 4 CDSB Petawawa RTA and some non DND property as well. Area K,  $\frac{3}{4}$  of the Garrison area and a sliver of Area 3 lie outside of CYR 511. This is due to the proximity of the Pembroke Airfield centered on GR 251 851. A NOTAM is in place for use of that small portion of airspace above Area 3 and Area K. Contact Range Control for more information.
2. CYR 511 is marked and labelled in blue on the current Training Area Map 4 CDSB Petawawa MCE132 Edition 12-MCE (TAM).
3. All firing of Live Ammunition that originates from the ground is referred to as ground fire. This includes Direct Fire, Indirect Fire and Pyrotechnics that may enter the airspace above the 4 CDSB Petawawa RTA. These projectiles, the ricochets or fragments from projectiles travelling up from the ground from Direct and Indirect Fire weapon systems and ammunition pose a major threat to all users of the airspace. Pyrotechnics, such as para flares, that are launched from the ground into the airspace must be considered as well. All aircraft operating over the RTA must be aware of the inherent dangers of the training that may be taking place underneath them and they must be aware of the inherent dangers that low flying aircraft may impose on ground units.
4. **Range Standing Orders and Daily Range Safety Orders.** It cannot be stressed enough that all users and potential users of the RTA and airspace above the RTA must be familiar with, read, and have a copy of the Range Standing Orders (RSOs), the Daily Range Safety Orders (DRSOs) and the 4 CDSB Petawawa Training Area Map (TAM) before entering the RTA and/or the airspace above the RTA.
5. **Range Control and Unit Responsibilities.** Range Control will act as the final coordination centre for all airspace above the RTA as indicated on the current TAM. When required, units shall conduct internal coordination and present their coordination to Range Control for confirmation and insertion into the DRSOs. Obviously this must be completed in a timely manner.

##### RTA AIRSPACE CONTROL - AREA

6. **Permanent Airspace Control Measures (ACMs).** The 4 CDSB Petawawa Ammunition Compound centred on Grid Reference 18TUR140920 has a minimum overfly altitude of 1500 ft AGL.
7. **Non-Permanent ACMs.** The following Non-Permanent ACMs are in effect:
  - a. all Drop Zones located in CYR 511 which are listed in Chapter 4 Section 3, which are indicated in the 4 CDSB Petawawa Daily Range Safety Orders (DRSOs) for para activity;
  - b. Tucker Creek Restricted Operating Zone (ROZ) which is on call when helos require a Low Level transit between Area C and Area G, see Section 2 of this Annex;
  - c. Annex Area G ROZ which is on call when artillery units are firing from Area L into Areas 7 and 8, see Section 3 of this Annex;

- d. any ROZs created in support of training or specific missions that are indicated in the DRSOs; and
8. The following CYRs are located in the general area of 4 CDSB Petawawa:
- a. CYR 511. As depicted in the current Designated Airspace Handbook (DAH) and on the current TAM;
  - b. CYR 540. As depicted in the current DAH;
  - c. CYR 541. As depicted in the current DAH;
  - d. CYR 542. As depicted in the current DAH;
  - e. CYR 543. As depicted in the current DAH;
  - f. CYR 510. As depicted in the current DAH. The CYR is not the responsibility of 4 CDSG. It is included because of its proximity to the northern boundary of CYR 511;
  - g. The CYRs listed above, less CYR 511, are not completely depicted on the 4 CDSB Petawawa TAM due to their size. For a graphical representation of all CYRs aircrew shall refer to the En Route Low Altitude Chart 6; and
  - h. The use of any CYR listed above, less CYR 511, shall be coordinated through the MFAU.
9. **CYR 511 Coordination Altitude.** Coordination Altitudes (CA) if required, shall be established when all factors WRT airspace safety have been considered. Range Control shall set the CA in consultation with MFAU and specific elms (TACP, JTAC, ARSO, AGRSO, DZ Controllers) that are using the airspace above the RTA.

