

Canadian
Forces
College

Collège
des
Forces
Canadiennes



BELLEROPHON REVITALISED: A NEW AIRBORNE FORCE EMPLOYMENT CONCEPT FOR THE CANADIAN ARMY

Lieutenant-Colonel David Stead

JCSP 45

Service Paper

Disclaimer

Opinions expressed remain those of the author and do not represent Department of National Defence or Canadian Forces policy. This paper may not be used without written permission.

© Her Majesty the Queen in Right of Canada, as represented by the
Minister of National Defence, 2019.

PCEMI 45

Étude militaire

Avertissement

Les opinions exprimées n'engagent que leurs auteurs et ne reflètent aucunement des politiques du Ministère de la Défense nationale ou des Forces canadiennes. Ce papier ne peut être reproduit sans autorisation écrite

© Sa Majesté la Reine du Chef du Canada, représentée par le
ministre de la Défense nationale, 2019.

CANADIAN FORCES COLLEGE/COLLÈGE DES FORCES CANADIENNES
JCSP 45/PCEMI 45
14 OCT 2018

DS545 COMPONENT CAPABILITIES

**BELLEROPHON REVITALISED: A NEW AIRBORNE FORCE EMPLOYMENT
CONCEPT FOR THE CANADIAN ARMY**

By / Par Lt Col David Stead

“This paper was written by a candidate attending the Canadian Forces College in fulfillment of one of the requirements of the Course of Studies. The paper is a scholastic document, and thus contains facts and opinions which the author alone considered appropriate and correct for the subject. It does not necessarily reflect the policy or the opinion of any agency, including the Government of Canada and the Canadian Department of National Defence. This paper may not be released, quoted or copied, except with the express permission of the Canadian Department of National Defence.”

Word Count: 2,548

« La présente étude a été rédigée par un stagiaire du Collège des Forces canadiennes pour satisfaire à l'une des exigences du cours. L'étude est un document qui se rapporte au cours et contient donc des faits et des opinions que seul l'auteur considère appropriés et convenables au sujet. Elle ne reflète pas nécessairement la politique ou l'opinion d'un organisme quelconque, y compris le gouvernement du Canada et le ministère de la Défense nationale du Canada. Il est défendu de diffuser, de citer ou de reproduire cette étude sans la permission expresse du ministère de la Défense nationale. »

Nombre de mots : 2,548

BELLEROPHON REVITALISED: A NEW AIRBORNE FORCE EMPLOYMENT CONCEPT FOR THE CANADIAN ARMY

AIM

1. The purpose of this paper is to recommend a Force Employment Concept for the Canadian Army (CA)'s airborne forces, together with any changes to structures, equipment and support requirements needed to operationalize that concept.

INTRODUCTION

2. The CA currently maintains a limited airborne capability in each of its three Canadian Mechanized Brigade Groups (CMBGs), comprising a light infantry battalion with one company in the parachute role, plus limited combat and combat service support.¹ While the Army Strategy highlights the utility of light forces for “unique environments and specific operations [including airborne] not suited for mechanized forces”,² there is currently not a widely understood Force Employment Concept for light forces in general, and airborne forces in particular.³

3. The paper will begin by defining the key terms “airborne forces” and “Force Employment Concept”. It will then examine the scale and operating concepts of allied airborne forces. This comparative analysis will inform a discussion of airborne forces’ utility in the Canadian Armed Forces (CAF)’s core missions.⁴ Three candidate Force Employment Concepts will then be explored: removing the CA’s airborne capability; focusing on niche non-combat roles; or a broader mission-set. This analysis will include implications for changes to structures, equipment and support requirements. The paper will conclude that airborne forces have utility across the CAF’s core missions; that their Force Employment Concept should reflect this utility; and will recommend a fundamental re-organisation of the CA to enable this concept.

DISCUSSION

Definitions

4. NATO defines airborne forces as those which are “organized, equipped and trained for airborne operations”; that is operations “involving the movement of combat forces and their logistic support into an objective area by air.”⁵ Movement *into an objective area* is key: this is what distinguishes airborne forces from those conducting an administrative move. Given the increasing pervasiveness of conflict, “albeit non-violent for the most part”,⁶ it could be argued

¹ Department of National Defence (DND), B-GL-324-004/FP-001, *Airborne Operations – Parachute* (Ottawa: DND Canada, 2013), iii.

² DND, B-GL-005-000/AC-001, *Advancing with Purpose: the Army Strategy* (Ottawa: DND Canada, 2014), 20-21.

³ Conversations with CA officers with recent experience in airborne forces, 4 to 14 October 2018; Capt John Keess, “Canadian Expeditionary Brigade Groups: A Proposal for Reforming Canadian Mechanised [sic] Brigade Groups,” *Canadian Army Journal* 17, no. 1 (2016): 85.

⁴ DND, *Strong Secure Engaged: Canada’s Defence Policy* (Ottawa: DND Canada, 2017), 82-87.

⁵ NATO, *Glossary of Terms and Definitions*, APP 06 (Brussels: NATO Standardization Office, 2017), 6. This definition is reflected in Canadian doctrine. DND, *Airborne Operations – Parachute* . . . , 1-1-1.

⁶ DND, B-GL-007-000/JP-009, *Canada’s Future Army, Volume 2: Force Employment Implications* (Ottawa: DND Canada, 2017), 35-36.

that all forces immediately move into a *conceptual* objective area on arrival in Theatre. However, this paper will focus on forces moving to a *physical* objective area, while recognising the requirement for those forces to be enabled to operate in a Joint, Interagency, Multinational, Public (JIMP) framework⁷ from arrival. Figure 1 illustrates the Canadian definition of airborne operations which, unlike some allies,⁸ covers parachute, air landing *and* air assault operations.

