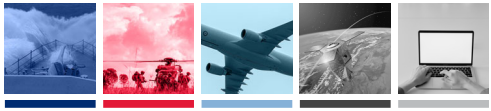
ADF Land Domain Publication



Land Domain Publication - Note

LNote 7.2.2 Olvanan Urban Doctrine and Tactics - Enclosure Warfare

Issued by authority of the Chief of Army.

Publication release approved on 24 November 2025 in accordance with the Army Standing Instruction (Knowledge Management) Part 2 – *Management and Governance of ADF Land Domain Publications*.

EDITION 1

LNote 7.2.2 *Olvanan Urban Doctrine and Tactics - Enclosure Warfare*

Edition 1, 2025

Sponsor: Chief of Army

Accountable Officer: Army G7

Release Authority: Staff Officer Grade One Land Domain Publications

Content Adviser: Commander Army Battle Lab

1. https://www.legislation.gov.au/Series/C1968A00063
2. https://www.legislation.gov.au/Series/C2004A04868
3. https://www.legislation.gov.au/Series/C2004A03712
4. htttp://intranet.defence.gov.au/home/documents/home/publications/policy-documents/defence-security-principles-framework.htm

Preface

1. ADF Land Domain Publications (LPubs) describe the fundamental principles that guide land forces actions, and provide the common frame of reference on how the Army achieves its mission. LPubs are the basis of the Army's training system based on time-tested, proven principles of war, combined with the critical analysis of contemporary lessons. LPubs have been shaped since 1901 by Army's proud history and culture, while being constantly adapted as required, thereby representing the sum of the Army's collective historical knowledge, presented into objective guides for action. In essence LPubs explain and guide *'who we are', 'what we do' and 'how we do it'*.

2. ADF doctrine provides the framework that guides thinking but does not dictate what to do. While doctrine publications are written in a non-prescriptive style that allows latitude in interpretation and flexibility in application, they are specific enough to provide informed guidance. Doctrine is about fighting power and the integration of its three components: intellectual, moral and physical, applied through mission command and our manoeuvrist approach to warfighting.

3. Land procedural publications provide the authorised procedural and technical knowledge required for land forces to achieve their mission. Unlike doctrine, procedural publications convey information covering a range of activities based on best possible practice, in clear detailed steps that, depending on the publication, describe and/or prescribe how to perform specific tasks and drills. Whilst the majority of procedural publications are descriptive in nature, the decision not to follow the guidance contained in the publications should be justifiable. Land procedural publications are aligned and subordinate to ADF doctrine.

4. Land procedural publications include a number of publications that prescribe the procedures for the safe conduct of a range of tasks and activities required for delivering a range of lethal warfighting capabilities. Procedural publications which are safety in nature are written with an expectation of compliance, and therefore do not attempt to prescribe every 'do' and 'don't'. A number of land procedural publications are classified as Landworthiness Regulations

in accordance with *Defence Landworthiness Management System Manual*. **LPubs constitute a lawful general order when written in mandatory terms and apply to all personnel**.

5. **Land Domain Publication - Note (LNote)** is a provisional publication valid for no more than 24 months from its release until it is cancelled, released as an enduring LPub or absorbed into an existing LPub. LNote can be released:

a. as an addendum to an existing land publication

b. to provide additional information of significance in a timely manner to address an emerging issue, an identified lesson, or to satisfy a major/critical knowledge gap

c. as an unscheduled/short notice new publication, published in response to changing strategic guidance, introduction of new capabilities, emerging threats or opportunities.

Aim

6. LNote 7.2.2 *Olvanan Urban Doctrine and Tactics - Enclosure Warfare*, aims to provide an in depth understanding on how the training adversary, known as the Olvanan Peoples' Army, established under the Decisive Action Training Environment (DATE), construct will conduct combined arms manoeuvre in an urban environment.

7. This publication provides philosophical and application-level doctrine on Olvanan urban warfare. It describes the nature and scope of adversary tactics in support of operations. This publication aims to inform commanders and other key personnel about adversary urban operations, and to assist with operational and tactical joint planning; and to contribute to Defence education and training.

Land publication L-Library

8. The ADF Land Power Library (L-Library) is the single access point, and digital catalogue for Army's authorised land power artefacts, supporting resources, including other related publications. In addition to accessing all current and historical publications, the L-Library contains links to ADF doctrine, and other ADF domain publications, as well as approved international partner publications. The L-Library is accessible via Land Domain Publications website.

9. Additional printed copies of Land Publications may be ordered using the Defence Print Ordering Portal which can be accessed via this link: https://printportal/overview.web.

Security

10. This publication contains Australian Defence information for the purposes of the *Crimes Act 1914* (Commonwealth) (the Act) and carries a protective marking in compliance with the Defence Security Principles Framework (DSPF). The publication and the information contained therein must be treated and secured in accordance with that protective marking. All Defence information, whether classified or not, is protected from unauthorised disclosure under the Act and may only be released in accordance with the procedures stipulated within the DSPF. Any requests for release of this publication or part thereof must be forwarded to Land Domain Publications. The publication must not be released to non-Defence agencies or persons without written authority from Land Domain Publications.

This page intentionally blank

Amendment record

1. Amendments to this Land Domain Publication are issued on the authority of the Chief of Army pursuant to Army Standing Instruction (Knowledge Management) Part 2 – *Management and Governance of ADF Land Domain Publications*.

Number	Date of amendment	Authorised by
1.		
2.		
3.		
4.		
5.		

2. All superseded amendment record pages should be retained at the rear of the publication for audit purposes.

3. Proposals to amend this publication may be emailed to: armybattlelab.landdomainpublications@defence.gov.au.

This page intentionally blank

Contents

List of figures

List of tables

Chapter 1

The Olvanan approach to urban warfare – enclosure warfare

1.1 A fundamental difference in how Olvanans think of urban warfare is apparent from what they call it. They do not label it street fighting – they say only fools fight on streets. Sometimes they refer to it as the fight of the short spear. This references a specialised ancient Olvanan weapon for fighting amongst buildings and implies a special kind of combat needing special weapons. Doctrinally they use the labels enclosure warfare and enclosure combat operations which tells us that they see the essence of urban terrain to be confined space. Buildings and blocks of buildings present countless enclosures, and enclosures within enclosures, that conceal and protect. In aggregate they form canyons that concurrently protectively screen troops from afar but envelop them in a potential three-dimensional threat.

1.2 A focus on enclosures frames the military problem differently. The successful commander uses enclosures to 'mask own forces and make them traps and graves for the enemy'. In attack or defence, enclosing terrain needs to be entered or moved through to hide, shelter, reconnoitre, seize or strike. The predictable channelling effect of streets, doorways and windows and risk of 'enclosing ambush' is minimised by not only finding and using, creating unexpected routes and actively concealing approaches. This breaching and searching is an engineering problem; therefore, enclosure warfare is the prime responsibility of the engineers. Furthermore, in the Olvanan language enclosure not only suggests walls that obstruct free movement in the countryside, but also cells or caves, so enclosure warfare also infers subterranean warfare.

Historical background

1.3 The Olvanans describe historical urban warfare as 'warfare in hell' and Confucian faction party members often quote Sun Zhu's dictum that 'to attack walled cities is the worst possible strategy'. They understand that while a protracted defence can impose huge costs, victory may be pyrrhic either way. Their own military history contrasts

with the Western Allies narrative that links stubborn resistance of the Donovians at 1942–3 in Volgograd to subsequent defeat of the Axis powers.

1.4 Most of the heroic Olvanan urban defensive battles of the early 20th century were ultimately defeats in which they lost their best troops to the invaders. The resulting ingrained wariness of the costs of defensive urban battle has only been reinforced by observing how US-allied armies have in recent decades used precision weapons to systematically destroy fixed defensive strong points. The Olvanan People's Army (OPA) commend using urban areas as ideal for a small high-tech force to degrade an advancing enemy, find protection from their fires or even conduct a defence by counter-attacks, but they reject the idea of a protracted fight from fixed positions.

1.5 In contrast to urban defensive disasters, effective offensive urban operations enabled the victory of the Olvanan Communist Party (OCP) in the post-WW2 Civil War. Chairman Cheng Ze's 'rural' preservation of the Red Army, which later became the OPA, by the 'long march' and his doctrine of revolutionary guerrilla warfare is studied beyond Olvana. The way that triumph over the Nationalist Coalition (NC) flowed from seizing and holding cities is less known.

1.6 Initial Red Army attempts to assault cities that were NC strongholds faltered, prompting them to become an explicitly 'learning army'. It developed new doctrine, created urban battle schools and conducted extensive training in previously fought over urban areas. Development included emphasis on envelopment, outflanking, and the concept of focussing on, or secerning, key zones in a city. These were infiltrated and penetrated by smaller independent storm-grupa, with their Trishula storm assault groups using explosive pole charges to blast hidden pathways through buildings. The nature of secerning warfare is captured in this quote:

> *'Killing cattle requires a fatal blow. Jinan's fortifications are strong, deep, and long…. In the campaign with the assault on Jinan, we must seize the vital parts of the enemy, concentration of forces and firepower, killing open a bloody path, going in and striking like a sharp knife, piercing the enemy's heart.'*
>
> ***General Xu Shuyou***

1.7 Increasing Red Army urban assault proficiency delivered victory against well-fortified cities and the kinetic approach became known as the ‘Tianjin pattern’ after that city’s capture in1949. However, in subsequent battles the OCP emphasised soft power in the form of political ‘United Front Work’. In Beijing this ‘magic weapon’ subverted the NC command into surrendering the city. The approach thereafter was called the ‘Beijing pattern’. In the subsequent and war-culminating battle for Shanghai the immediate and future allegiance of the population was a major consideration for the OCP. As Marshal Chen Yi explained: ‘The Battle of Shanghai can be aptly compared to battling rats in a china shop; you must catch the rats and must not break the precious porcelain.’ Their success in both military terms and in persuading the population to defy the NC is believed by the OPA to have flowed from the blending of the two patterns and the great discipline of the Red Army. This understanding is foundational for their current fusing concept.

1.8 Like other militaries, the Olvanans are conscious of the potential cost in time, blood, moral and political legitimacy of clearing a defended city, even with new technologies. They too will seek to bypass, envelop and isolate. They too will strive to limit civilian harm, indeed, they insist that this is vital to achieve enduring political outcomes. However, in contrast to Western militaries, the Olvanans have a developed philosophical vision of how to prevail in an urban fight if they cannot avoid one. Since the imperative is likely to be political, and their strengths are technological they aspire to what they characterise as technical-political combat where technical means not only give advantage in the kinetic fight but operate more directly at the political level which is the fundamental purpose of fighting.

Fused-Masked-Secerned warfare

1.9 The Olvanans have adopted fused-masked-secerned warfare, usually abbreviated to fused warfare (sometimes informally labelled fourth warfare). This is a concept which seeks to exploit Olvanan technological advantages to mitigate the challenges of urban terrain, reduce collateral harm, and for which they claim ideological and ethical superiority relative to the ‘West’.

1.10 Fused warfare is both a stimulate-observe-act response to a complexity theory understanding of cities and a manoeuvrist response to the restraints on firepower and the constraints on physical manoeuvre on urban terrain. It also reflects Olvanan belief of the importance of the cognitive and information domains. As its name suggests, fused warfare merges a range of notions which are explained in more detail below, but the three key ideas are these:

a. Fusing is the notion of preceding and combining kinetic warfare, including 'robotic and intelligent warfare' with non-kinetic forms, especially information warfare and the wider constructs of the three warfares including inciting action amongst populations and the employment of low collateral weapons.

b. Masking is the notion of concealing and protecting own forces by using both less lethal and non-lethal systems such as obscurants and moving in and through the fabric of the urban area.

c. Secerning is the notion of focusing military effort and lethal effects into closely defined areas, separating non-combatants, isolating enemy forces and denying them favourable engagement. It especially exploits remote technologies.

1.11 A solid understanding of the Olvanan concept of fused-masked-secerned warfare needs an overview of the thinking that underpins it.

1.12 Olvanan tactics and operational concepts have long been anchored in Socialist military doctrines that emphasise the offensive with mechanised forces backed by concentration of massive firepower. Typically, in peer-to-peer fighting, this approach has proved effective and ethically justifiable. Influential Donovian military analysis has demonstrated total human suffering and harm is reduced by concentrating violent intensity in time and space.

1.13 Nevertheless, the Olvanans observed the negative international political consequences of the slaughter of civilians when firepower-based methods were used in urban battles in the Caucuses in the 1990s and this began a debate in their professional journals. The way in which the narrative of the urban damage and suffering

inflicted by US assault on Fallujah in 2004, crystallised the Iraqi insurgency and was the trigger for an Olvanan doctrine rewrite.

1.14 Importantly, the Olvanans noted that Western militaries had long lamented that population presence presents an acute ethical, moral and international humanitarian law (IHL) problem that inhibits conventional military action, but had not adjusted their capabilities accordingly. Furthermore, they observed not only that the treatment and fate of civilian populations can have profound strategic impact, shifting attitudes towards the conflict within and outside of the theatre, but that the presence and particularly the induced movement of large numbers of people has operational impact. In seeking an alternative approach, the doctrine developers also set out very consciously to demonstrate moral superiority to facilitate information operations and strategic political goals.

Political soldiers, three warfares and complexity

1.15 The cultural and ideological context in which new doctrine was evolved is important. Olvanan military culture aspires to victory without combat and praises cunning and judicious use of force. The honourable warrior strikes reluctantly, strikes judiciously but then strikes with total force seeking submission.

1.16 Ideologically, the Olvanans understand war as a spectrum of political struggle, which is not limited to the kinetic. From basic training, soldiers are taught that ‘army exists for carrying out the political tasks of the revolution’. This is more than rhetoric. Olvanan soldiers are familiar with being domestically deployed, on not only disaster tasks, but community aid, police support or public relations programs. Furthermore, they expect that in conflict conventional military formations may be required to support non-kinetic tasks such as psychological attack, deception and influence operations.