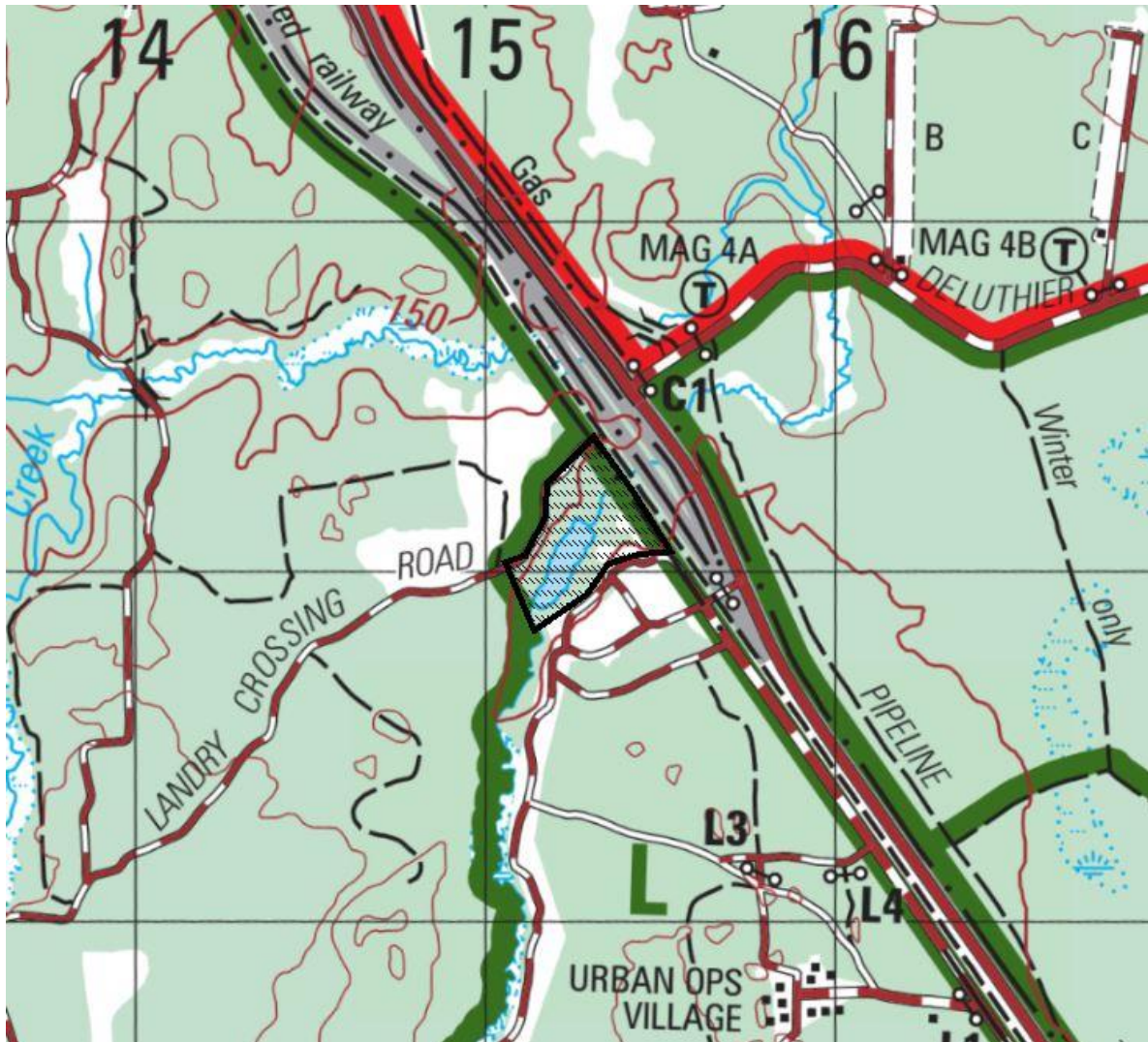
## SECTION 2 – COORDINATION OF TRAINING IN AND OVER THE RTA

10. It is critical that all airspace users are intimate with the Grn Flying Orders and these orders.
11. All trg proposed for the RTA, and above the RTA, shall be de-conflicted at Range Control during the Range Control Weekly Coordination Conference (a detailed explanation of the conference is given in Chapter 1 of this pub). If this procedure is not feasible, for whatever reason except convenience, then direct coordination with the RCO shall be completed. All units must be aware of the booking procedures as laid out in Chapter 1 Section 1 of this pub.
12. All ground based units who plan to use any RCAF or civilian air elements as part of their trg shall indicate this at the Coordination Conference so proper de-confliction can be completed. It is the unit's responsibility to coordinate all requirements for their supported air element.
13. Unit reps from 427 SOAS, 450 THS or any other flying unit trg at Petawawa should attend whether they have bookings or not, to hear and understand what training is taking place in the RTA. It is imperative that the designated rep attending have an understanding of airspace and is able to infer any dangers to aircraft as ground based bookings are reviewed.
14. Range Control staff can give detailed briefings on procedures and policies WRT how training, both Live and Dry, is carried out in the RTA. Units shall coordinate these briefings with the Range Control Officer.
15. Range Control shall use CFRIS to create the DRSOs. Only Range Control Staff can modify the DRSOs for any activity in and over the RTA.
16. CFRIS Base Safety Map will be used to create all final Danger Area Overlays, Weapon Danger Zones and Restricted Operating Zones.
17. **Calculation of Minimum Safe Altitude in the RTA.** When required, Range Control shall calculate the minimum safe altitude for all aircraft over the RTA by using the following formula:
  - a. use the highest point in the applicable training area(s) from the current TAM in metres;
  - b. add the ricochet height for the applicable weapon or ammunition system in metres;
  - c. convert the sum of the two values above to feet and add a 500' buffer; and