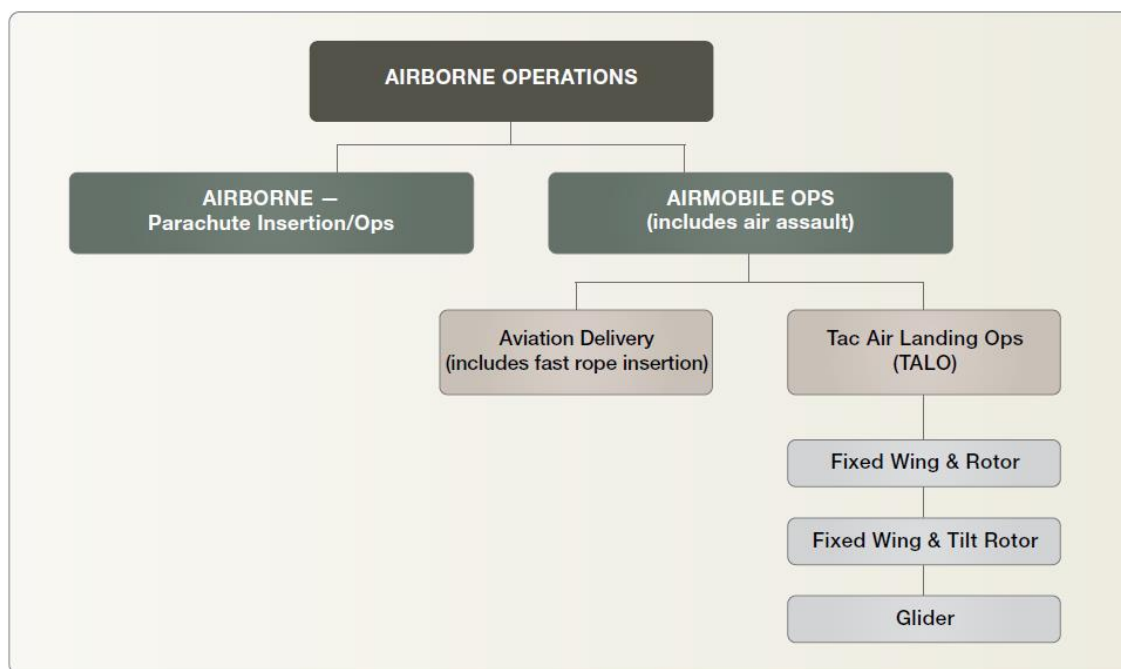


Figure 1 – Airborne Operations Defined

Source: DND, *Airborne Operations – Parachute . . .*, 1-1-2.

5. Canadian Military Doctrine defines force employment as “the command, control and sustainment of generated forces on operations” and a concept as “a notion or statement of an idea, expressing how something might be done or accomplished, that may lead to an accepted procedure.”⁹ A previous version of British Defence Doctrine put it more succinctly: “a concept prescribes where and when a capability will fight.”¹⁰

Comparative analysis

Scale of allied airborne capability

⁷ *Ibid.*, 47.

⁸ The US and UK definitions exclude air assault. US Department of the Army, *Airborne and Air Assault Operations*, FM 3-99 (Washington, D.C.: Department of the Army, 2015), 1-20; UK Ministry of Defence, *Air Manoeuvre*, JDN 1/16 (Shrivenham: Development, Concepts and Doctrine Centre, 2016), 21-24.

⁹ DND, B-GJ-005-000/FP-001, *Canadian Military Doctrine* (Ottawa: DND Canada, 2009), GL2-GL3.

¹⁰ UK Ministry of Defence, *British Defence Doctrine*, JDP 0-01 (Shrivenham: Development, Concepts and Doctrine Centre, 2008), iii, quoted in Timothy Jenkins “The Evolution of British Airborne Warfare: A Technological Perspective” (PhD thesis, University of Birmingham, 2013), 4.

6. Thirteen NATO members, including Canada, maintain conventional airborne forces,¹¹ as illustrated by Figure 2.

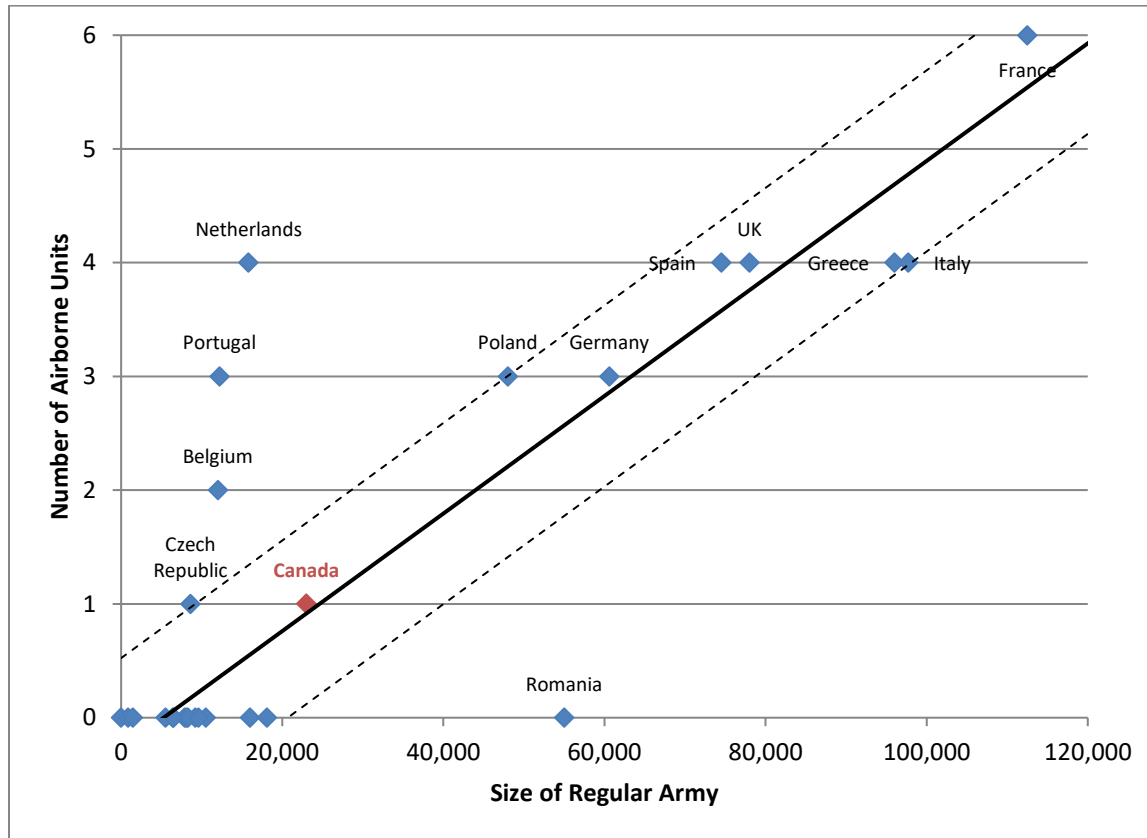


Figure 2 – Airborne Forces in NATO Armies¹²

¹¹ Jane's, *Jane's World Armies 2018* (Coulsdon: IHS Markit, 2018).