1.17 Political and non-kinetic roles are operationalised by the presence of political officers: political directors at battalion level and political instructors at company level. While generally political officers have duties that are similar to those of a Western second-in-command, looking after administration and welfare, they have a party-mandated responsibility to step up and take greater responsibility during internal security and public order operations.

1.18 Public order capability is regularly demonstrated in the guise of ‘military counterterrorism displays’ in cities. These are considered the province of the political officers, who often invest great effort and imagination to plan into such training, as this provides excellent opportunities for self-promotion. Consequently, urban terrain is far more familiar to the average Olvanan soldier than in the West.

1.19 The development of urban doctrine coincided with the Olvanan adoption of a high-level concept of three warfares: legal, public opinion and psychological warfares. This construct highlights the role of society and non-military agencies in setting the conditions for a successful kinetic fight. Importantly, because of the presence of people, governments and IT infrastructure, three warfares is largely waged in cities. In the pre-conflict stages before urban areas become physical battlefields, their populations become the influence for battlefields of: legal warfare to provide the basis for launching an attack, public opinion warfare to delegitimise the adversary, and psychological warfare to influence opposing decision-makers and demoralise the adversary.

1.20 The application of the three warfares concept in cities is also related to Olvanan acceptance of complexity theory. They consider large, populated areas to be complex systems whose behaviour is not predictable. There is a need to iteratively stimulate such a system before deciding what actions to take to influence it. Therefore, while three warfares is intended to inflict moral, political and psychological disarray to better allow kinetic warfare to deliver decision, three warfares is also a form of ‘reconnaissance by fire’ against cities. Olvanan commanders pay close attention to behaviour of populations and militaries within cities under the stimulus of three warfares when planning tactical action.

Wage war inside the enemy’s mind

1.21 Of the three warfares, the military focus has been on psychological operations, which is often translated to the Western term, information operations. However, their concept is different. They specify a sustained, wide and deep attack that begins long before conflict and is maintained through and into the post conflict phase. The army’s part is called perceptual and cognitive confrontation – a

construct which they illustrate with the example of how a few thousand Islamic State (IS) fighters swept a much larger, better equipped and trained Iraqi army from Mosul in 2014.

1.22 The Olvanans emphasise that this spectacular psychological victory was not simply the work of a few propaganda specialists, rather it relied on the actions of the individual IS fighters conforming to the narrative plan, thus all soldiers should be prepared to participate in psychological warfare by their actions. Variously, ruthless, heroic and humanitarian acts at the correct time are 'lauded contributions' essential to both military and political victory.

1.23 Recently, when explaining psychological warfare, the Olvanans use the example of the battle of Marawi in 2017 and note both the continued importance of old methods such as loudspeakers, leaflet drops and banners as well as the value of footage captured by soldiers' helmet cameras.

The Orange Jackets

1.24 IHL, political, operational and ethical imperatives require protection of non-combatants. The Olvanans analysts observed first that there is a moral obligation to protect non-combatants, including providing evacuation, shelter and succour of evacuees as well as organising rescues, truces and surrenders. They then also argued that doing so creates political advantage, citing the success of the White Helmets organisation in Syria in advancing a particular narrative. Inspired by this they recommended the creation of an unarmed military medical organisation for humanitarian purposes.

1.25 The Orange Jackets was carefully established to conform to IHL requirements and align with the norms of the military use of the Red Cross/Red Crescent. All members have basic medical and urban rescue training and the organisation is regularly exercised overseas in disaster situations. The officer structure is drawn from those with party connections, including, unusually a high proportion of women. All officers are trained as linguists in at least one language. Reflecting the hazardous nature of the task, the rank-and-file are mostly drawn from volunteers from disadvantaged sections of society who take the opportunity to improve their social credit.

1.26 The organisation represents a powerful tool of strategic influence. While formally part of the military, it has a separate chain of command directly to central party level and has developed an excellent relationship with humanitarian non-government organisation (NGO). It is evident that the Olvanans see great political advantage in 'waging' humanitarian efforts on the battlefield and are sanguine about the risk to the Orange Jackets personnel.

Orange zones

1.27 A key element in the Orange Jackets methods of operation is to proactively propose and support the establishment of evacuee safe and relief areas within the theatre of operations. These will be chosen in conjunction with independent NGO and are unlikely to be sited to blatantly support Olvanan plans or even significantly disadvantage those of their opponents. Part of the potency of the approach is that the Olvanans will achieve benefits whether or not their opponents agree to the safe areas.

Precision and remote systems

1.28 Olvanans expect that the advent of mass precision munitions will change the battlefield as machine guns did in the early 20th century. They offer the means for an Olvanan attacker to destroy enemy fixed urban positions rather than assaulting them, while the reciprocal is that a commander should seek to avoid fighting from fixed positions for more than short periods of time after they are unmasked. In both attack and defence, the Olvanans plan to first destroy the enemy with precision and autonomous munitions at a distance and indirectly, then closer-in emphasising the use of remotely controlled mechanical and kinetic means. (An Olvanan commander is taught to only choose to initiate urban close quarter combat when secerned: i.e. when own forces are relatively protected by the terrain from adversary supporting systems, and the target adversary isolated from that mutual support. Often this will favour defending within structures.)

Information technology infrastructure as an enabler

1.29 While the Olvanans start from the proposition that enclosed terrain conceals and shelters the enemy, they also see opportunity in the opposite direction. The IT infrastructure of the city offers a window

to look and manipulate within. Technical surveillance and penetration of the infrastructure and communication systems of urban areas offers operational and tactical military intelligence for the kinetic fight. Furthermore, systems and networks within a city provide a vector for ongoing ‘soft’ influence operations including misinformation, disinformation and media manipulation operations, especially on social media. These may be overlaid with ‘harder’ electromagnetic deception and interference operations that may include disruption of critical services or infrastructure, applied for either political or tactical purposes.

Three constructs and a concept

1.30 The Olvanan concept for urban warfare is formally labelled for its three component constructs – fusing, masking and secerning. The key notion of fusing is to meld together many, so apart from its specific meaning explained below, it is often used as a shorthand to also infer masking and secerning. (This three-part concept should not be confused with three warfares as explained at paragraph 1.9)

Fusing

1.31 The overarching idea of fused warfare is the integration and continuation of non-kinetic with conventional kinetic operations, especially the three warfares that are waged in adversary cities prior to open conflict. Preceding legal warfare and public opinion warfare strive to trigger political dissent or public disturbances, while prior psychological warfare seeks to overstimulate, deceive, or overwhelm the sensory capacity of human observers and decision-makers. They consider that violent political action by irregular and unconventional actors can deliver particularly powerful psychological blows, even if the material effects are minor. All these actions set the pre-conditions for psychological overload during kinetic combat. The Olvanans consider cities to be ‘complex organisms’ with leaky informational and human systems, so prior non-kinetic stimulation is also intended to generate military, economic and political intelligence.

1.32 Fused warfare also pursues political and ethical advantage by tactically integrating conventional kinetic engagement with non-kinetic and less lethal effects. A key example is the deployment of obscurant capabilities that degrade enemy surveillance and

weapon systems with little collateral damage. However, other systems including the use of incapacitating chemicals may be deployed. Importantly, the Olvanans consider their Orange Jackets humanitarian force to be a very powerful moral and psychological tool of legal warfare and legitimation that will enormously complicate the politics of operations for their adversaries.

1.33 Fusing also operationalises developing new Olvanan concepts. Systems warfare focuses military effort on crucial nodes in the enemy systems, seeking disaggregation of capacity to fight in contrast to the Western focus on the collapse of the will to fight system. Fusing seeks to expose and attack vulnerabilities, in enemy capacity across political, temporal and physical boundaries. It also provides a framework for effectively waging the Olvanans concept of robotic and intelligent warfare which combines the notions of remote, autonomous and artificial intelligence (AI) enabled conflict. While they place great store by their growing ability to deploy high-tech systems in mass they constantly remind their officers that historically victory has not gone to the actor with the most potent technology, but the actor that best applies that new technology, using the (negative to them) example of their own invention of gunpowder.

1.34 Importantly, the construct of fusing does not envisage a single transition to kinetic warfare at one point in time. The Olvanans have analysed the patterns of warfare in recent decades, noting pauses, truces and ceasefires frequently occur. They believe there is massive advantage to be able to switch intensity and continue to pursue political objectives by employing military non-kinetic or less lethal effects, especially but not limited to the Orange Jackets.

1.35 In summary, fusing sets the conditions for the fight, and:

a. emphasises and continues the three warfares initiated before kinetic conflict

b. stimulates populations in urban areas for intelligence and disruption purposes

c. overlays low-collateral effects over kinetic methods

d. maximises both the political and military effect of robotic and intelligent warfare

e. envisages switching between kinetic and non-kinetic or less-lethal effects.

Masking

1.36 The construct of Masking intends to generate uncertainty and ambiguity and reduce the effect of enemy systems by fighting from behind a 'mask'. Masking first emphasises concealment and deception using virtual, less lethal or non-lethal effects that can be readily applied amongst populations without breach of IHL. The Olvanans have noted that while Western use of precision guidance technologies has demonstrated the capability to systematically destroy centres of resistance, this has still required a systematic attritional fight with force elements moving on predictable and therefore vulnerable routes. Masking is intended to restore scope for decisive surface manoeuvre and un-crewed aerial system (UAS). The main tools are:

a. Obscurant deployment (variously obscuring visual, thermal and/or other parts of the Electromagnetic spectrum)

b. Non-lethal (incapacitant) chemical weapons

c. Electromagnetic system attack

d. Millimetric and sonic anti-personnel attack.

1.37 Masking also infers the intention to fight physically protected or concealed amongst the urban fabric whenever possible to reduce vulnerability to precision weapons. In offensive and security operations this involves engineering machinery creating routes through buildings and constructing physical barriers. In the defence this means not only choosing positions that are well hidden and have excellent protection but employing capabilities and techniques that allow engagement without detection using remote sensors and weapons. Unmasking of weapons is delayed and from positions that conceal signature and are difficult to strike. In the offence, capabilities and techniques allow force elements, including armoured platforms, to move through, in and engage from urban structures.

1.38 Finally, since the Olvanans emphasise that all manoeuvre warfare first targets the mind of the commander, they portray masking as a psychological envelopment and assault.

1.39 In summary, masking reduces vulnerability, it:

a. uses virtual, less lethal and non-lethal effects for concealment and deception

b. exploits well protected structures and engagement while remaining hidden

c. manoeuvres soldiers and platforms within urban structures and behind barriers.

Secerning (discriminating, differentiating and isolating)

1.40 The Olvanan term *alag kanara* (from Hindi) has been variously translated as to segregate, excise, cut out, differentiate or partition off. Importantly, as used by the Olvanans it conveys notions of moral discrimination, geographic separation, denial and distinguishing in thought. It approximates to the English term secern. In military use, the term secerning indicates intention to concentrate both effects and forces selectively on limited areas of the urban battlefield, to avoid attritional engagement, limit harm to non-combatants, exploit urban segmentation and defeat by tactical isolation and excision.

1.41 The Olvanans describe cities as ‘blood sponges’. For ethical and practical reasons, they seek to minimise urban combat and the harm suffered and inflicted. Their concept of secerning, as focus, is key. It is above all about focusing military effort into limited areas. They recognise both that it may not be possible to bypass cities and no army can dominate more than a small part of a modern city, whether attacking or defending. Decisive effect requires concentration and selectivity and they seek to minimise urban operations by minimising which parts they operate in. They seek to manoeuvre in undefended or weakly defended terrain and concentrate effects where the enemy is or might threaten from.

1.42 Secerning also expresses the Olvanan notion of striking selectively, central to their idea of system destruction warfare, that is, targeting the systems that enable adversaries to fight. In the urban context this emphasises the particular enemy systems that will most threaten on plans. It also relates to their principle of choosing the first battle carefully, guiding the commander to strike very hard initially to set the psychological preconditions for subsequent engagement.

1.43 Protection of non-combatants is a moral as well as a political imperative. Under the label of secerning, as discrimination, the Olvanans give high priority to measures such as identifying safe areas, acknowledging protected structures and working with organisations like the International Committee of the Red Cross (ICRC) to enable evacuation and shelter. Secerning is discriminate but should not be mistaken for hesitation or restraint. A central idea is that having prioritised non-combatant welfare and discrimination in where they fight, they can ethically locally apply overwhelming force. Furthermore, and of increasing importance, is the relationship of secerning to autonomous lethality.

1.44 While Western armies have invested massively in meeting the political requirement that humans retain targeting control, the Olvanans have taken a different approach. Arguing that as conflict is increasingly waged in the electromagnetic spectrum, humans offer neither necessary reliability nor speed of lethal control. Indeed, they have conducted extensive experiments that have demonstrated quite convincingly that while artificial intelligence makes occasional costly errors it is far better than humans at rapidly making a decision about whether a target is a legitimate one or not. Their conclusion is that autonomous lethality is essential but must be temporarily and spatially constrained. Crucially, this position is presented as not simply satisfying utilitarian ethics and least harm, but also as consistent with moral obligations to secern (derived from Hindu scriptural sources), especially when combined with providing opportunities for enemies to surrender and non-combatants to escape.

1.45 The Olvanans have assessed the historical imperative to immediately clear and secure all parts of an urban area is not only no longer feasible, it may also be redundant. Secerning as isolation of the battlefield describes how forces with suitable sensor, robotic and autonomous systems can dominate streets and open spaces in three dimensions across a wide area and this will constrain undetected enemy manoeuvre. Where enemy in strength are located, they can be destroyed with precision weapons. This reduces the threat from stay behind or infiltrating forces to acceptable levels. Legitimate imposition of a curfew beyond the areas they immediately control becomes feasible in the context of Olvanans conducting a combination of humanitarian and security operations in unoccupied areas.

1.46 Secerning is also understood as denial of combat on unfavourable terms. In particular the Olvanans prefer to avoid assaulting prepared defensive positions by employing precision munitions, physically reshaping the battlefield to obstruct fields of fire or view or creating alternative manoeuvre routes and outflanking enemy to threaten their withdrawal routes. They recognise urban terrain disrupts their principle of achieving overwhelming advantage in numbers, so they concentrate overwhelming effects. Similarly, in defence the concept is to fight while remaining concealed and protected, emphasising defiladed position and remote attack. Given precision munitions, defenders should relocate once detected.