  - d. indicate this altitude in the DRSOs Footnotes box as "x" feet Above Sea Level (ASL).

### TUCKER CREEK ROZ

18. When deemed necessary by Range Control, Range Control can order the Tucker Creek ROZ, located in Gr Sq 1594 above Area L, in effect for Low Level helos transiting between Area C and Area G over Area L. The ROZ creates a corridor approx. 1000' (305 metres) wide from 0 to 200' AGL. The ROZ boundary runs from Landry Crossing Road in Area G south to the most northern trail of Landry Crossing which encompasses the man - made lake on Tucker Creek at Landry Crossing in Area L.
19. The Tucker Creek ROZ can be found in CFRIS Base Safety Map Database. If you cannot find it in the CFRIS Database call the Range Control Officer or the Range Control Booking and Templating Cmres. A hard copy is also available at Range Control. Do not use the following illustration for any flight planning or safety purposes. It is added strictly for reference only.

Tucker Creek ROZ:



### **SECTION 3 – INDIRECT FIRE AND THE DANGEROUS AIRSPACE BETWEEN DEPLOYMENT AND IMPACT AREAS**

20. A Restricted Operating Zone (ROZ) shall be created, by the unit conducting the Indirect Firing training, between all non-contiguous Trg Areas used as Indirect Fire Deployment Areas and the associated Impact Areas so aircraft can avoid this dangerous airspace. See para 22 below for the exceptions to this specific policy.

21. An example of this procedure is an artillery unit which is deployed in Area D and is impacting projectiles into Areas 7 and 8. While obvious to some it is not obvious to all therefore the reason for this policy.

22. There will be no ROZ in effect for any Indirect Fire Trg between Areas 7 and 8 and the fol areas:

- a. Area H
- b. Area I;
- c. Area J;
- d. Area 1;
- e. Area 2;
- f. Area 3;
- g. Area 4;
- h. Area 5; and
- i. Area 6.

23. For all other situations the ground unit shall create a ROZ and submit that ROZ to Range Control for approval. The type of ammunition and fuse combination used shall be included in all ROZs created for this trg.

24. If there is any confusion or doubt stay away from any potential deployment area and call Range Control via the fastest means possible (telephone or the Range Safety Net). All artillery deployment areas must be considered as Live Areas for all air elements.