¹² Data primarily drawn from *Jane's World Armies 2018*. The y-axis indicates the number of airborne combat units listed (although see caveat below), with the value increased by one where units are grouped into combined-arms airborne formations (e.g. the Belgian Light Brigade has only two para-commando combat units plus training centres, whereas the Portuguese Rapid Reaction Brigade includes combat support and combat service support elements). Given the size of their regular armies, the US and Turkey are excluded from the graph, as they would otherwise unhelpfully cluster all other nations too close to the origin to enable analysis. However, their data is included in the calculation of the linear regression (bold black line) which indicates a broad correlation between size of regular army and number of airborne units fielded: note that there is no implication of causality. To assist with the identification of outliers, the two dotted black lines indicate the 'fit' of the model, using the r-squared statistic. An important caveat: Jane's does not have a consistent taxonomy for airborne forces, so judgement has been applied, informed by countries' defence policies as required. In particular, a number of countries hold airborne forces primarily in a supporting role to their Special Operations Forces (SOF). Where this is the primary role of a nation's airborne forces, they have been excluded from Figure 1. In most cases, the judgement is relatively simple as airborne unit(s) are listed as part of SOF brigades or separate SOF commands. However, in the cases of Bulgaria and Hungary, airborne forces which Jane's lists as part of General Purpose Forces (GPF) have been removed from the data following further research. Hungarian Armed Forces, "2nd Special Purpose Brigade," last accessed 11 October 2018, https://honvedelem.hu/szervezet/mh_2_kulonleges_rendeltetesu_ezred, trans. by Google; Maj-Gen Dr József Boda, "Future Capabilities of Parachutist, Airborne and Special Forces in the EU/NATO Context," *Tradecraft Review: Periodical of the [Hungarian] Military National Security Service*

7. While there is no *de-facto* reason why there should be a correlation between the size of an army and the airborne forces it fields, examining the relationship between the two nevertheless enables analysis of outliers, which can provide insights of relevance to the Canadian context.

8. Belgium, Portugal and the Netherlands have a larger airborne capability than would be expected, given their small armies. All three nations are formerly imperial powers: their acquisition of airborne forces could be justified by such forces' deployability across dispersed colonies.¹³ In addition to their ongoing utility as rapid reaction forces,¹⁴ subsequent maintenance of airborne capabilities may then be related to post-colonial responsibilities¹⁵ and institutional inertia.¹⁶

9. The Czech Republic is, with Canada, the only NATO country to have a single unit of airborne forces. While the vision for the Czech Armed Forces in 2030 discusses all other army capabilities in some detail, airborne forces are not mentioned.¹⁷ This implies there is no clear concept for their employment, and thus that their survival is based on institutional factors,¹⁸ and to preserve a seedcorn capability.

10. Finally, Romania is also an outlier: it has no conventional airborne forces, despite having a relatively large army. During its downsizing prior to joining NATO, conventional airborne forces were removed and used as the foundation for SOF.¹⁹ Belgium also plans to “transform . . . para-commandos into Rangers in support of the Special Forces”.²⁰

Roles of allied airborne forces

11. Of those countries with larger scale airborne capabilities, their roles fall into two broad categories. US airborne doctrine focuses exclusively²¹ on Joint Forcible Entry: that is, operations to enable access to a Theatre “against armed opposition . . . when diplomatic and other means

2013, no. 2 (2013): 14; Bulgarian Ministry of Defence, *Programme for the Development of the Defence Capabilities of the Bulgarian Armed Forces 2020* (Sofia: Ministry of Defence, 2015), 16.

¹³ This was certainly the case for the larger imperial powers. Victor-Manuel Vallin, “France as the Gendarme of Africa, 1960–2014,” *Political Science Quarterly* 130, no. 1 (2015): 79-101; Ian Speller, “The Seaborne/Airborne Concept: Littoral Manoeuvre in the 1960s?,” *Journal of Strategic Studies* 29, no. 1 (2006): 53-82.

¹⁴ Netherlands Ministry of Defence, *Defence White Paper: Investing in our People, Capabilities and Visibility* (The Hague: Ministry of Defence, 2018), 11, 14; Portugal Ministério da Defesa Nacional, *Defesa 2020* (Lisbon: Ministério da Defesa Nacional, 2015), 9, trans. by Google.

¹⁵ For example, “our partners continue to count on the Belgian military expertise and capabilities to take swift, effective action in Central Africa.” Belgium Ministry of Defence, *The Value of the Belgian Defence* (Brussels: Ministry of Defence, 2014), 28.

¹⁶ Marc DeVore, *When Failure Thrives: Institutions and the Evolution of Postwar Airborne Forces* (Fort Leavenworth: The Army Press, 2015), 14.

¹⁷ Czech Republic Ministry of Defence, *The Long Term Perspective For Defence 2030* (Prague: Ministry of Defence, 2015), 13-14.

¹⁸ The current Czech Chief of the General Staff spent 14 years serving with the 4th Rapid Deployment Brigade, including commanding both the 43rd Airborne Battalion and the Brigade. Czech Republic Ministry of Defence and Armed Forces, “Chief of the General Staff of the Czech Armed Forces,” last accessed 12 October 2018, <http://www.army.cz/en/armed-forces/organisational-structure/general-staff/chief-of-the-general-staff-57562/>.

¹⁹ Jane's, “Romania creates new counterterrorism unit,” *Jane's Intelligence Review*, 16 December 2004, 3.

²⁰ Belgium Ministry of Defence, *Strategic Vision for Defence* (Brussels: Ministry of Defence, 2016), 50-51.

²¹ US Department of the Army, *Airborne and Air Assault Operations*, FM 3-99 . . . , x.

have failed”.²² While other nations’ doctrine acknowledges the importance of theatre entry,²³ it also envisages a wider role for airborne forces. Reflecting the requirement for smaller armies to be able to employ all elements of their forces flexibly, these additional roles include the full spectrum of conflict, from “delivering humanitarian aid”²⁴ to “all types of combat”.²⁵

12. This combination of roles is demonstrated by the French army’s operations in Mali since 2013: following an opposed theatre entry by airborne forces, the same forces continued to execute both offensive and stability operations.²⁶ Of note, the French ability to “reaggregate and disaggregate . . . apparently at will” at unit and sub-unit level gave the force “a significant degree of flexibility and organizational adroitness”.²⁷ it is perhaps a practical realisation of “Adaptive Dispersed Operations.”²⁸

13. Finally, while Australia (perhaps Canada’s closest peer Army²⁹) and New Zealand have acknowledged a requirement for expeditionary forces, given their “archipelagic” operating environment,³⁰ they have opted for amphibious rather than airborne forces;³¹ but these too are expected to have “capacity to conduct both combat and non-combat operations.”³²

14. While this comparative analysis provides a useful background on the spectrum of airborne forces and roles, it has highlighted the criticality of context to determine what is appropriate for each nation’s armed forces. The next section will therefore analyse what roles could be required for airborne forces in the Canadian context.