1.47 In summary, secerning seeks to be selective, and to:

a. focus military effort, especially effects, into limited areas

b. proactively separate and shelter non-combatants

c. isolate urban terrain to constrain enemy manoeuvre

d. maximise the moral, technical and psychological effectiveness of robotic and intelligent warfare

e. deny unfavourable engagement (eg. assaulting or relying on fortifications).

Summary

1.48 The Olvanans declare fused warfare an aspirational idea that looks forward to how they intend to fight when their developing technologies are mature. Importantly, while it anticipates emerging methods of fighting, the doctrine described below indicates how they intend to implement this concept using existing systems. The future employment of emerging technologies, for example directed energy weapons, are envisaged as overlaying and enhancing existing capabilities.

Chapter 2

Prior operations and fused warfare preparation

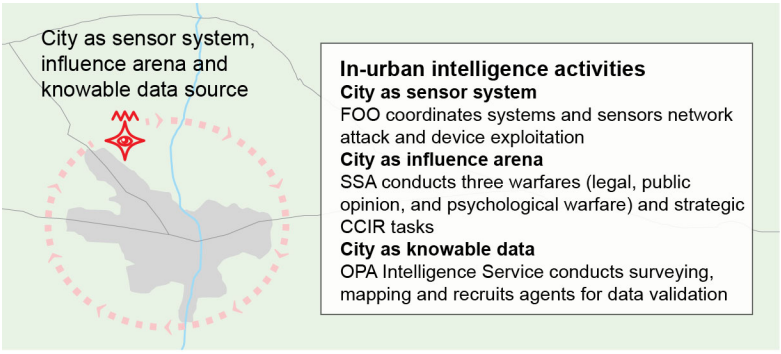
2.1 In the Olvanan political understanding of war, actions taken before hostilities fundamentally determine their conduct and outcome. They may even avoid the need to fight at all. To minimise or avoid the political and military cost of a fight in urban areas the Olvanans conduct prior operations.

2.2 Prior operations occur before the outbreak of kinetic hostilities and/or before the commitment of a formation to attack or defend an urban area. They are executed in pursuit of both political and military objectives. While prior operations shape conditions well beyond urban terrain, because they are executed through human and technological networks within urban areas they are considered part of enclosed operations.

2.3 Prior operations range from political intelligence actions that the OPA will have no visibility of, through to applied activities such as the provision of highly detailed 3D mapping.

2.4 The quite distinct Olvanan approach to preparing for operations in urban areas is illustrated by how they portray cities as the optimum environment for intelligence services to contribute. As indicated schematically in Figure 2.1, they intend to use urban terrain as a sensor system, and influence opportunity and a source of vital data.

Figure 2.1: Intelligence activities during prior operations



Relationship between three warfares and fused warfare

2.5 The Olvanan concept of three warfares, (legal, public opinion, and psychological warfare) highlights how their understanding of war extends before and after kinetic exchange and is explicitly political. It is necessarily mainly waged in cities because people, governments and IT infrastructure are located there, but this has practical implications. In the Olvanan view, the speed and cost of enclosure operations can be greatly influenced by prior waging of public opinion and psychological warfare well before any shots are fired. These activities are planned at a high level and are the responsibility of the Strategic Integration Department (SID).

Strategic integration of three warfares

2.6 A three warfares campaign is executed as a 'line of operation' towards strategic level objectives and any offensive military operations occur on a parallel line. Because strategic outcomes are conceived in political terms, the outcomes of three warfares are expected to have comparable significance to military options rather than being a mere supporting effort. Successful waging of three warfares can deliver the political outcome with little or no kinetic combat.

Operational integration of fused warfare

2.7 In contrast, fused warfare is understood as integrating non-kinetic effects towards the military commanders own operational objectives. Nevertheless, because the Olvanan consider large, populated areas to be complex systems whose behaviour is not predictable, they understand that the conduct of three warfares has important tactical effects as an informational form of ‘reconnaissance by fire’ against cities.

Key features of prior operations

2.8 Prior operations of all kinds support, enable and deliver fusing. The military purpose of prior operations is to set and confirm the conditions for successful enclosure operations by achieving both psychological ascendancy and an information advantage: to ‘shape the population and to see the city’. They have the following features.

Operational fusing

2.9 The military purpose of fused warfare, and its notion of melding of virtual and physical battlefield, is to minimise the opportunity for an enemy to exploit protection and concealment advantages while concurrently shaping the battlefield to Olvanan advantage. The Olvanans recognise that conventional military reconnaissance of urban areas is difficult, slow, at high risk of being compromised (even when populations are sympathetic) and troops on foot can typically only reconnoitre small areas. Un-crewed systems will not completely overcome these limitations.

2.10 Overhead technical collection and human intelligence (HUMINT) continue to have important roles, but within enclosure warfare the Olvanan’s focus is exploiting their niche technological edge to collect from the infrastructure and networks within urban areas. This effort begins long before conflict and exploits unique opportunities for both ground-level technical collection and information warfare.

Active measures and information attack

2.11 Information warfare, HUMINT and technical operations against an external national information infrastructure are executed by a variety of government agencies, but coordinated by a section of the

Fused Operations Office (FOO) of the SID. This arrangement exploits the highly developed social surveillance capabilities of the Ministry of the Interior and the messaging capability of the Ministry of Public Information. They have invested heavily in creating national information infrastructure electronic backdoors into internet, phone system and domestic security infrastructure.

Network attack and device exploitation

2.12 The personal devices and electronic systems of all kinds belonging to the civilian population are considered a primary enabling tool for not only maintaining situational awareness within urban areas, but, by pattern monitoring and various other technical means, locating defenders and defences. Olvana has also invested heavily in the technical means to intercept feeds from and conduct remote control of smartphones and similar tools. They have widely distributed one version of a popular social media application that can be secretly accessed to obtain Geo-located images. Another version has an apparently innocuous ‘pin-marking’ feature that can be used to identify targets and apply fire onto them, transmitting data in disguised form with short persistence.

2.13 Yet another initiative exploits the ubiquity of security cameras, and Olvanan agents working for front businesses covertly tap into or install surveillance systems in cities across the region. When remotely activated, these use existing power supplies and disguise transmission amongst the background level of electromagnetic emissions to provide a real-time picture of activity at important nodes.

Olvanan intelligence services

2.14 The human terrain of cities provides greater opportunities for Olvanan agents to ‘swim amongst the sea of the people’. The State Security Agency operates at the strategic-level and might incidentally conduct HUMINT operations against high value targets in an OPA objective, but this is unlikely to be coordinated with the offensive. In contrast, the focus of agent recruitment operations by the OPA intelligence service, is long-term recruitment of agents to conduct low risk ‘validation’ collection which can then be used to triangulate against feeds from sensors and systems in the city, noting the very significant potential for enemy deception against these.

Information effect fusing elements

2.15 Key to operationalising fusing are information-effect fusing (IEF) teams and cells. These comprise, urban planners, reticulation engineers and other similar specialists from relevant government departments, OPA staff officers with impeccable OCP credentials and military communication soldiers. IEF teams, which comprise about 30 military personnel plus non-uniformed specialists are deployed to the higher level headquarters responsible for the overall enclosure operation. IEF teams can be broken down into section sized IEF cells, which are deployed forward to form Fused Warfare Control Elements (FWCE) at brigade or detachment level. If shortage of time or other factors preclude forming FWCE the IEF Cells will be embedded with brigade or Integrated Fires Command (IFC) command posts (CPs). In the field IEF teams are administered by a support platoon from the Asymmetric Warfare Brigade. At other times they are based at the FOO of the Strategic Information Department (SID) in the capital.

Virtual mapping and modelling: Enclosure-world

2.16 The anchor of fused warfare is a machine-intelligence driven virtual mapping modelling and simulation tool known as Enclosure-world. Starting from geospatial data and supplemented by both open source and on the ground Global Positioning System (GPS)/GLONASS/BDS surveying, the Olvanans have a three-dimensional exterior surface model of every urban area in the region down to a resolution of 20 cm. In many cases accurate interior and subsurface layouts have been incorporated, and even when original data is not available, the software generates remarkably reliable estimates.

2.17 Enclosure-world models have a low classification, are transferable and portable and can be updated in the near real-time, either by users in isolation or by shared feeds. The raw unpopulated model is loaded as a navigation tool into soldier's personal devices, vehicles and, especially, un-crewed platforms and weapon systems. The model can, optionally, be automatically updated while devices are in a passive condition, and a wide variety of data layers can be superimposed. Software packages provide decision support to soldiers when they select hides, routes, engagement positions and

killing areas, taking into account intervisibility and what is known about enemy deployments. The system is not only capable of mission rehearsal, but has a range of games that encourage soldiers to practice moving and operating systems in the virtual world.

2.18 While the base data models that comprise Enclosure-world have a low classification and are widely distributed across systems, the tactically updated and populated versions are recognised as being extremely sensitive. Conscious of the risk of catastrophic failure if flawed data was fed into Enclosure-world, the Olvanans have deliberately returned to an archaic security approach and transfer some classes of data physically, with data storage devices being treated and distributed as priority combat supplies.

Orange Jackets

2.19 The political and practical effectiveness of the Orange Jackets rests largely on relationships and perceptions that they establish prior to hostilities. To this end they carefully choose visible opportunities to deploy Orange Jacket relief and rescue teams to disasters and as neutral parties to other conflicts. However, it is fundamental to their concept of employment that they are internationally trusted and perceived as a genuinely humanitarian entity. They make no pretence of being non-partisan, but they are scrupulous in avoiding behaviours that might be considered intelligence collection.

2.20 The Orange Jackets have developed excellent working relationships with a variety of international NGOs, and they have been at the forefront of conducting international humanitarian planning exercises focused on the protection of civilians during armed conflict. Many international organisations participate in the annual three-day humanitarian exercise in an Olvanan city, where OPA forces act as belligerents on both sides and the population play their role.

2.21 Orange jacket liaison teams are routinely deployed to any areas where the OPA operate, however the deployment of substantial numbers of personnel and equipment to a theatre before hostilities will be significant. It will be a considered and overt political signal and integrated into political warfare messaging.

2.22 Prior operations will occur in the context of ongoing strategic level three warfares, as well as a variety of intelligence and surveillance operations, but the conduct of these will not directly concern military commanders or organisations. During prior operations, the requirements of enclosure operations will add three groupings to routine planning and preparation:

a. *Information effect elements.* Information effect fusing teams are deployed to, and embedded within, selected formations. The fusing cells will liaise and conduct rehearsals with subordinate CPs.

b. *Enclosure-world support teams.* Teams tour formations supporting training exercises, simulations and rehearsals to reinforce capability. Within units, the playing of virtual games based within the Enclosure-world environment is encouraged.

c. *Orange Jackets.* Where circumstances allow, Orange Jackets liaison officers may be deployed to engage with NGO while units may be prepositioned in theatre.

2.23 The main activities conducted during Prior operations are summarised at Table 2.1.

Table 2.1: Key activities during prior operations, both in-urban and in-theatre

In-urban activities	In-theatre engagement activities
FOO Covert installation of surveillance systems and sensors Physical backdoors to mobile and internet infrastructure Collection from personal devices, dissemination of software **SSA** Public opinion operations (information operations) Psychological warfare shaping actions/activities Agent reconnaissance (strategic CCIR tasks) **OPA intelligence service** Human network development (for data validation) Detailed three-dimensional digital terrain survey GPS/GLONASS/BDS terrain mapping Establish EW baselines	**Information Effect Fusing elements** Embedded with selected formations **Enclosure-world support teams** Tour formations and conduct activities **Orange Jackets** Relationship development with NGO Opportunistic relief and rescue Deploy liaison teams to theatre

Chapter 3

Overview of urban offensive operations

3.1 The Olvanans are acutely conscious of the defensive advantages of what they classify as enclosed terrain. Like other militaries, they will seek to bypass and isolate. However, they have recognised that urban offensive operations may be unavoidable and will be both more difficult and more likely if they are not prepared to execute them.

3.2 The concept of fused-masked-secerned warfare, the doctrine of enclosed operations and the development of enclosed operations capability are an explicit response to the urban challenge and intended to avoid either the delays and military costs of protracted offensive operations, the political cost of being perceived as the agent of widespread destruction or the difficulties of controlling and administering large civilian populations.

3.3 Pre-shaping is foundational to the Olvanan concept of enclosed warfare and occurs both in prior operations before hostilities commence and then during toward-enclosure operations, meaning those taking place in the vicinity of urban terrain. Olvanan doctrine not only seeks to shape the urban environment to minimise the inherent advantages of the defender, but also to give OPA commanders maximum flexibility of options ranging from the conceptually simple situational (quick) attack that takes advantage of opportunity, through to highly tactically and technologically integrated techniques to overcome well-prepared defences. This doctrine is applied at the tactical level, which is to say between section and brigade level.

Types of tactical offensive urban operations

3.4 There are four types of offensive tactical urban operations; toward-enclosure operations and three types of attack. Stability and control operations are not formally offensive operations but they are typically integrated into the exploitation stages of an offensive and so are briefly described here.

3.5 Toward-enclosure operations – this describes the various reconnaissance, preparatory, disruption, picketing, cordoning and envelopment operations that set the conditions for either an urban attack or a bypass.

3.6 Urban attack operations – this describes kinetic operations to seize urban terrain or destroy or expel enemy on that terrain:

a. The situational/opportunity attack – is launched into an urban area without delay and with limited regrouping.

b. The dispersed attack – is executed by multiple smaller combined arms teams manoeuvring on separate axes, concentrating at a decisive point.

c. The integrated attack – is conducted by regrouped and rehearsed combined arms teams that are tailored to task and fight fully integrated with joint effects.

3.7 Integrated and dispersed urban attacks require regrouping into tailored task-organised detachments, usually based on battalions or companies. Such attacks will occur within a larger formation-level framework.