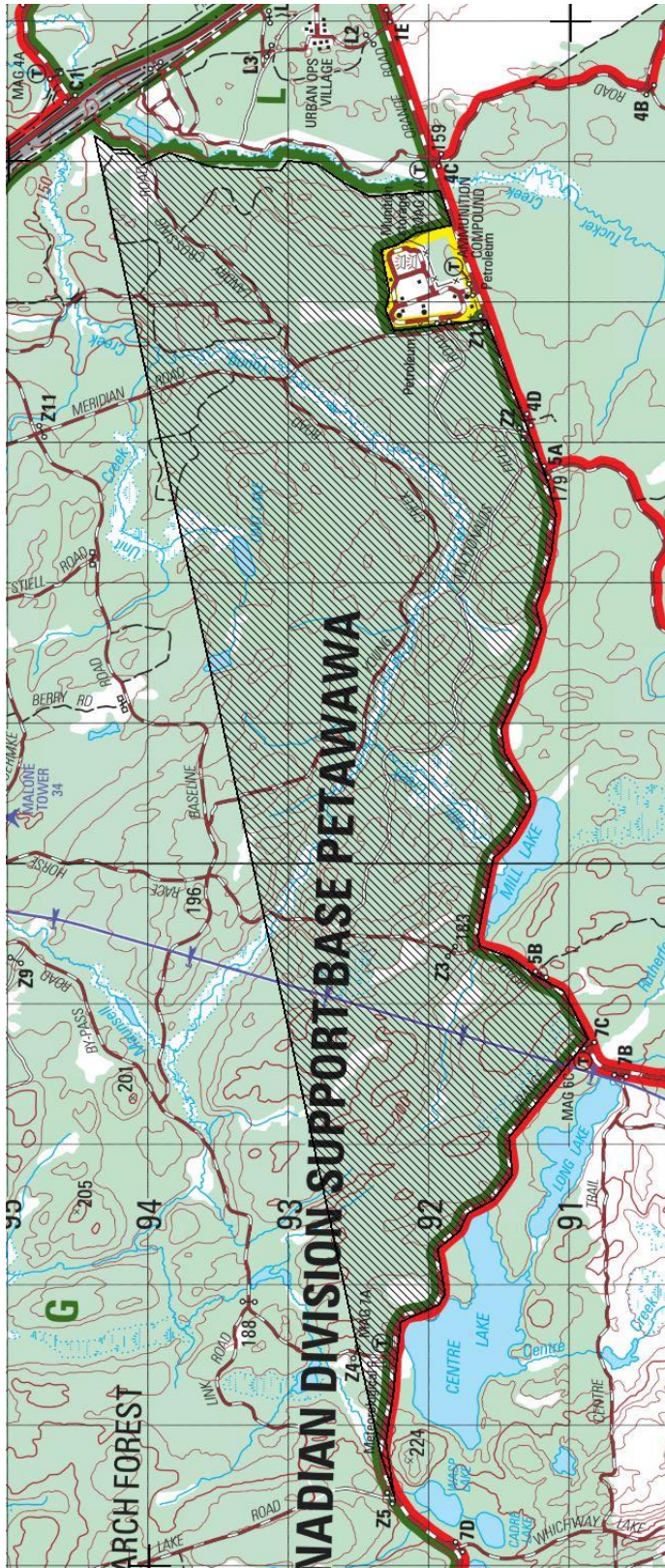
#### **AREA G ROZ**

25. Range Control has created the Area G ROZ for the situation of an artillery unit deployed in Area L and impacting into Areas 7 and 8. The airspace over a small portion of Area G is now also considered dangerous airspace along with Areas 1, 4, 5 and 6.

26. The Area G ROZ can be found in CFRIS Base Safety Map Database. If you cannot find it in the CFRIS Database call the Range Control Officer or the Range Control Booking and Templating Cmres. A hard copy is also available at Range Control. There may be further restrictions which depend on type of ammunition and fuse combination used.