Canadian requirement

15. Current Canadian doctrine envisages airborne forces having utility across the spectrum of conflict.³³ Table 1 indicates how they could support each of the CAF’s core missions in *Strong Secure Engaged*.³⁴

Table 1 – Utility of Airborne Forces for CAF Missions

²² US Joint Chiefs of Staff, *Joint Forcible Entry Operations*, JP 3-18 (Washington, D.C.: Joint Chiefs of Staff, 2018), I-1.

²³ UK Ministry of Defence, *Air Manoeuvre*, JDN 1/16 . . . , 21.

²⁴ *Ibid.*, 29.

²⁵ Royal Netherlands Army, *Army Doctrine Publication, Part II: Combat Operations* (The Hague: Royal Netherlands Army, 1998), 108.

²⁶ Michael Shurkin, *France’s War in Mali: Lessons for an Expeditionary Army* (Santa Monica: Rand, 2014).

²⁷ *Ibid.*, 29.

²⁸ DND, B-GL-310-001/AG-001, *Land Operations 2021: Adaptive Dispersed Operations – The Force Employment Concept for Canada’s Army of Tomorrow* (Ottawa: DND Canada, 2017).

²⁹ Australia Department of Defence, *Defence White Paper* (Canberra: Department of Defence, 2016), 138.

³⁰ Steven Paget, “Coming Full Circle: The Renaissance of Anzac Amphibiosity,” *Naval War College Review* 70, no. 2 (Spring 2017): 114.

³¹ *Ibid.*; Australia Department of Defence, *Defence White Paper* . . . , 99; NZ Defence Force, *The 2015 – 2018 Statement of Intent* (Wellington: New Zealand Defence Force, 2015), 13.

³² Australia Department of Defence, *Defence White Paper* . . . , 85

³³ DND, *Airborne Operations – Parachute* . . . , 1-2-2.

³⁴ DND, *Strong Secure Engaged* . . . , 82-87.

| Mission | Potential utility of airborne forces | Likelihood of requirement |
|--|---|---|
| Detect, Deter and Defend Against Threats to Canada and North America ³⁵ | Deterrence (and if necessary defence) against land incursion, likely in arctic. <i>Only airborne (parachute) forces can provide rapid assured access across Canada's north.</i> | Although “direct military conflict may be unlikely”, ³⁶ “Russian aircraft have resumed their testing of NORAD air defences” ³⁷ and it is therefore not inconceivable that a similar probing of land defences could take place. ³⁸ |
| Lead/Contribute Forces to International Peace Operations | Rapid deployment or reinforcement of a peace operation, as requested by the UN ³⁹ and pledged by Canada. ⁴⁰ | The Vancouver Conference concluded that “early warning and rapid deployment mechanisms are needed more than ever to prevent escalations of violence.” ⁴¹ |
| Lead/Contribute Forces to NATO/Coalition Efforts | Rapid reinforcement of Canadian battle-group in Latvia in event of escalating tensions. | Ability to reinforce rapidly supports deterrent effect of enhanced Forward Presence; ⁴² “grey zone” challenge more likely than conventional escalation, ⁴³ so airborne reinforcement remains credible despite anti-access / area denial threat. ⁴⁴ |

³⁵ *Strong Secure Engaged* lists these as two separate missions: given that they are primarily executed in the air and maritime environments, the missions have been merged in this table.

³⁶ Kevin Stringer “The Arctic Domain: A Narrow Niche for Joint Special Operations Forces,” *Joint Force Quarterly* 78 (3rd Quarter 2015): 26.

³⁷ Adam MacDonald “The Militarization of the Arctic: Emerging Reality, Exaggeration, and Distraction,” *Canadian Military Journal* 15, no. 3 (Summer 2015): 19.

³⁸ While unlikely to be an explicitly military incursion, this could take a similar form to the “notorious South Georgian scrap-metal incident which led directly to the Falklands war.” Martin Middlebrook, *The Falklands War 1982* (London: Penguin, 2001), 37-41. A policing response would therefore initially be more appropriate than a military one but, absent a Royal Canadian Mounted Police (RCMP) airborne capability, this could only be *rapidly* enabled by a parachute insertion, and therefore by the CAF.

³⁹ United Nations, *Report of the High-Level Independent Panel on Peace Operations* (New York: UN, 2015), 50-52.

⁴⁰ Government of Canada, “2017 UN Peacekeeping Defence Ministerial Conference: Pledges,” last accessed on 12 October 2018, <https://www.canada.ca/en/department-national-defence/campaigns/peacekeeping-defence-ministerial/pledges.html>.

⁴¹ Government of Canada, *UN Peacekeeping Defence Ministerial: Report* (Ottawa: Government of Canada, 2017), 17.

⁴² DND, *Strong Secure Engaged* . . . , 50.

⁴³ *Ibid.*, 53.

⁴⁴ The anti-access / area denial challenge is described by, for example, Alexander Lanoszka and Michael Hunzeker “Confronting the Anti-Access/Area Denial and Precision Strike Challenge in the Baltic Region,” *The RUSI Journal* 161, no. 5(2016): 12-18. However, if Russia intends its actions to remain in the “grey zone” and thus below the Article 5 threshold, it is unlikely credibly to threaten airborne reinforcement of the enhanced Forward Presence.

| Mission | Potential utility of airborne forces | Likelihood of requirement |
|--|--|--|
| Engage in Capacity Building | Can be employed on capacity building tasks as light forces. | Much capacity building likely to take place with partners' light forces. ⁴⁵ |
| Assistance to Civil Authorities including security of Canadians abroad | Ability rapidly to execute Non-Combatant Evacuation Operations (NEOs). ⁴⁶ <i>Only airborne forces can respond with the necessary "main characteristic of speed".</i> ⁴⁷ | While other nations may take the lead and agree to evacuate Canadians with their citizens, an "enduring requirement to conduct NEOs on a semi-regular basis seems to exist". ⁴⁸ |
| Response to International and Domestic Disasters/Major Emergencies and Conduct Search and Rescue ⁴⁹ | Rapid provision of "scaleable additional support" to the Disaster Assistance Response Team (DART). ⁵⁰ While the initial response will be provided by DART (international) / Search and Rescue Technicians (domestic), <i>only airborne forces can provide additional support which is "unique in . . . timeliness".</i> ⁵¹ | Increasing frequency of natural disasters, and thus CAF disaster relief deployments, envisaged. ⁵² |

16. To summarise the analysis in Table 1, airborne forces are essential to: enable a rapid response to a land-based adversary probing Canadian sovereignty in the Arctic; execute a NEO; and provide additional support in the aftermath of a disaster. Airborne forces' characteristic of "quick reaction"⁵³ is crucial to mission success in all three scenarios: although there are

⁴⁵ The UK, for example, has developed a Specialised Infantry Group of light forces to undertake this role. UK HM Government, *National Security Strategy and Strategic Defence and Security Review 2015* (London: Her Majesty's Stationery Office, 2015), 31.