Stability and control operations

3.8 Stability operations are those conducted to control, manage and provide relief to civilian populations. A central tenet of fused warfare is to only exert military control over urban terrain when this is vital and only for as long as essential. The Orange Jackets organisation are assigned responsibility for stability operations in such areas, supported in the first instance by the Olvanan People's Armed Police (OPAP). By default, the Olvanans will assign 'open' or 'orange' areas in conjunction with international NGO and IHL entities. This is a development of the historical concept of the open city applied in one or more subsections of an urban conurbation. The Olvanans will propose such areas, seek to negotiate the withdrawal of enemy forces from there and not deploy OPA elements within them if they are established. Importantly, they will regard armed action from within an orange area as perfidy and state as a matter of principle and policy

they will respond with maximum force with the consequences for non-combatants being the responsibility of the commander who breached the convention.

3.9 Control operations are those to maintain security over defined zones. They consist of:

a. Cordon operations which limit movement in and out of a defined area to control points. Importantly, in Olvanan doctrine, isolation may be imposed by methods that include autonomous weapons systems and antipersonnel mine fields, provided these are marked.

b. Proved zones are those where sensors, persons or dogs have verified the absence of unconcealed threats in tactically significant interior spaces from which an enemy might substantially threaten the mission, it implies accepting risk.

c. Searched zones are those where sensors, persons or dogs have thoroughly verified all interior and adjacent spaces of the structure, including for nominated concealed threats.

d. Contained zones which are monitored to deny access and detect overt enemy activity.

3.10 Stability and control operations are subjects of separate doctrine. Offensive operations will often have area control as an objective for the concluding stages of an attack. Area control is the precondition for control operations or stability operations.

Operation-level aspects

3.11 Olvanan doctrine specifies three operational-level purposes for an attack: to seize, to destroy or to expel. The planning and conduct of the attack at the divisional task group level or above on urban terrain does not substantially change: the formation of enclosure detachments and the use of enclosure warfare doctrine occurs at brigade level and below. However, at formation level purposes are applied with different emphasis.

Attack to seize

3.12 An attack to seize is an operation designed to gain control of key terrain feature or facility. The distinctive Olvanan notion of urban seizure is to manoeuvre through and occupy weakly held or undefended urban terrain from where control can be exerted, or the defence rendered untenable. An urban seizure should avoid assaulting intact prepared defensive positions. If such positions cannot be neutralised and bypassed such an attack would be the objective of one or more localised attacks to destroy.

Attack to destroy

3.13 An attack to destroy is mounted against prepared defensive positions and is primarily achieved by conducting a ‘strike’ using large precision guided munitions or demolition un-crewed ground vehicles (UGVs) that can reliably collapse buildings. Unlike practice in Western armies, ‘destruction' of an objective with very heavy (annihilation) levels of artillery firepower remained, albeit little used, in Olvanan doctrine after World War II. While this is now considered undesirable for ethical and collateral reasons, it is still preferred to conducting protracted assaults.

Attack to expel

3.14 To avoid either attritional urban combat, leaving an enemy occupied urban area in the rear of an advance, or, especially to avoid combat amongst civilian populations, Olvanan’s may mount an attack to expel. The intent is to systematically isolate areas without decisively engaging but progressively threatening the enemy’s scope withdraw, while demonstrating that they will destroy in detail. A withdrawal route may be deliberately left open. The focus of such an attack is to dominate the road network and open terrain emphasising the use of UAS and UGV.

Operational level functional organisation and conduct

3.15 Excepting situational attacks, the Olvanan expect to plan and execute even relatively small-scale enclosure operations at brigade level or higher in order to leverage fusion of influence, information and

effects. The Fusion cells that enable many of the features of enclosure operations require the assurance of systems and networks that are not available at a lower level.

3.16 If an advancing formation is given tasks on urban terrain it will typically allocate as follows:

a. First echelon formations, units and subunits form forward detachments to envelop, cordon, seize or strike or execute a situational attack. They may be reinforced by formation assets such as an (engineer) movement support detachment but will not otherwise delay to regroup.

b. Second echelon formations regroup into task-organised detachments to conduct an enclosure attack. Whenever possible, this includes specialist elements from the Asymmetric Warfare Brigade. As explained in detail later in this document, Robotic Reconnaissance, Robotic Vanguard or chemical (smoke) subunits will typically be attached to the leading battalion detachments (BDET). Subsequent BDET that are tasked to execute deliberate operations within the urban area will similarly have specialist engineer or firepower subunits attached. Enclosure warfare doctrine has been written to reflect the mechanisation of the OPA. However, the Olvanans recognise that if extensive dismounted combat is required the capabilities of most of a unit mechanised infantry platforms may not be exploited. If the mission calls for clearing dense defended areas of continuous buildings the Olvanans will seek to employ airborne or high mobility marine units integrated with robotic support elements and engineers. Where securing substantial areas of urban terrain of uncertain status but modest threat is part of the operation, the preference is using motorised rather than mechanised units.

c. BDET level reconnaissance will likely be integrated with formation level reconnaissance elements to form reinforced combat reconnaissance patrols rather than two levels operating independently. This reflects the increasing risk of ambush and isolation as an advancing force approaches urban terrain. Reconnaissance towards an urban perimeter is organised at the formation level.

The operational level approach to offensive urban operations

3.17 The concept of fused-masked-secerned warfare provides the overarching framing for Olvanan conduct of offensive urban operations. The construct of fusing implies prior investment in technical and human probing to determine what is occurring within an urban area, shaping the population in advance and locating the enemy. Masking highlights the need to protect manoeuvring forces, while secerning indicates the requirement to focus to segment the urban battlefield, excise enemy locations, exploit less defended terrain and separate non-combatants.

3.18 These three constructs link closely to three other important Olvanan ideas: the notion of disruption and the tension between seizing opportunities with alacrity and the need for regrouping and task organising.

Disruption

3.19 The first of these ideas is that when attacking a built-up area, strive to disrupt enemy preparations for its defence. The benefits of achieving this justify significant risk and expenditure of resources. Olvanans note that most historical urban battles where the defender has not prepared are decisive victories for the attacker. There is likely to be high payoff for engaging a defender before or as they are channelled and concentrated to withdraw into urban terrain. The concept of fusing expands this engagement from the kinetic, so that in populated areas a preferred planning option will be to confound the enemy's plans with the behaviour of the civilian population. The influence methods may include direct operations by agents of influence, including within political organisations and NGO, cyber-attacks and social media operations.

Alacrity

3.20 The second of the notions is alacrity. The Olvanan's believe that a window of opportunity exists for a limited period before an urban defence is established in which it is unlikely that defensive weapon systems will be fully sited, coordinated and concealed. The movement of either civilians or withdrawing forces is likely to mean that minefields and remote weapon systems are unarmed. Under these conditions an immediate opportunity attack, while it may suffer casualties, is likely to be cheaper than a deliberate assault later.

Deliberation and tailoring

3.21 The third idea, which is in direct tension with the second, is the need for deliberate tailored regrouping and detailed planning of all element's actions. The Olvanans have long understood the need for combined arms to concurrently execute many distinct tasks in order to prevail in the attack. In particular, to obtain mutual support between elements in constricted terrain demands that such teams be formed at the very lowest level. Furthermore, from observing recent conflicts, the Olvanans assess that attacking a prepared urban position is akin to fighting in a minefield. Since most urban terrain offers hasty defensive positions, it should be treated as a continuous obstacle. Consequently, their tactics reflect their obstacle crossing doctrine of isolate, secure, penetrate and execute.

3.22 At the formation level, the construct of tailoring drives troops-to-task. There is a priority on engineers, and of course the employment of the specialist Asymmetric Warfare Brigade, however beyond this there is both a requirement and an opportunity to use dismounted forces. The sophisticated platforms of first rate troops have capabilities that offer no great advantage in urban terrain and in many cases the proportion of dismounted troops is low. For offensive operations, the Olvanans regard the ideal force composition, beyond engineering and specialist capabilities, to be mechanised brigades paired with motorised or high mobility brigades, with the possibility of supplementation from even reserve or militia formations for subsequent security operations (which also assumes OPAP expeditionary element involvement).

This page intentionally blank

Chapter 4

Toward-enclosure operations

4.1 Toward-enclosure operations are those conducted towards urban terrain ahead of main forces with the purpose of setting the conditions for an attack, bypass or cordon. They occur on a scale of days to hours before the main formations come within direct fire range of the urban perimeter and are likely to mostly occur beyond the range of Olvanan artillery.

4.2 The wider Olvanan whole of government effort of three warfare generally and the continued activity of the OPA intelligence service as described above under prior operations continues and is integrated. These activities, their support by special purpose forces (SPFs), the extensive use of robotic and remote platforms and the beginning of Orange Jacket activities seek informational and psychological dominance.

Key features of toward-enclosure operations

4.3 During toward-enclosure operations, command and control and reconnaissance elements have crucial functions.

Information-effect fusing and forward C3

4.4 The heart of the Olvanan concept of fused warfare is the synthesis of information and effects, kinetic and non-kinetic, to enable secerning of the urban battlefield. Building a command system is always the starting point for Olvanan offensive (and defensive) operations. This integration is enabled by two levels of organisation. First, the 30+ person IEF teams and cells from the whole of government FOO that are embedded in the task force (divisional level) headquarters responsible for the enclosure operation. Second, the section-sized FWCE. How they are deployed reflects the time available to reorganise.

Integrated attack

4.5 An integrated urban attack involves specialist reinforcement and regrouping. A crucial component are the FWCE. These are self-contained with the C3 systems to first provide comprehensive urban planning and situational information to the commander and the supported unit, principally in the form of real-time Enclosure-world data. Superimposed on this is lethal secerning the capacity to selectively coordinate and control lethal engagement by remote and semi-autonomous systems within the urban area. The FWC, including attached IEF cells, are deployed from the Asymmetric Warfare Brigade to reinforce the relevant Brigade Base CP, or possibly Battalion Enclosure Detachment (BEDET) HQ.

4.6 As early as possible, the FWC are deployed forwards to where they can provide continuous control for all phases of the urban battle. This will often be the Brigade Advance CP. As they have a critical role and is a signature for an enclosure operation, the Olvanans will make particular effort to conceal its location, typically keeping it small, dismounting it into a building, using fibre-optic remoting and employing extensive deception measures. Wherever possible there will be at least one duplicate FWC, and where this is not available IEF cells will be deployed to other subordinate CP as is done for situational attacks as below.

Situational attack

4.7 Because of the decisive value of the data coming from multiple sources within the urban area, the Olvanans will seek to achieve a fusing effect for a situational attack, even when it is conducted with insufficient time for regrouping or deploying an FWC. To achieve this, the small cells from the IEF will be attached to either the CP of the primary Brigade in which case that CP is known as an IEF-CP or, preferably, the cells are attached to an Integrated Fires Command CP (IFC-CP) formed by the Divisions artillery headquarters and is then known as the Fused Integrated Fires Command CP (FIFC-CP).

Reconnaissance, intelligence, surveillance, and target acquisition – electronic warfare

4.8 The Olvanans recognise that, other things being equal, sophisticated sensors and precision munitions favour the defensive. Because urban terrain provides an ideal environment for ambushing, ground reconnaissance and leading elements are vulnerable to being isolated and destroyed piecemeal. Defender use of remote and autonomous weapon systems is likely to compound this threat.

4.9 The Olvanan response to this challenge, fused warfare emphasises reconnaissance, intelligence, surveillance, and target acquisition – electronic warfare (EW) in both capability and doctrine. Furthermore, they anticipate that battle will increasingly commence with reconnaissance/counter reconnaissance engagements waged between robotic and autonomous systems on both sides and the outcome of this struggle will largely dictate the protagonist's subsequent freedom of action.

4.10 Prior operations provide the basis of information advantage, with intensive technical surveillance presence well ahead of overt military forces, but this is mostly executed by organisations outside of the OPA. The OPA reconnaissance, intelligence, surveillance, and target acquisition – EW effort in toward-enclosure operations superimposes five elements:

a. First reinforce established technical surveillance to maximise collection from the pre-placed systems, including physical penetration and EW systems.

b. Second, draw on a range of overhead sensor products, especially 'change/disturbance' imagery to inform decisions about manoeuvre routes and further reconnaissance effort.

c. Third, exploit a range of remotely operated and autonomous UAS for target acquisition.

d. Fourth, deploy, using UAS, a range of UGV and sensors to picket urban approaches.

e. Fifth, throughout, employ counter unmanned aerial systems and counter unmanned ground vehicle.

Special-purpose forces and technical warfare

4.11 During the toward operations phase, the training, equipment and doctrine of the SPFs emphasises operating clandestinely on the periphery of urban areas conducting technical warfare and remote operations. The Olvanans recognise a high risk of compromise when traversing extensive populated urban terrain and that undetected reconnaissance by surface infiltration of overt forces in small numbers will rarely be feasible. The risk of detection, isolation and destruction should be mitigated by waiting until other offensive operations are occurring before penetrating. (Covert operations are not a special purpose force (SPF) responsibility; however, they may provide insertion support for operators from other government agencies.) As a result, the SPF initially focus on what they call urban stand-off reconnaissance and Technical Penetration. This reflects both the higher command priority for fused situational information from within the urban area and the value of that information for their own subsequent operations.

Enclosure stand-off reconnaissance

4.12 To conduct stand-off reconnaissance the SPF have adopted small semi-autonomous terrain-avoiding UAS that can largely remain below the counter unmanned aerial system detection and engagement envelope. To support the Asymmetric Warfare Department technical collection and information warfare operations the SPFs have formed Technical Penetration elements within their SPFs. Their capabilities include systems for physically and virtually penetrating communications in addition to deployable systems that will emulate mobile phone relay towers to permit intrusion of networks. As well as collection, these tools give the Olvanans the scope to masquerade as existing media or conducting overt public messaging.

Support to subsequent operations

4.13 After responding to initial RFI from commanders, the likely focus of SPF reconnaissance is preparation for their subsequent operations (those after the toward-enclosure phase). These may include SPF distraction operations in support of attacks or raids into urban areas that have been bypassed and cordoned off. The

Olvanans place great value on observation from elevated vantage points during operations. They may endeavour to infiltrate surface SPF teams for this task but will not consider doing so without extensive prior reconnaissance of routes. They can also be expected to reconnoitre subsurface systems (Enclosure-world provides information on the reticulation and other subterranean features), seeking opportunities to infiltrate raiding or seizure groupings.