27. Do not use the following illustration for any flight planning or safety purposes. It is added strictly for reference only.

Area G ROZ:



K-6/6



## Annex L

### 4 CDSB Petawawa Range Standing Orders

#### **STORAGE AND TRANSPORTATION OF AMMUNITION WITHIN THE RTA**

1. Within the confines of the RTA ammunition and explosives shall be stored and transported IAW Explosive Safety Manuals C-09-005-002/TS-000 Volume 2 -Storage and Facility Operations, and C-09-005-003/TS-000 Volume 3 - Transportation and TSI 8.403 Handling, Storage, Shipment and Transportation of Ammunition. Storage and transportation can be broken down into two categories – logistical loads and combat loads.

#### **LOGISTICAL LOADS**

2. A logistical load is defined as a load of ammunition to and/or from the Ammo Compound, transported by the Unit Ammo Rep on logistical vehicles for the purpose of supplying ammunition to a range or exercise. Logistical loads shall be governed by the rules laid out in Vol 2 Part 2 Sect 2 and 4 CDSG TSI 8.403.

3. When transporting logistical loads of ammunition off the confines of 4 CDSB Petawawa units shall contact the 2 Svc Bn Ammo Pl for shipping documentation and load inspection prior to leaving base.

#### **COMBAT LOADS**

4. A combat load is defined as ammunition that has been broken down for transport on an individual or as part of a vehicle's ammunition complement. Combat loads are governed by the regulations laid out in Vol 3 Part 7 Sect 3. Combat loads may be carried in AFV, LUVW, or other vehicles when required as part of the functioning of that vehicle. When carrying combat loads, the following restrictions shall apply:

- a. no placards are required to be displayed on the vehicle;
- b. vehicle shall be carrying 1x 20lb dry chemical fire extinguisher ABC or have an integral fire suppression system;
- c. load/passenger compartment of the vehicle shall be free of readily combustible waste material; and
- d. free of fuel load other than that carried in tanks and containers in approved locations.

5. AFV may carry mixed compatibilities of ammunition in its authorized configuration. However when carrying mixed compatibilities above what the vehicle has designed storage locations for, compatibilities should not be mixed if possible (normally C,D,E,G and S, plus detonators and fuzes of B for operational requirements):

- a. no troops in cargo compartment of logistical transport vehicles;
- b. no passengers other than the normal crew compliment or persons required to accomplish the mission shall be carried in the crew compartment of an AFV with ammunition;
- c. no smoking or fires within 30m of vehicles carrying ammunition;

- d. no supply documentation or CARF required – a manifest of all explosives on board will be carried instead; and
  - e. vehicles carrying explosives will be parked a minimum distance of 2m between AFV or 4m between non-armoured vehicles (LSVW, MSVS, LUVW, HLVW, etc...), and a minimum of 180m away from public roadways and 400m away from inhabited buildings (i.e. kitchens, tents, CPs, range huts and towers, etc...). If vehicles are barricaded from inhabited buildings then the distance can be reduced to 270m.
6. If a unit is storing or transporting combat loads of ammunition outside of the RTA and within the confines of 4 CDSB Petawawa then a waiver shall be submitted to 4 CDSB Petawawa Ops Svcs.
7. If a unit is transporting combat loads of ammunition off the confines of 4 CDSB Petawawa then the following restrictions shall apply:
- a. must be authorized by Comd 4 Div IAW B-GL-381-001/TS-000 Part 1 Para 74-75;
  - b. routes should avoid densely populated areas and use marked Dangerous Goods routes; and
  - c. major bridges and tunnels should be avoided – contact 2 Svc Bn Ammo Pl for further direction.

## **FIELD STORAGE**

8. Field storage of ammunition consists of large stocks of ammo for resupplying ranges and exercises. Due to the accessibility of the Ammo Compound, no authorization for field storage shall be approved. The only storage of ammunition other than combat loads shall be limited to that on ranges, firing points and firing ranges (does not include ammo being transported as per combat load).