⁴⁶ See, for example, Maj Thomas Odom, *Dragon Operations: Hostage Rescues in the Congo, 1964-1965* (Fort Leavenworth: U.S. Army Command and General Staff College, 1988) and Lt Col Thomas Odom, *Shaba II: The French and Belgian Intervention in Zaire in 1978* (Fort Leavenworth: U.S. Army Command and General Staff College, 1993).

⁴⁷ David Bond, "How Should the State Manage the Contemporary Expectation of Non-Combatant Evacuation Operations?," *The RUSI Journal* 161, no. 5 (2016): 29.

⁴⁸ Sam Dudin *The Historical Characteristics of Non-Combatant Evacuation Operations* (Portsmouth West: Defence Science and Technology Laboratory, 2011), 1.

⁴⁹ *Strong Secure Engaged* lists these as two separate missions: given that Search and Rescue is primarily executed by specifically earmarked forces, which could be reinforced by airborne forces if needed to respond to a major emergency, the missions have been merged in this table

⁵⁰ DND, *Strong Secure Engaged* . . . , 81. The utility of airborne (and amphibious) forces in responding to Hurricane Irma in 2017 is highlighted in: House of Commons Foreign Affairs Committee, *The UK's response to hurricanes in its Overseas Territories* (London: House of Commons, 2018), 3 and the Ministry of Defence's evidence to the Committee.

⁵¹ "Military assets should be requested only where there is no comparable civilian alternative and only the use of military assets can meet a critical humanitarian need. The military asset must therefore be unique in nature or timeliness of deployment, and its use should be a last resort." United Nations, *Civil-Military Guidelines and References for Complex Emergencies* (New York: Office for the Coordination of Humanitarian Affairs, 2008), xi.

⁵² DND, *Strong Secure Engaged* . . . , 86.

⁵³ DND, *Airborne Operations – Parachute* . . . , 1-2-1.

alternatives to the CA, as discussed in paragraph 18 below. Airborne forces also have wide utility across the other CAF missions – although these missions could also be undertaken by non-airborne forces.

17. The key judgement in deciding the correct response will be the balance between rapid effect (best achieved with airborne forces) and increased mobility, protection and firepower (best achieved with mechanized forces).⁵⁴ While the CA must be prepared to contribute to all of the CAF's core missions, the benefit of being relatively isolated from conventional land threats is strategic choice in *how* that contribution is made. The next section will therefore examine the utility of three different levels of airborne effort.

Courses of action

Airborne Force Employment Concept One – Remove conventional airborne role

18. Of the three missions which Table 1 identifies as requiring airborne forces, Canadian SOF Command (CANSOFCOM)'s tasks already include NEO and “deter . . . or deny others from the use of Canadian territory”.⁵⁵ Given that “airmobile insertion is considered a general-purpose capability”⁵⁶, it could be possible to use non-airborne forces for disaster relief. As other writers have argued,⁵⁷ the CA could therefore cease to hold any forces in a specific airborne role, concentrating light forces instead on urban operations, which “are expected to become increasingly frequent and will . . . pose the greatest challenges.”⁵⁸

19. Such a decision would align with the approach taken by many of Canada's smaller allies. A number have re-rolled airborne forces to provide support to SOF,⁵⁹ and those with arctic territories are increasingly turning to SOF to assert arctic sovereignty.⁶⁰ However, as US doctrine highlights, SOF “should not be substituted for [conventional forces] that are able to effectively execute that mission”.⁶¹ This is particularly relevant for Canada, given CANSOFCOM's size and the “increasing demands for SOF effects”.⁶² The second course of action will thus explore whether conventional airborne forces could reduce some of those demands.

Airborne Force Employment Concept Two – Niche non-combat roles

20. Building on the analysis in Table 1 above, the second force employment concept would focus airborne forces on the missions where their ability to deploy rapidly and operate immediately thereafter is judged crucial. This would result in airborne forces being held at readiness to reinforce arctic sovereignty, execute a NEO, and support disaster relief.

⁵⁴ *Ibid.*, 1-2-1, 1-2-2.

⁵⁵ DND, *CANSOFCOM Capstone Concept for Special Operations* (Ottawa: DND Canada, 2009), 10, 13.

⁵⁶ DND, B-GL-324-002/FP-001, *Airborne Operations – Airmobile* (Ottawa: DND Canada, 2012), iv.

⁵⁷ Andrew Jayne, “The Future of Canadian Airborne Forces” (Joint Command and Staff Programme Paper, Canadian Forces College, 2007); J. C. Thamer “What to do with the Mass Drop Parachute Insertion Capability” (Joint Command and Staff Programme Paper, Canadian Forces College, 2016).

⁵⁸ DND, *Canada's Future Army, Volume 2 . . .*, 34

⁵⁹ See paragraph 10 and footnote 12.

⁶⁰ Stringer “The Arctic Domain: A Narrow Niche for Joint Special Operations Forces,” . . ., 26.

⁶¹ US Joint Chiefs of Staff, *Special Operations*, JP 3-05 (Washington, D.C.: Joint Chiefs of Staff, 2011), II-3.

⁶² MGen Peter Dawe, *CANSOFCOM Future Operating Concept* (n.p., 2018), 9.

21. The RCMP should have initial primacy for an arctic mission, to avoid militarization and escalation. The requirement for airborne forces to support the RCMP implies no timely access by maritime or air mobile forces: this would thus require a parachute deployment, including the capability to insert RCMP officers (for example, by precision tandem parachute). An extraction capability is also required: either the construction of an arctic temporary landing zone (TLZ);⁶³ or sufficient aerial delivery capability to sustain the force until extraction by helicopter or sea is possible.