Individual air insertion

4.14 The SPF are investing significant resources into autogyros, personal aircraft and passenger carrying drones for insertion of individuals and small teams, with an emphasis on using them within urban areas. Whilst this theoretically provides the capability for small raids or coup de main operations, all the indications are that the Olvanans regard this as an exquisite and immature capability, albeit one of great potential. The current emphasis seems to be on placing human observers and UAS/UGV controllers onto uncontested vantage points. During the toward-enclosure operation phase SPF may conduct drone reconnaissance in preparation.

Pathfinding tasks

4.15 Raids or seizures by infiltrated dismounted groupings are most likely to be executed by troops from marine or airborne assault units earmarked for the task early in the operation. In the context of an urban operation the SPF capability to conduct small patrols is considered uniquely valuable and therefore the Olvanans are unlikely to concentrate such units. Teams are however likely to be deployed as guides and OPs along an infiltration route.

Conventional reconnaissance

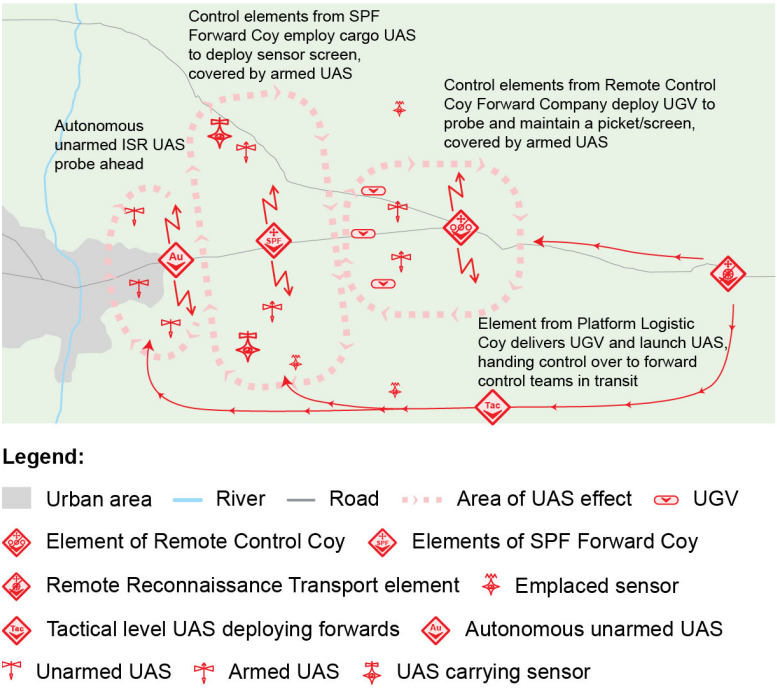
4.16 On open terrain Olvanan doctrine is for reconnaissance elements to operate aggressively well ahead of the organisations they belong to. On urban terrain, this changes. Unless reinforced, reconnaissance elements will avoid entering an urban area mounted or using anything other than a covered infiltration route.

4.17 Within urban terrain, the reconnaissance platoons of battalions work close-in probing as part of a combined arms enclosure detachment, preferably integrated with attached Remote Reconnaissance Companies (described below under the attack). Like the SPF, Divisional and Brigade reconnaissance assets will normally only initially attempt to penetrate the periphery of an urban area, from where they will use their un-crewed platforms to probe the defences.

Remote reconnaissance and picketing

4.18 Remote reconnaissance capability is provided by the companies of the Remote Reconnaissance Battalion (RRB), integrated with relevant Brigade Reconnaissance Company. Typically, the RRB are deployed with control teams from SPF Forward Companies mounted in high mobility vehicles. Ahead of them is a screen of unarmed intelligence, surveillance and reconnaissance (ISR) UAS, while they operate stealthily over a wide front, employing armed tactical UAS to engage targets identified by the screen and, most importantly to deploy cargo UAS to position sensors. Behind this follow control teams from the remote-control forward company operating from wheeled armoured vehicles and controlling a ground screen of UGV, backed by armed UAS. A range of different armed and unarmed UAS and light UGV are brought forward on wheeled transport, with the mix determined by task. Some systems are considered expendable and treated as ammunition. Control systems have commonality, and by switching plug-in modules, most platforms can work in multiple modes, fully autonomous or operator on the loop and can be switched between directional, mesh radio and tethered operation. The deployment of elements of a Remote Reconnaissance Company (RRC) is shown schematically at Figure 4.1.

Figure 4.1: Schematic illustration of elements of a Remote Reconnaissance Company advancing towards an urban area



Probing

4.19 The Remote Reconnaissance Companies are flexible in how they deploy, but the general principle on the approach to an urban area is to employ low-cost commercial-off-the-shelf (COTS) derived systems in autonomous-transmitting mode to probe and unmask defences. These may be supported by a few semi-autonomous munitions under the direction of the SPF forward teams. Once this screen has closed on the urban perimeter, delivery UAS deploy unattended passive acoustic sensor systems to previously selected locations and establish an initial surveillance network.

4.20 As a picture of enemy counter uncrewed aerial system (CUAS) deployment emerges likely gaps are exploited for the delivery-UAS to deploy small sensor UGV, perching UAS and GPS jammers. In order to minimise and avoid early compromise of control transmissions, these are also likely to operate in near-autonomous mode. Limited numbers of semi-autonomous lethal systems may be deployed for disruption effect and to deter enemy soldiers from searching for sensors. The Olvanans do not consider this at odds with their commitment to ethical conduct, arguing that conservatively programmed AI is less likely to kill non-combatants than ordinary soldiers.

Picketing

4.21 The likely main task of the RRC is to deploy both static and mobile sensor systems across the urban area, at surface and subsurface level, in order to establish electromagnetic picketing around axes of attack. They may also cue joint disruption strikes as described below.

Specific types of toward-enclosure operations

4.22 To set the conditions for subsequent attack or bypass there are several specific types of toward-enclosure operation: cordon, disruption and orange operations.

Cordon deployment

4.23 Cordon operations have a central role to play in Olvanan avoidance of unfavourable urban combat where they enable stability and control operations, as described above. Furthermore, whether the Olvanan commander intends to mount an attack or simply bypass a significant urban area, if and a significant threat force capable of attacking outwards remains within, a cordon detachment is likely to be deployed outside of the urban perimeter.

4.24 In general, a cordon force or detachment will conform to the usual Olvanan doctrine for manoeuvre on open terrain. Whether bypass or attack is intended the cordon detachment will if possible be integrated with a RRC and if a bypass is intended an IEF CP will be formed and deployed to coordinate the containing operation. Cordon operations are further described below.

Disruption operation

4.25 In Olvanan doctrine a disruption force seeks to destroy the integrity of enemy forces and capabilities without decisive engagement. They place particular value on disruption during enclosure operations as pre-emption of defensive deployment and/or precision strike may prevent the enemy establishing a coherent defence.

4.26 Consequently, a distinctive Olvanan tactic for urban operations is to push forwards a ‘forward seizure detachment’ whose mission is to advance parallel with withdrawing adversary forces, avoiding engagement, and occupy unoccupied positions or buildings in or on the periphery of the urban area. Importantly, the concept is to seize undefended ‘soft points’ that command defiles or otherwise compromise the defence, and force the adversary to react or counter-attack, rather than attempting to assault and clear defended terrain.

4.27 An enemy force that is withdrawing and redeploying through the defiles on the approaches to an urban area represents an attractive and relatively predictable target for an artillery disruption raid. This involves cueing data provided by a remote reconnaissance detachment to briefly bring an artillery element forwards so that is just in range. Collateral damage considerations will influence Olvanan ammunition choice. If the air situation permits deploying a targeting UAS overhead, precision guided projectiles will be used. Otherwise, multi-barrel rocket launcher (MBRL) parachute delivered anti-armour sensor munitions or scatterable anti-armour mines are most likely. The unique capability of the Olvanan optical fibre guided anti-tank missile to conduct high angle visually guided ‘direct fire’ attack provides the Olvanan commander with the option of conducting an anti-armour disruption raid in similar vein.

4.28 Geography may also offer the Olvanan commander a further disruption option, where the urban area is dominated by surrounding high ground or the street layout creates fire lanes that are visible from well outside the perimeter. In this case elements may be infiltrated forwards to employ a variety of direct fire weapons systems (of all kinds not limited to small arms) in a ‘sniping’ mode.

Orange operations – orange zones declared

4.29 The Olvanan place great emphasis on the political and psychological impact of the employment of Orange Jackets during enclosure operations. While not under OPA chain of command, their actions are closely integrated. It is likely that during the toward-enclosure operations phase the Orange Jackets will liaise with relevant humanitarian organisations and declare, on behalf of Olvana, orange zones and orange routes. These represent a formal undertaking by the Olvanan government of open zones, which they will neither use nor target unless their adversaries do so. The claim is that non-combatants moving to these areas and using the nominated routes will be safe. In order to maximise political and psychological benefit these will be carefully chosen to not yield obvious tactical advantage to the Olvanans, not to lie across major routes and be suited for subsequent relief delivery.

Toward-enclosure operations planning and conduct

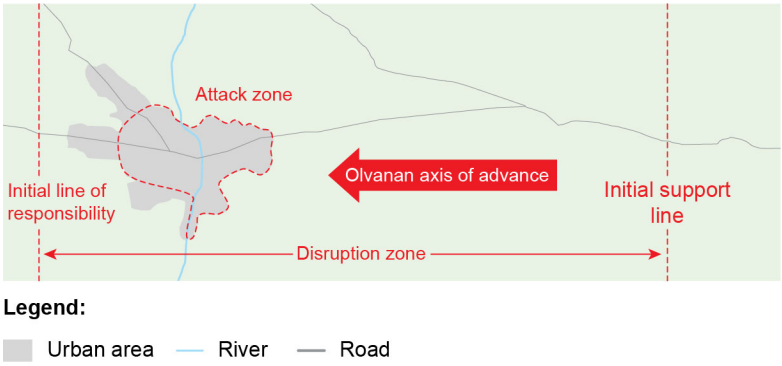
4.30 The Olvanans regard toward-enclosure operations as vital in realising many of the benefits of their concept of fused operations, avoiding the need to attack prepared defences and for setting the conditions to fight or bypass efficiently. They also create the time and space for following echelons to regroup for urban tasks and command control and communication elements to deploy well forwards to conduct the fused battle. Regrouping is not limited to OPA. At this stage (if not before) the whole of government IEF teams and cells deploy to the higher-level headquarters and despatch FWCE to brigade level or lower where some will join Fused Integrated Fires Command CP. Similarly, the command elements of the Orange Jackets and possibly expeditionary units of the OPAP will join relevant headquarters.

4.31 Toward-enclosure operations are considered to occur in three phases, the strategic reconnaissance phase, the operational reconnaissance phase and action (attack or bypass) phase. These, and the basic control measures are described below.

Areas of responsibility and control measures

4.32 For enclosure operations, Olvanan planners will divide the battlefield in the normal way with initial lines of responsibility and support. However, the disruption zone will usually be drawn to include all possible approaches to the urban terrain, while an attack zone will be defined that will usually be less than the entire area. This is shown at Figure 4.2. Further control measures within the urban area reflect the subsequent intended operations but emphasise boundaries between different units and formations operating un-crewed systems.

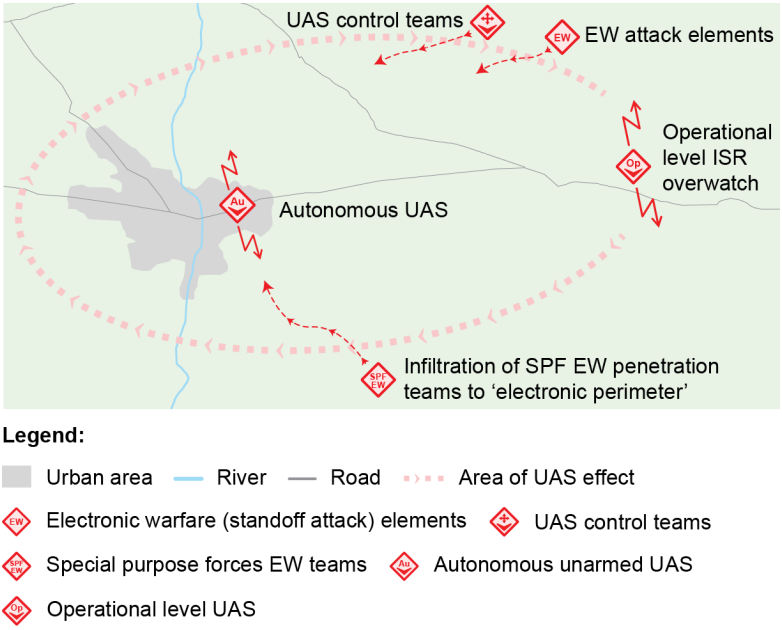
Figure 4.2: Olvanan offensive planning – areas of responsibility



Strategic reconnaissance stage

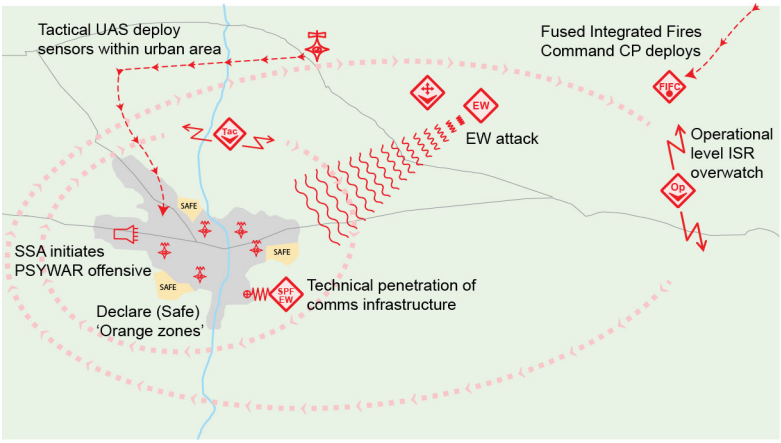
4.33 In the days prior to the enclosure operations, the activities of the intelligence agencies, including strategic ISR, continue while SPFs infiltrate to the urban electronic perimeter. Divisional level reconnaissance and remote reconnaissance companies together form remote reconnaissance detachments and begin to deploy, establishing ground coordination cells, EW systems and ground control elements. Some initial probing commences, probably using autonomous COTS-based UAS. The Orange Jackets begin formal liaison and forewarn the declaration of orange zones. These activities and the approach of different elements towards the urban area are shown at Figure 4.3. At this stage, while on the move UAS control teams are not operating platforms and overwatch is provided by higher-level formations.

Figure 4.3: Activities during the strategic reconnaissance stage



4.34 As the remote reconnaissance effort begins, the security agencies initiate psychological warfare offensive within the urban area and technical surveillance nodes are activated, with SPFs conducting technical penetration of communications infrastructure. Data is integrated with that from continuing strategic level ISR and strategic level briefings occur. EW activities begin and the remote reconnaissance detachment begins to deploy UAS including posting sensor pickets. One or more Fused Integrated Fires Command CP deploys and the government declares orange zones. The deployment of these small elements is shown at Figure 4.4, with key points being the UAS deploying sensors into the urban area, the pink ellipses showing the focus area of the tactical UAS (shown by 'Tac' symbol) deployed by the RRC and that both stand-off EW attack and technical EW penetration occur.

Figure 4.4: Activities as operational reconnaissance begins



Legend:

Urban area — River — Road — Area of UAS effect

SAFE (Safe) Orange zones — SPF EW Special Purpose Forces EW teams

FIFC Fused Integrated Fires Command CP — EW Electronic warfare elements

Emplaced sensor deployed by UAS — UAS control teams

Tac Tactical level UAS — Op Operational level UAS

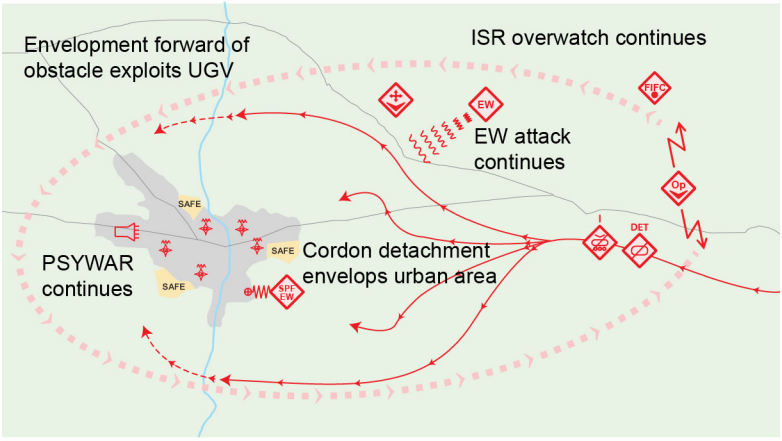
UAS carrying sensor — PSYWAR effect

Deployment of a cordon detachment

4.35 In preparation for attacking an urban area, or if it is to be bypassed and there is a significant threat within, a cordon force or detachment will normally be formed, with troops drawn from a first echelon formation. Usually, the cordon force will be reinforced with a RRC, both to support the rapid tactical isolation of the urban area at lower cost and risk, and in order to be able to subsequently maintain an effective tactical cordon and monitor for threats within. When the focus is containing the enemy threat, an Olvanan commander may assign engineering or artillery assets to deploy minefields on the urban perimeter and so enable a smaller cordon force. Cordon deployment is illustrated at Figure 4.5. Note the pre-positioned

elements remain in place as a reconnaissance detachment (composition can vary) with an attached RRC deploys to envelop the urban area, initially using un-crewed systems beyond the river obstacle. For clarity, the deployment of UAS and UGV in front of the elements of the cordon detachment is not shown, but it will use the arrangement shown earlier at Figure 4.1, however in this case the previously deployed overwatching UAS control team offers an additional level of human control.

Figure 4.5: Deployment of a cordon detachment



Legend:

Urban area — River — Road — Area of UAS effect

(Safe) Orange zones — Electronic warfare elements

Operational level UAS — Special Purpose Forces EW teams

Fused Integrated Fires Command CP — PSYWAR effects

Emplaced sensor deployed by UAS — Mechanised detachment

Remote Reconnaissance Company UGV and UAS — Current route

Future route

Stability and control Operations

4.36 The Olvanans will seek to avoid military entry into an urban area where possible and will prefer to mount a stability operation using the Orange Jackets to control, manage and provide relief to civilian populations. This is a distinctive and potentially potent element of their political and narrative strategy. Even if the area is not declared an open city, the Olvanans will seek to assign at least parts of it as ‘open areas’ in conjunction with international NGO and IHL entities, while seeking to negotiate the withdrawal of enemy forces. This approach is likely to deliver political advantage regardless of whether it is successful. It is likely to be closely supported by Orange Jackets mounting rescue and relief operations on the urban perimeter while taking control of utility reticulation. The Olvanans are quite prepared to suffer losses from amongst the Orange Jackets in order to gain a narrative and moral advantage.

Control operations

4.37 A stability operation will be preceded by a control operation, with the minimum task of establishing and maintaining security over either the entire urban perimeter or geographically defined sub-perimeter. The cordon force then has to transition to the much more demanding task of establishing a security cordon (rather than a tactical cordon) to control all movement in and out. A control operation may also be required to exert military and political influence into an isolated urban area. The Olvanans believe that remote and autonomous systems provide the means of doing this feasibly, especially when combined with the use of chemical smokes, surgical strikes and raiding.

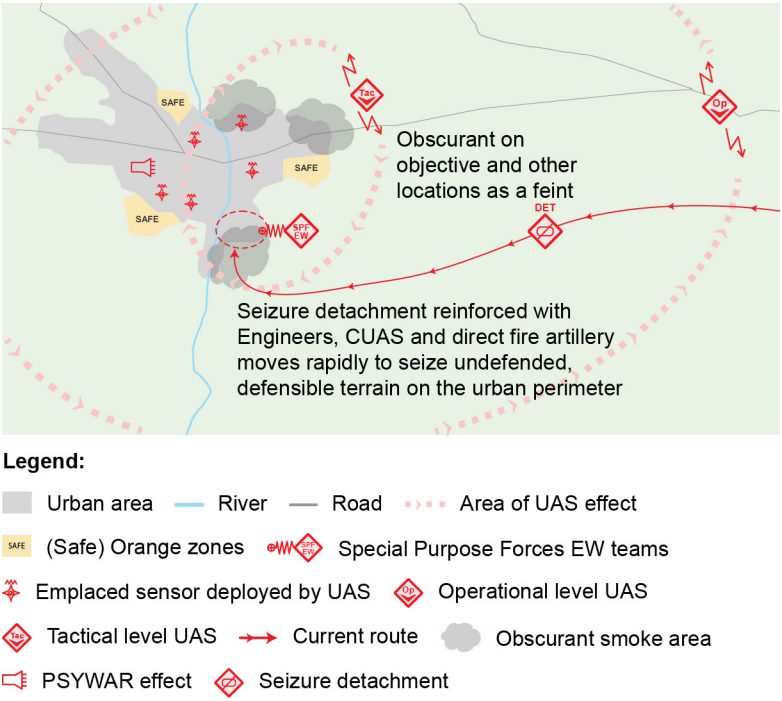
4.38 As an alternative to or in addition to conducting a cordon operation, the Olvanan commander may mount a disruption.

Disruption – seizure detachment

4.39 A favoured Olvanan disruption tactic to avoid a protracted urban battle is a forward enclosed seizure. It is predicated on an assessment that there is undefended urban terrain behind a withdrawing enemy, which if seized will compromise enemy attempts to mount a coherent defence. A detachment is formed and reinforced with engineer and artillery assets tasked to push forwards past and

outflank withdrawing enemy forces, seize undefended urban terrain and establish a simple/hasty defensive position. The Olvanans believe seizure is particularly suited to exploiting obscurant. Figure 4.6 shows a detachment rapidly deploying to seize undefended terrain on the southern edge of the urban area, supported by armed UAS during the approach. This occurs under obscurant which is concurrently laid on to other areas of the urban area to deceive the defender.

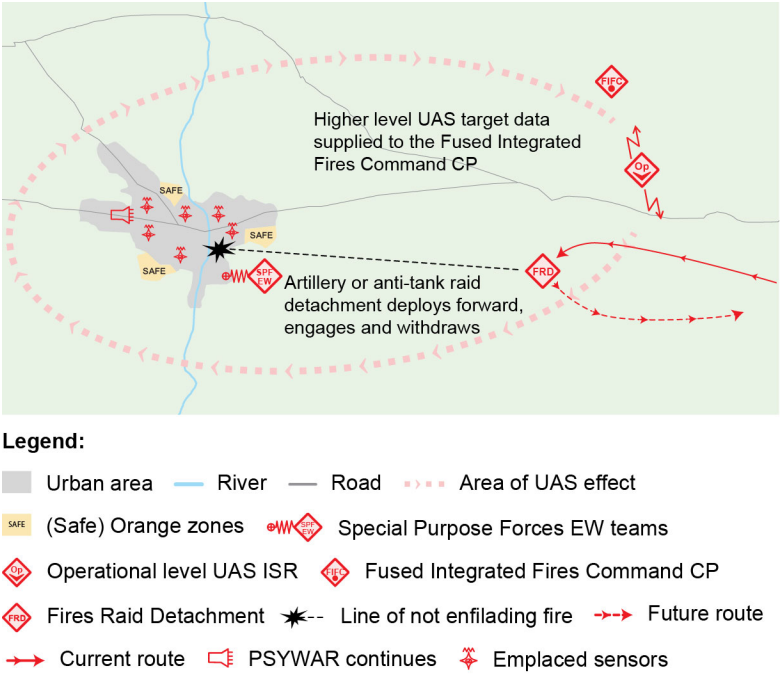
Figure 4.6: Deployment of a seizure detachment



4.40 Disruption – fires raid detachment. Another option for disruption of enemy defences is to form a fires raid detachment. This comprises artillery, anti-armour or other guided weapon elements that advance to a point where their weapon systems are just in range of suitable targets within the urban area, and engage defenders before

withdrawing. The raid is coordinated by the Fused Integrated Fires Command CP. Figure 4.7 shows a fires raid detachment, coordinated by the FIFC deploying forwards for a brief engagement using target data supplied from higher-level reconnaissance UAV.

Figure 4.7: Employment of a fires raid detachment

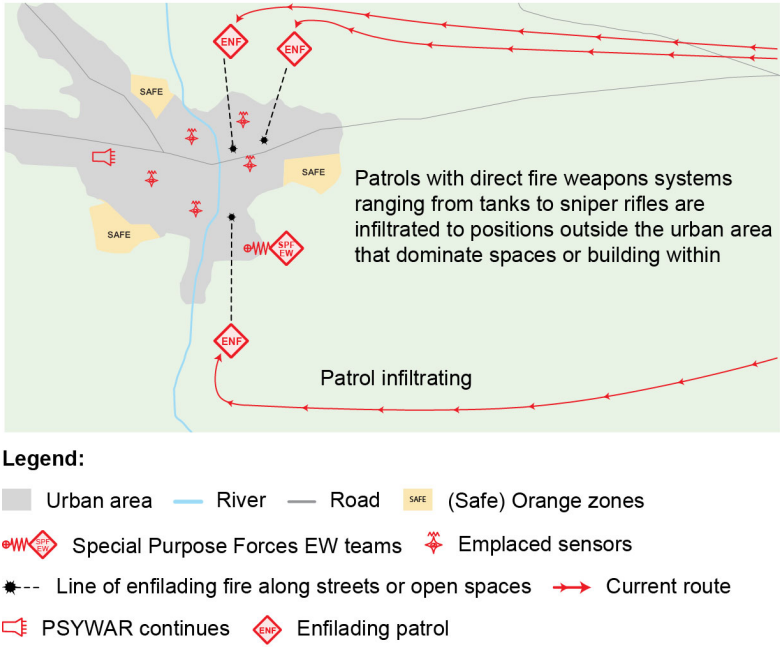


Probing/sniping element/patrol

4.41 If geography allows important areas of the interior of the urban area to be observed from beyond the perimeter, the Olvanan commander may also infiltrate relatively small direct fire elements into well concealed overwatch positions from where they use sniping type engagement. The Olvanans practice concealing direct fire support weapons, artillery cannon and even armoured vehicles within buildings to use this technique which they consider particularly useful for denying defenders use of positions in tall buildings. Figure 4.8

shows two patrols in the north and one in the south infiltrating to positions where they can observe into the urban area along roads or other open spaces and where their fire will have an isolating and disruptive effect. The Olvanans employ exactly the same technique to support their attacks and they are particularly likely to consider attacking through buildings that can be observed and engaged by direct fire from outside of the urban area.

Figure 4.8: Employment of enfilading patrols to disrupt by 'sniping'



Chapter 5

Urban attack operations

5.1 While the Olvanans seek to avoid attacking in urban areas, they ensure that their commanders have a range of tactical options for doing so and not fighting on the enemy's terms. These flow first from their concept of enclosure operations: that is fusing to achieve informational and psychological advantage, secerning to focus on particular parts of the battlefield and enemy systems; and using masking techniques to reduce vulnerability. These options vary from the rapid pre-emption of a situational attack to the technology-enabled tailored use of different functional groupings and tactics in an integrated attack. The latter seeks to overwhelm by synthesising the effects of multiple systems and elements concurrently manoeuvring and delivering effects.

5.2 This section looks at the key features of attack operations then outlines the following types of attack:

a. The situational enclosed attack

b. The dispersed enclosed attack

c. The integrated enclosed attack.

5.3 The three attack types are progressively more complicated. The situational enclosed attack is conducted with minimal reorganisation and therefore only involves minor modifications to existing situational attack doctrine. The dispersed enclosed attack involves detailed regrouping to form several similar manoeuvre elements, but otherwise similarly reflects existing doctrine.