22. A NEO or disaster relief deployment could require a mass parachute capability, to overcome runways blocked by debris of conflict or disaster. Once deployed, a NEO is likely to require an infantry-heavy task force to enable protection of entitled persons (EPs), and some form of mobility (ideally protected)⁶⁴ to enable movement of EPs.⁶⁵ Conversely, engineering and logistics capabilities are likely to be in more demand in a disaster relief scenario.⁶⁶

23. The majority of the above requirements could be delivered by giving the light forces in each CMBG a more explicitly airborne role. There would, however, be benefits to consolidating airborne forces into a single CMBG; with light forces in the other brigades being allocated other specialist foci, such as mountain and urban.⁶⁷ This would give clarity of focus, command and ownership of the airborne capability, both within the CAF and to allies.⁶⁸ It would also be inefficient to generate three sets of supporting capabilities such as airborne light armoured and TLZ construction detachments. However, holding the airborne capability in a single CMBG would undermine the balance of the brigades and thus the current readiness cycle. The final course of action therefore considers a more radical approach.

Airborne Force Employment Concept Three – Full spectrum capability

24. Given the potential utility of airborne forces across the CAF mission set, the third option is for the airborne Force Employment Concept to cover the spectrum of conflict, including rapid reinforcement of deployed forces and limited theatre entry. To take on combat missions with a reasonable degree of success would require the ability to deploy a full range of *airborne*

⁶³ This is a non-trivial task for engineers, with both ice and snow runways requiring significant engineering assessment and, particularly in the case of snow, construction. Greg White and Adrian McCallum “Review of ice and snow runway pavements,” *International Journal of Pavement Research and Technology* 11 (2018): 311–320. Nevertheless, Denmark plans to expand its “existing improvised runway construction capability . . . to include operations in the Arctic.” Denmark Ministry of Defence, *Forsvarsministeriets fremtidige opgaveløsning i Arktis* (Copenhagen: Danish Ministry of Defence, 2016), 18.

⁶⁴ The generation of an airborne light armoured capability, based on LAV-II, has been suggested for the US Army. Although Canada’s CC-177 fleet is insufficient to support the battalion level capability envisaged for the US, given that the Canadian Army already uses Coyote and Bison, it could experiment with a small scale airborne light armoured capability (initially air landing, and subsequently parachute) to bolster the mobility, protection and firepower of airborne forces. John Gordon *et al*, *Enhanced Army Airborne Forces: A New Joint Operational Capability* (Santa Monica: Rand, 2014).

⁶⁵ NATO, *Allied Joint Doctrine for Noncombatant Evacuation Operations*, AJP 3.4.2 (Brussels: NATO Standardization Office, 2013), 3-4.

⁶⁶ NATO, *Allied Joint Doctrine for the Military Contribution to Humanitarian Assistance*, AJP 3.4.3 (Brussels: NATO Standardization Office, 2015), 3-1.

⁶⁷ DND, B-GL-300-000/AG-003, *Waypoint 2018: The Canadian Army Advancing Toward Land Operations 2021* (Ottawa: DND Canada, 2015), 55-56.

⁶⁸ Lt Col T. B. H. Otway, *Airborne Forces* (London: War Office, 1951), 385.

combined arms capabilities, including the enhancements listed under concept two plus offensive support and anti-armour capabilities; and to achieve a favourable force ratio on deployment.⁶⁹ Taken together with the reasoning in paragraph 23, implementing this concept would require a fundamental re-structuring of the CA into two CMBGs and one Canadian Airborne Brigade Group (CABG), as illustrated in Figures 3 and 4.





































| CMBG A | CMBG B | CABG |
|--|--|--|
|  |  |  |
|     |     |   ⁷⁰   |
|  x 3    |  x 3    |  x 2    |
|  |  |  |
|  |  |  ⁷¹ |
|  |  |  ⁷² |

Figure 3 – recommended re-structuring of CA: in-barracks

⁶⁹ Paul Syms, *Our Chief Weapon is Surprise: a Quantitative Study of Historical Air Manoeuvre Operations* (Portsmouth West: Defence Science and Technology Laboratory, 2016), 20; DND, *Airborne Operations – Airmobile* . . . , 1-4.

⁷⁰ Pathfinder Company.

⁷¹ Including TLZ construction capability.

⁷² Including aerial delivery capability.














































| CMBG A | CMBG B | CABG |
|---|---|--|
|  |  |  |
| A1   ⁽⁻⁾   | B1   ⁽⁻⁾   | C1      |
| A2   ⁽⁻⁾   | B2   ⁽⁻⁾   | C2      |
| A3     | B3     | |
| A4     | B4     | |

Figure 4 – recommended re-structuring of CA: deployed⁷⁴

25. Comparing these recommendations to the current force structure, it will be noted that there is one fewer infantry battalion. Although further work is required to determine detailed structures for combat support and combat service support units, some additional savings are likely given the reduction in units to be supported. These person years could be re-invested to add resilience across the CA; or alternatively returned to the CAF to build capacity in joint enablers. This latter investment should include a robust deployable airborne medical capability: not mentioned in Canadian airborne doctrine,⁷⁵ but judged essential by allies.⁷⁶

⁷³ The ninth mechanized infantry company could either be used to reinforce the main effort or for rear-area security (during a brigade level deployment); or for resilience (during multiple smaller deployments).

⁷⁴ Combat support and combat service support sub-units would be integrated into each battle-group as required by the mission. Alphanumeric battle-group designations (e.g. A1) are used in the indicative commitments forecast at Annex A.

⁷⁵ The only reference to medical care prior to aeromedical evacuation is: “Medical assistants parachute into the objective area with the sub-units to which they are attached and provide medical assistance to casualties as required.” DND, *Airborne Operations – Parachute . . .*, 5-5-1.

⁷⁶ See, for example, US Joint Chiefs of Staff, *Joint Forcible Entry Operations*, JP 3-18 . . . , V-2; UK Army, *Army Field Manual – Warfighting Tactics – Part 3: Brigade Tactics* (Warminster: Land Warfare Centre, 2018), 2C-10.

26. Annex A includes an indicative commitments forecast, showing how the re-structured brigades could continue to deliver against the *Strong Secure Engaged* concurrency set.⁷⁷ In brief, one mechanized battle-group and one airborne battle-group would always be held at readiness, enabling a choice of the most appropriate capability for each contingency. Each battle-group could either deploy as a whole on the medium non-enduring operation;⁷⁸ or as three company groups on the small non-enduring operation, DART reinforcement and NEO.⁷⁹

27. Given the scale of re-structuring recommended, it is acknowledged that significant further work would be required to confirm future structures and commitments, including second order impacts across the CAF.