5.4 The integrated enclosed attack involves specific-to-environment tactics and techniques for movement across urban terrain as well as actions on objectives. Effective execution of these requires tailored combined arms regrouping, which may be organised down to the very lowest level of individual platforms and teams of soldiers. The planning and conduct of the integrated attack is outlined in the next section.

Key features of attack operations

5.5 The Olvanans approach to enclosed attacks is distinguished and characterised by their concept of fused/masked/secerned warfare: fusing providing informational advantage, masking protecting manoeuvre and secerning applying remote warfare to selected parts of the battlefield. However, within this concept there are several features that are particularly relevant to attack operations.

5.6 The Olvanan capability for the IEF provides a detailed three-dimensional representation of the Urban battlefield down to junior commander or individual soldier level which can be variously updated or populated to suit the using soldiers need. This has the potential to provide unprecedented levels of situational awareness and enhance application of fires and actions. However, the Olvanans are conscious of the potential for cognitive overload and have developed a modified command and control approach. This also reflects their desire to introduce ‘Mission Command with Olvanan characteristics’ for their junior leaders.

5.7 The approach is referred to as directed-indirect and directive-direct which describes a central distinction, based on the proposition that physically displaced higher commanders have access to and the ability to process greater volumes of data overlaid on the Enclosure-world model wage. Given this they proactively direct the ‘indirect’ (meaning fire systems) fight in response to intentions and requests digitally communicated in general terms by the commanders on the ground. Conversely, the higher commanders digitally authorise the scope for ‘directive’ freedom of action within a three-dimensional close fight manoeuvre space in which the principal effects are direct fire or hand delivered.

5.8 This approach reflects the construct of secerning, which divides the urban battlefield up into subsectors where the undefended or weakly defended ones are manoeuvred through or occupied, and enemy resistance is rewarded with destruction effects. Such an approach is feasible because of the Olvanan capability to both manoeuvre within the urban areas under obscurant and mechanically breach structures to manoeuvre both mounted and dismounted elements through the urban fabric.

AI-based route, fire position and target planning

5.9 Enclosure-world is more than a useful three-dimensional planning ‘map’. It has integrated inter-visibility and fire effects tools that allow the user to pick a point anywhere and interrogate from where it might be seen or effectively engaged when unseen. Conversely it will identify all points that overlook a route. The advantages for route selection are obvious, but the capability does far more. Reminiscent of the leap in capability that touchscreen control of indirect fire has given non-specialists, Enclosure-world now allows the Olvanan junior commander to touch a screen to digitally issue fire control orders or arcs of observation. This reduces the enduring urban problem of disorientation and dramatically increases engagement effectiveness of individuals and individual weapons systems.

5.10 Furthermore, the basic 3D mapping processes are used by specialised machine learning based apps to provide junior leaders user-friendly interfaces which allow them to quickly assess different combinations of manoeuvre and effects. They are able to ‘play’ simulations as a rehearsal tool which they constantly emphasise ‘does not assure a lucky result, but makes troops luckier.’ The practical effect is to allow Olvanan forces to conduct well coordinated tactical manoeuvres and engagements as pulses of violent activity in rapid succession.

Leveraging remote systems: deception, disruption, web isolation

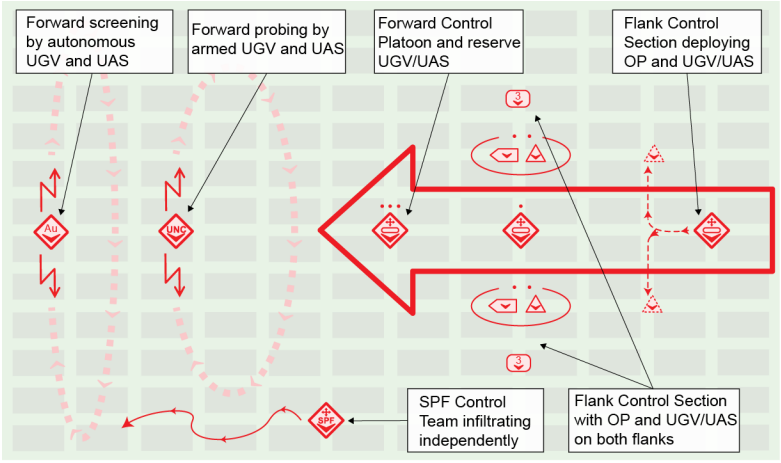
5.11 The enduring challenge of Urban operations is that an attacker is channelled and confined by the urban fabric to channelled approaches. Conversely, the defender must disperse forces across many of these. Defenders often rely on attackers being unable to change axes of attack as fast as they can redeploy to reinforce their defences. Because of this, the Olvanans emphasise measures to deceive defenders as to where the main attack will occur, disrupt their attempts to redeploy and protect the flanks of an axis of attack.

5.12 Traditionally they infiltrated dismounted teams ahead of attacks to conduct feints or occupy positions where they could bring fire to bear across defenders’ lines of communication. They have recognised that remotely operated systems are particularly

well-suited for deployment ahead of an attack in order to disrupt and deceive. They will deploy platforms to dominate open spaces in the depth of enemy defences and aspire to do this in sufficient numbers to impose a web of isolation around the axis of their attack. This is initially operationalised by light Remote Reconnaissance Companies of the SPFs as well as the conventional Remote Reconnaissance Companies who envelop and dominate the urban area with un-crewed systems (see Figure 4.1).

5.13 As the Olvanans advance into urban terrain the remote capability is provided by Robotic Vanguard Companies whose more potent un-crewed systems are controlled from well protected infantry fighting vehicle (IFV). They are able to augment a conventional mechanised detachment to provide both forward screening and probing as well as deploying robotic systems as flank protection (see Figure 5.1).

Figure 5.1: Robotic Vanguard Company advancing across urban terrain



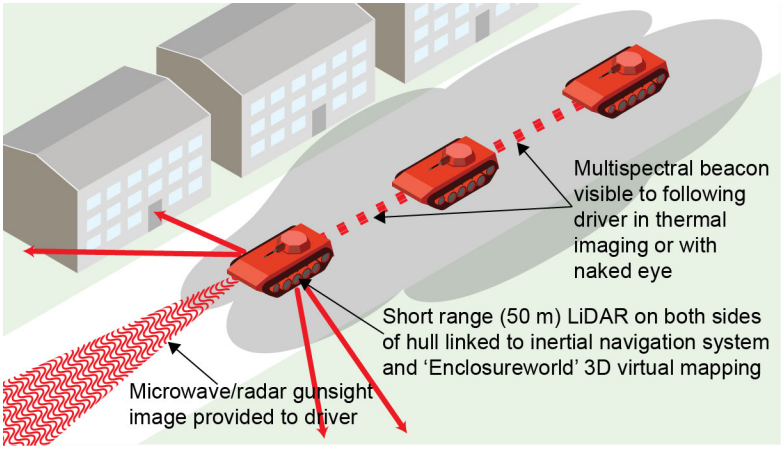
The masked transit: obscuration and tunnelling

5.14 The notion of masking manoeuvre is central to the Olvanan concept for enclosure warfare. They take two complimentary approaches: obscuration and tunnelling. The first is a radical approach which has only recently become feasible. Smoke has long been used to conceal an attacker's manoeuvre, who however, may be equally blinded and more disorientated. Technology has in recent decades allowed platforms and even soldiers using thermal imaging vision devices to see in the smoke. The Olvanans have seized this opportunity to gain the 'advantage of the one-eyed man in the kingdom of the blind'. They have invested in both thermal vision equipment and range of smoke munitions, including large quantities of rocket projectiles with non-explosive scattered pellet smoke

payloads that descend under a drogue chute and therefore present low hazard in a populated area. Furthermore, conscious that many of their adversaries have excellent thermal vision equipment they have also fielded thermally opaque smoke munitions.

5.15 The data fidelity in Enclosure-world is, when used in conjunction with other systems such as inertial geolocation is sufficient to allow completely ‘blind’ navigation through a fully obscured streetscape. Furthermore, the Olvanans have excellent COTS LiDAR cameras which they have experimentally fitted to armoured fighting vehicle (AFV) commander and driver’s stations. The application of smoke munitions on and around avenues of approach in quantities able to totally obscure streetscape for a period of minutes to hours should be expected. This will involve a carefully considered blend of thermal opaque and non-opaque screening, and possibly irritant, smokes. This capability is illustrated at Figure 5.2 where an AFV equipped with inertial navigation, a geo-locating system, LiDAR and microwave gunsight is able to advance through smokes and vapours that obscure even thermal sights. While only a limited number of AFV are equipped with these systems, by using high visibility multispectral beacons on the rear of each vehicle, small convoys can effectively advance in completely ‘blind’ conditions. This is illustrated at Figure 5.2.

Figure 5.2: An armoured fighting vehicle equipped with inertial navigation, geo-locating system, light detection and ranging and microwave gunsight leading other armoured fighting vehicles using multispectral beacons

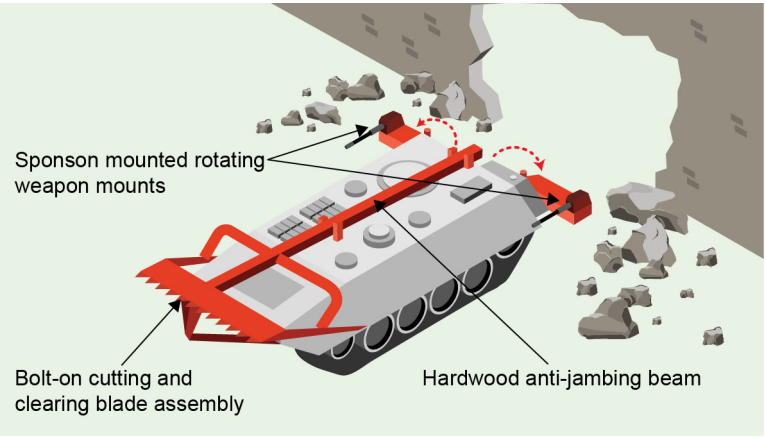


5.16 The other Olvanan approach to masking is derived from their response to the widespread deployment of lethal drones. Recalling the successful use of tanks within buildings during WWII battles, the OPA conducted experiments driving AFV into buildings to seek not only concealment from the sky, but protection. They discovered that not only could most of their armoured vehicles readily enter many types of buildings common in the region, but that the risk of being trapped by collapse or falling into foundations was much less than supposed. This was not only the basis of a basic urban manoeuvre for armoured vehicles, but the genesis of their tactical 'tunnelling' technique. This involves use of an armoured vehicle, preferably but not necessarily an armoured engineering vehicle, to mechanically breach carefully chosen 'tunnels' through buildings.

5.17 An example of an Olvanan AFV modified for breaching operations is illustrated at Figure 5.3. This is an older model armoured personnel carrier (APC) modified for remote control and equipped with a cutting and clearing blade assembly. It is also equipped with two rear-mounted rotating sponsons on which a variety of lighter

weapons can be mounted. This design appears to minimise damage to weapons while breaching and also allow engagement from a vehicle that is substantially still in cover. Various cutting tools can be fitted, in this case the design is optimised for breaching panelling and light block construction walls. The Olvanans have a variety of models, some of which are able to make entry breaches in substantial ferro-concrete walls.

Figure 5.3: Optionally crewed armoured personnel carrier modified for building breaching



5.18 The level of structural engineering detail overlay available in Enclosure-world combined with remote operating facility for armoured vehicles makes tunnelling a low-risk high-payoff technique that confounds many enemy planning assumptions. While the Olvanans have established that in industrial areas it is feasible to breach an almost continuous protected tunnel through buildings, this is not how they typically plan to use ‘tunnels’ for tanks and large AFV. For this kind of conventional armoured vehicle, a tunnel is created as a means of rapidly switching from one axis of approach to another. However, in contrast, in the Asymmetric Warfare Brigade they employ remotely operated versions of the obsolescent APCs as platforms for rapid

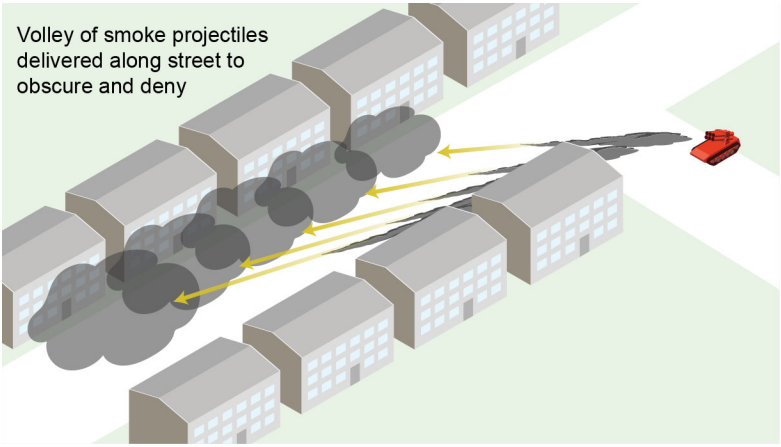
breaching of successive walls in continuous buildings. Masked transits, whether by obscuration or tunnelling, will be a standard means of manoeuvre for the Olvanans on urban terrain.

Smoke-incendiarism and eviction

5.19 The Olvanans have extensively researched and debated the question of neutralising the overwatch threat or effective resistance from innumerable buildings of unknown status. They have adopted the position that ‘low hazard’ smoke munitions are a manifestly preferable neutralisation option compared to wide area explosive weapons. This approach has been met with cautious approval by the IHL monitoring community. It is however becoming increasingly evident that the Olvanans propose to fire these munitions directly into buildings and so deny their use as positions for observation of fire. Since the primary effect of munitions is not incendiary, this is not in breach of IHL, however the smouldering pellets will start fires.

5.20 Articles in the OPA professional magazine make it clear that this is recognised and understood both a positive tactical feature and as a humanitarian improvement, on the basis that their use will cause far less immediate harm than explosive equivalents and civilians in buildings ‘treated’ this way will be far more likely to have the opportunity to escape. Figure 5.4 shows a MBRL equipped AFV firing a volley of smoke rockets so that they are dispersed linearly along an axis of advance to provide unbroken obscuration.