CONCLUSION

28. Many of Canada's allies have chosen to retain airborne forces; others have not. Canada too has strategic choice: those missions which Table 1 highlights as requiring airborne forces could be executed by CANSOFCOM. However, this paper has highlighted the benefits of instead enhancing the CA's airborne forces. This course of action would: provide an option to act more rapidly in areas of concern to Canada; enable more balanced CMBGs and more resilient joint enablers; and relieve pressure on CANSOFCOM. It is therefore recommended.

RECOMMENDATION

29. The airborne Force Employment Concept should cover the spectrum of conflict, including rapid reinforcement of deployed forces and limited theatre entry. To enable this, the CA should reorganise to establish a Canadian Airborne Brigade Group, in line with Figure 3. The wider CAF should ensure the availability of adequate joint enablers, including a deployable airborne medical capability; and sufficient air transport capability to deploy and sustain the force.

Annex:

A. Indicative commitments forecast for re-structured CA.

⁷⁷ DND, *Strong Secure Engaged* . . . , 81.

⁷⁸ The headquarters for the medium non-enduring operation would likely be provided by the CABG, assuming that the CMBG headquarters was deployed on one of the medium enduring operations. Elements of the CABG could participate on Ex MAPLE RESOLVE to ensure units and headquarters at readiness had trained together.

⁷⁹ The headquarters for company group deployments would be provided from appropriate unit headquarters within the brigade: for example, the battle-group headquarters for a NEO, or the engineer regiment for a disaster relief operation.

BIBLIOGRAPHY

- Australia. Department of Defence. *Defence White Paper*. Canberra: Department of Defence, 2016.
- Belgium. Ministry of Defence. *Strategic Vision for Defence*. Brussels: Ministry of Defence, 2016.
- . *The Value of the Belgian Defence*. Brussels: Ministry of Defence, 2014.
- Boda, Maj-Gen Dr József. “Future Capabilities of Parachutist, Airborne and Special Forces in the EU/NATO Context” *Tradecraft Review: Periodical of the [Hungarian] Military National Security Service* 2013, no. 2 (2013): 5-17.
- Bond, David. “How Should the State Manage the Contemporary Expectation of Non-Combatant Evacuation Operations?” *The RUSI Journal* 161, no. 5 (2016): 28-35.
- Bulgaria. Ministry of Defence. *Programme for the Development of the Defence Capabilities of the Bulgarian Armed Forces 2020*. Sofia: Ministry of Defence, 2015.
- Canada. Department of National Defence. B-GJ-005-000/FP-001, *Canadian Military Doctrine*. Ottawa: DND Canada, 2009.
- . B-GL-324-004/FP-001, *Airborne Operations – Parachute*. Ottawa: DND Canada, 2013.
- . B-GL-005-000/AC-001, *Advancing with Purpose: the Army Strategy*. Ottawa: DND Canada, 2014.
- . B-GL-007-000/JP-009, *Canada’s Future Army, Volume 2: Force Employment Implications*. Ottawa: DND Canada, 2017.
- . B-GL-300-000/AG-003. *Waypoint 2018: The Canadian Army Advancing Toward Land Operations 2021*. Ottawa: DND Canada, 2015.
- . B-GL-310-001/AG-001, *Land Operations 2021: Adaptive Dispersed Operations – The Force Employment Concept for Canada’s Army of Tomorrow*. Ottawa: DND Canada, 2017.
- . B-GL-324-002/FP-001. *Airborne Operations – Airmobile*. Ottawa: DND Canada, 2012.
- . *CANSOFCOM Capstone Concept for Special Operations*. Ottawa: DND Canada, 2009.
- . *Strong Secure Engaged: Canada’s Defence Policy*. Ottawa: DND Canada, 2017.
- Canada. Government of Canada. “2017 UN Peacekeeping Defence Ministerial Conference: Pledges.” Last accessed on 12 October 2018. <https://www.canada.ca/en/department-national-defence/campaigns/peacekeeping-defence-ministerial/pledges.html>
- . *UN Peacekeeping Defence Ministerial: Report*. Ottawa: Government of Canada, 2017.

- Czech Republic. Ministry of Defence. *The Long Term Perspective For Defence 2030*. Prague: Ministry of Defence, 2015.
- Czech Republic. Ministry of Defence and Armed Forces. “Chief of the General Staff of the Czech Armed Forces.” Last accessed 12 October 2018. <http://www.army.cz/en/armed-forces/organisational-structure/general-staff/chief-of-the-general-staff-57562/>.
- Dawe, MGen Peter. *CANSOFCOM Future Operating Concept*. n.p., 2018.
- Denmark. Ministry of Defence. *Forsvarsministeriets fremtidige opgaveløsning i Arktis*. Copenhagen: Danish Ministry of Defence, 2016.
- DeVore, Marc. *When Failure Thrives: Institutions and the Evolution of Postwar Airborne Forces*. Fort Leavenworth: The Army Press, 2015.
- Dudin, Sam. *The Historical Characteristics of Non-Combatant Evacuation Operations*. Portsmouth West: Defence Science and Technology Laboratory, 2011.
- Gordon, John, Agnes Schaefer, David Shlapak, Caroline Baxter, Scott Boston, Michael McGee, Todd Nichols, and Elizabeth Tencza. *Enhanced Army Airborne Forces: A New Joint Operational Capability*. Santa Monica: Rand, 2014.
- Hungary. Hungarian Armed Forces. “2nd Special Purpose Brigade.” Last accessed 12 October 2018. https://honvedelem.hu/szervezet/mh_2_kulonleges_rendeltetesu_ezred. Translated by Google.
- Jane’s. *Jane’s World Armies 2018*. Coulsdon: IHS Markit, 2018.
- . “Romania Creates New Counterterrorism Unit.” *Jane’s Intelligence Review*, 16 December 2004, 1-7.
- Jayne, Andrew. “The Future of Canadian Airborne Forces.” Joint Command and Staff Programme Paper, Canadian Forces College, 2007.
- Jenkins, Timothy. “The Evolution of British Airborne Warfare: A Technological Perspective,” PhD thesis, University of Birmingham, 2013.
- Keess, Capt John. “Canadian Expeditionary Brigade Groups: A Proposal for Reforming Canadian Mechanised [sic] Brigade Groups.” *Canadian Army Journal* 17, no. 1 (2016): 75-97.
- Lanoszka, Alexander and Michael Hunzeker. “Confronting the Anti-Access/Area Denial and Precision Strike Challenge in the Baltic Region.” *The RUSI Journal* 161, no. 5(2016): 12-18.

- MacDonald, Adam. "The Militarization of the Arctic: Emerging Reality, Exaggeration, and Distraction." *Canadian Military Journal* 15, no. 3 (Summer 2015): 18-28.
- Middlebrook, Martin. *The Falklands War 1982*. London: Penguin, 2001.
- NATO. *Allied Joint Doctrine for Noncombatant Evacuation Operations*. AJP 3.4.2. Brussels: NATO Standardization Office, 2013.
- . *Allied Joint Doctrine for the Military Contribution to Humanitarian Assistance*. AJP 3.4.3. Brussels: NATO Standardization Office, 2015.
- . *Glossary of Terms and Definitions*. APP 06. Brussels: NATO Standardization Office, 2017.
- Netherlands. Ministry of Defence. *Defence White Paper: Investing in our People, Capabilities and Visibility*. The Hague: Ministry of Defence, 2018.
- Netherlands. Royal Netherlands Army. *Army Doctrine Publication, Part II: Combat Operations*. The Hague: Royal Netherlands Army, 1998.
- New Zealand. Defence Force. *The 2015 – 2018 Statement of Intent*. Wellington: New Zealand Defence Force, 2015.
- Odom, Maj Thomas. *Dragon Operations: Hostage Rescues in the Congo, 1964-1965*. Fort Leavenworth: U.S. Army Command and General Staff College, 1988.
- . *Shaba II: The French and Belgian Intervention in Zaire in 1978*. Fort Leavenworth: U.S. Army Command and General Staff College, 1993.
- Otway, Lt Col T. B. H. *Airborne Forces*. London: War Office, 1951.
- Paget, Steven. "Coming Full Circle: The Renaissance of Anzac Amphibiosity." *Naval War College Review* 70, no. 2 (Spring 2017): 113-136.
- Portugal. Ministério da Defesa Nacional, *Defesa 2020* (Lisbon: Ministério da Defesa Nacional, 2015). Translated by Google.
- Shurkin, Michael. *France's War in Mali: Lessons for an Expeditionary Army*. Santa Monica: Rand, 2014.
- Speller, Ian. "The Seaborne/Airborne Concept: Littoral Manoeuvre in the 1960s?" *Journal of Strategic Studies* 29, no. 1 (2006): 53-82.
- Stringer, Kevin. "The Arctic Domain: A Narrow Niche for Joint Special Operations Forces." *Joint Force Quarterly* 78 (3rd Quarter 2015): 24-31.

- Syms, Paul. *Our Chief Weapon is Surprise: a Quantitative Study of Historical Air Manoeuvre Operations*. Portsmouth West: Defence Science and Technology Laboratory, 2016.
- Thamer, J. C. “What to do with the Mass Drop Parachute Insertion Capability.” Joint Command and Staff Programme Paper, Canadian Forces College, 2016.
- United Kingdom. Army. *Army Field Manual – Warfighting Tactics – Part 3: Brigade Tactics*. Warminster: Land Warfare Centre, 2018.
- United Kingdom. HM Government. *National Security Strategy and Strategic Defence and Security Review 2015*. London: Her Majesty’s Stationery Office, 2015.
- United Kingdom. House of Commons Foreign Affairs Committee. *The UK’s response to hurricanes in its Overseas Territories*. London: House of Commons, 2018.
- United Kingdom. Ministry of Defence. *Air Manoeuvre*. JDN 1/16. Shrivenham: Development, Concepts and Doctrine Centre, 2016.
- United Nations, *Civil-Military Guidelines and References for Complex Emergencies* (New York: Office for the Coordination of Humanitarian Affairs, 2008).
- . *Report of the High-Level Independent Panel on Peace Operations*. New York: UN, 2015.
- United States. Department of the Army. *Airborne and Air Assault Operations*. FM 3-99. Washington, D.C.: Department of the Army, 2015.
- United States. Joint Chiefs of Staff. *Joint Forcible Entry Operations*. JP 3-18. Washington, D.C.: Joint Chiefs of Staff, 2018.
- . *Special Operations*. JP 3-05. Washington, D.C.: Joint Chiefs of Staff, 2011.
- Vallin, Victor-Manuel. “France as the Gendarme of Africa, 1960–2014.” *Political Science Quarterly* 130, no. 1 (2015): 79-101.
- White, Greg and Adrian McCallum. “Review of ice and snow runway pavements.” *International Journal of Pavement Research and Technology* 11 (2018): 311-320.

ANNEX A

INDICATIVE COMMITMENTS FORECAST FOR RE-STRUCTURED CA

1. Table 2 should be read in conjunction with Figure 4, which shows the deployable organisation of the re-structured CA; and Table 3, which outlines the concurrent operations required by *Strong Secure Engaged*.⁸⁰

Table 2 – Indicative commitments forecast for re-structured CA

| | | 2020 | | | | 2021 | | | | 2022 | | | |
|-----------|----|------------------|----|-----------|--------|----------------|----|------------------|----------------|-----------|-----------|----|----------------|
| | | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| CMBG A | A1 | Latvia | | | | Readiness | | Brigade Training | | | | | |
| | A2 | Readiness | | | Latvia | | | | | | | | |
| | A3 | I / U | | Readiness | | | | | | | | | |
| | A4 | Iraq / Ukraine | | | | | | | | | | | Iraq / Ukraine |
| CMBG B | B1 | Brigade Training | | | | | | Latvia | | | Readiness | | |
| | B2 | | | | | | | Readiness | | | Latvia | | |
| | B3 | | | | | Iraq / Ukraine | | | | Readiness | | | |
| | B4 | | | | | | | | Iraq / Ukraine | | | | |
| CABG | C1 | Readiness | | Training | | | | Readiness | | | Train | | |
| | C2 | Training | | Readiness | | | | Training | | | Ready | | |

⁸⁰ DND, *Strong Secure Engaged* . . . , 81.

Table 3 – Concurrent operations required by *Strong Secure Engaged*

| Scale | Requirement | Example operation |
|---------------------|--------------------------|--|
| Medium (500 – 1500) | Enduring (Canadian lead) | Latvia |
| | Enduring | Iraq |
| | Non-enduring | Battle-group at readiness |
| Small (100 – 500) | Enduring | Ukraine ⁸¹ |
| | Enduring | Mali (RCAF lead) |
| | Non-enduring | Company group from battle-group at readiness |
| | Non-enduring | Op PROJECTION (RCN lead) |
| Reinforce DART | Non-enduring | Company group from battle-group at readiness |
| NEO | Non-enduring | Company group from battle-group at readiness |

⁸¹ This assumes that a single battle-group can deliver the CA's contribution to operations in both Iraq and Ukraine.