Figure 5.4: Multi-barrelled rocket launcher delivering direct fire smoke munitions ahead of an advance



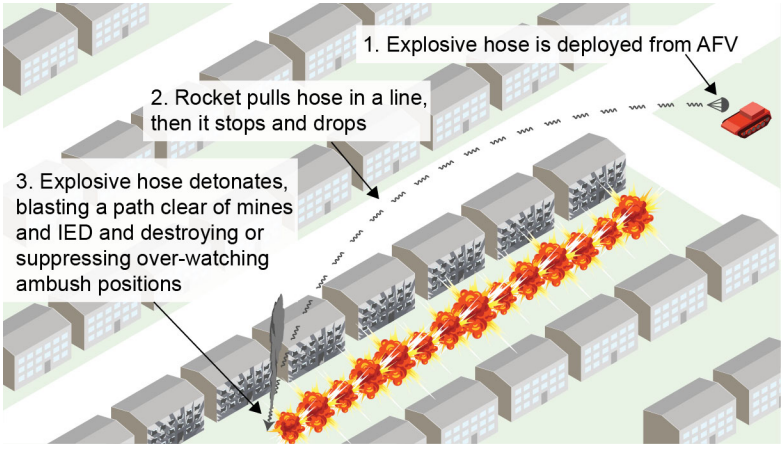
The blast neutralised transit

5.21 The Olvanans recognise that where the enemy have had time to prepare a coherent defence, simply obscuring the axis of advance may not reduce the risk to their forces to an acceptable level. This is particularly true if the enemy have made extensive use of improvised explosive devices (IEDs) or mines with sophisticated multi-sensor and command initiation. Traditional methods of area bombardment inflict very high levels of collateral damage and create further obstacles. Olvanan analysis of combat in the Middle East, particularly in Syria, has led them to conclude that the use of large linear explosive charges, or the concurrent use of thermobaric munitions, along an intended route is an effective neutralisation method against the many threats.

5.22 When detonated on a street flanked by buildings within certain parameters of distance and height, linear mine-clearing charges inflict devastating 'reflected' blast effects. This is often sufficient to suppress enemy concealed and observing from those buildings and either directly degrade enemy munitions or bury them or their sensors in falling rubble. While smaller and weaker buildings may collapse, the rubble will typically fall in a predictable pattern and major obstructions

are less likely than with artillery or aircraft munitions. To take advantage of this effect the Olvanans prefer to employ either a relay of explosive hose equipped engineering vehicles or long sections of Bangalore torpedo pushed into position by UGV. Figure 5.5 shows an armoured vehicle firing a rocket propelled explosive hose to detonate along the axis of advance.

Figure 5.5: An explosive hose mine-clearing armoured fighting vehicle, blasting a corridor down a major axis



5.23 Employing MBRL brought forward to directly fire thermobaric munitions is also effective, with better neutralisation effects. However, during trials it was shown that to achieve consistent neutralisation along corridor using unitary munitions requires either large quantities or precise and deliberate aiming techniques which undercut speed and surprise. They prefer to use these systems for strike and destruction missions.

The fight of the pole, dog, and probe

5.24 The Olvanans view the methods of ‘room entry’ employed in close quarter battle tactics by Western conventional soldiers with bemusement when they realise they are not watching armed police. In their mythology fortresses were overcome by using Hornet nests on poles, and the idea continued from the 1930s onwards when, possibly

for reasons to do with the relative availability of mining explosives compared to grenades, the explosive pole charge became the general-purpose weapon of fighting in buildings. It is a long-time mantra amongst Olvanan soldiers that the first thing into an enclosure must never be a human being. Ideally it should be a munition fired from a distance, failing that, a command detonated charge placed using a pole, with a thrown grenade regarded as unpredictable and inferior. Even after this, a mirror on a stick should be used to check if there is any doubt whether all the enemies in the next space have been killed. Such checking is now faster and easier with the drones that are used in every section.

5.25 While ethical considerations feature high in Olvanan military thinking, they also take a binary view. Their view is that if a building displays signs showing civilians are present and it appears undefended this should be taken at face value. They consider they have an obligation, whenever possible, to ‘call out’ to anyone in an enclosure inviting surrender and will do this under circumstances that Western soldiers might not. Having met this moral requirement, if there is no response, they will be ruthless in order to avoid risk to themselves or comrades. Between about twenty and five years ago some OPA infantry and engineer units began an informal practice of keeping dogs to carry out simple searches for enclosure warfare tasks. However, this practice is reducing with the widespread use of drones at section level as well as the introduction of working search and attack dogs in engineer units.

5.26 In the last five years the competent use of small drones by individual soldiers has become almost ubiquitous. Initially these were personally purchased but now, COTS varieties are widely issued and there is a program to introduce tethered (for spectrum management reasons) MILSPEC examples down to section level across the OPA. The normalised used of small drones has permitted the evolution of a standard ‘probe’ approach enclosure warfare, where when outdoors a section will deploy a (thermobaric) grenade launcher to cover a target building and then one or two UAS are employed to search first the outside then interior. Within buildings, command detonated charges are iteratively pushed or thrown ahead of the leading soldier after which the next spaces is searched with the drone.

Key terms

5.27 The Olvanans make extensive use of specific terms to describe urban task groupings, manoeuvres, and, especially, integrated attacks. These are more fully described in the next section, but several are important for all types of enclosed attack.

5.28 The Olvanans use the following terms to describe urban manoeuvre types:

a. Infiltration – is stealthy dismounted tactical movement using multiple concealed routes across and through urban terrain.

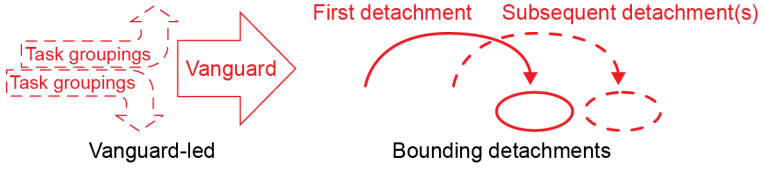
b. Penetration – is rapid tactical movement by an element on a narrow front across and through urban terrain that makes the best use of cover and concealment, mainly moving within foliage, structures or narrow spaces between them. The method exploits speed to increase security.

c. Corridor – transit is a tactical movement mainly along a corridor formed by over watching structures which offer protection from distant observation and fire. The threat from within these structures may be reduced by obscuration or other means.

d. Vanguard-led – is tactical movement where a Vanguard leads the advance enabling mission task groupings following behind to clear ground for conduct attacks on nominated objectives (see Figure 5.6).

e. Bounding – detachments is where detachments are individually reinforced and task organised (normally with engineer elements) to be able to independently create their own pathway and clear ground or conduct attacks (see Figure 5.6).

Figure 5.6: Main movement patterns for tactical groupings



f. Back clearing is where clearing elements initially penetrate into the depth of an objective and then clear backwards. This disrupts enemy retrograde schemes.

Types of attack mission

5.29 As explained elsewhere, the Olvanans avoid using the term assault in the urban context as they consider it insufficiently specific. The different actions on objectives are:

a. Snatch approximates to a Western hasty conventional assault, and involves simultaneous assault of multiple sub-objectives, usually immediately after firepower is delivered across the objective.

b. Strike is where substantial munitions or demolition charges are delivered onto an objective as the primary effect. The role of the attacking force is to secure against counter-attack and 'prove' (check clear) the remaining structures.

c. Storm is an assault into an enclosed structure where each assaulting grouping enters through structures and/or breaches of its own making, often penetrating in depth, before systematic clearance.

d. Contain is an attack to exert control over structures by controlling approaches without initial systematic clearance. The Olvanans seek to confine buildings on objectives whenever possible in order to 'call out' civilians and defenders, but where resistance is encountered, they will destroy entire buildings without hesitation.

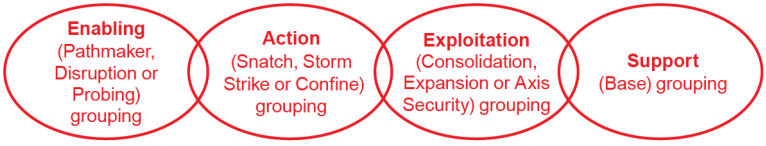
Grupa and functional groupings for the attack

5.30 Olvanan doctrine emphasises the use of battle drills, similarity and consistency in method and the use of descriptive names for tasked groupings. Enclosure operations generate unique terrain-related tasks and regrouping into combined arms teams organised at a lower level and with more specialist elements than in other operations. The basis of these is normally BEDETs, or Company Enclosure Detachments (CEDET), but even if the grouping is smaller than a company the word 'detachment' will usually still be used if the grouping is operating independently.

5.31 The integrated attack requires forming a variety of specialised sub-groupings within detachments (which are explained in the next section). These are often all-arms and comprise different elements, so to avoid confusion with the levels above or below they are called ‘grupa’. This originates with the Donovian word for group but is also a word for group in Hindi.

5.32 Grupa are the sub-groupings of detachments that carry out the doctrinal enabling, action, exploitation, or support tasks, however in enclosure warfare they are likely to be renamed to make the type of attack and their function explicit. As illustrated below, the enabling grupa may be relabelled as, for instance, a pathmaker, disruption or probing grupa. Similarly, the action grupa may be labelled to indicate both its task and the type of mission, so that it might be called the storm grupa, while being part of an overall storm detachment. Similarly, the exploitation grupa may be renamed. This is shown at Figure 5.7.

Figure 5.7: The four attack groupings



Overview of attack types and stages

5.33 As introduced earlier, there are three main attack types:

a. The situational/opportunity attack is launched into an urban area without delay and with limited regrouping.

b. The dispersed attack is executed by multiple smaller combined arms teams manoeuvring on separate axes, concentrating at a decisive point. Alternatively, the dispersed attack may be used to ‘sweep' an urban area, particularly if the objective is to expel an un-located enemy.

c. The integrated attack is conducted by regrouped and rehearsed combined arms teams that are tailored to task and fight fully integrated with joint effects.

Stages of the attack

5.34 The Olvanans consider urban terrain to be an obstacle and therefore their doctrine for the attack reflects their doctrine for obstacle crossing (isolate, secure, penetrate, execute). It integrates the enclosed warfare notions of secerning and masking as follows:

a. Secern stage deploys elements and applies effects ahead of advancing elements to destroy, dislocate or disrupt defenders. It exploits un-crewed systems but is not dependent on them.

b. Mask and penetrate stage deploys elements and applies effects that minimise the vulnerability and exposure of the advancing elements.

c. Execute stage delivers the mission effect, which whenever possible is expressed as the effect on the enemy rather than being focused on terrain, and uses terms such as strike, seize or storm to specify that effect.

d. Consolidate stage reinforces or secures the mission effect.

5.35 This four-stage construct is applied at all levels from brigade to section and is scalable. Frequently, the execution stage at one level will consist of one or more attacks of subunits, each of which will be broken into the same four stages.

Situational enclosed attack

5.36 A situational attack is one launched into an urban area without delay and with limited regrouping. It is mounted when a commander judges that the enemy within an urban objective will be unable to offer effective resistance within the time it will take to secure that objective, OR there is a high probability of success and the casualties that will be suffered will be substantially fewer than will be incurred by delay. These conditions may occur when reconnaissance elements confirmed that one of the following applies:

a. the enemy is not in a defensive posture or state of preparedness

b. destruction levels of fires have been achieved across the objective

c. obscurants have been effectively applied and Olvanan forces have vision equipment and the enemy do not

d. chemical weapons have been effectively employed and the defenders do not have protection.

5.37 The Olvanans consider that a situational enclosed attack will invariably be mounted or mechanised. A dismounted attack would be executed as a dispersed attack or involve the regrouping and detailed planning of an integrated attack.

Overview

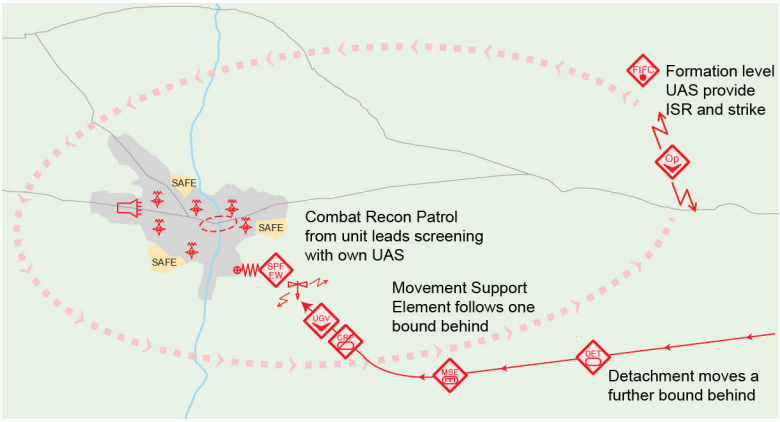
5.38 A situational attack is typically mounted directly from the line of march or current positions. For simplicity and to avoid delay regrouping is normally limited to forming standard combined arms tank/IFV groupings. Preferably, this would see objectives allocated to mechanised company level detachments with their associated platoon of tanks, though it can be broken down to tasks for individual infantry platoons and pairs of tanks. A reconnaissance section with UGV would normally lead and be followed by any allocated engineer elements.

5.39 The possible conduct of a situational attack is illustrated in the scenario below which sketches the actions of a mechanised detachment to seize a bridge in the centre of an urban area, (given that the conditions for such an attack exist).

Secern stage

5.40 During this stage the conditions for a situational attack are either confirmed or created. Initial assessment is based on technical intelligence systems within the urban area. In this example data is accessed and triangulated by a SPFs patrol with technical electromagnetic warfare capability. Formation level UAS assets directly linked to the Integrated Fires Command will prepare to conduct a reconnaissance strike (artillery attack) against responding enemy, while UAS from or assigned to the reconnaissance platoon moving with the attack force focus on the urban approach to the objective. If enemy positions have been reliably identified precision strikes may be applied.

Figure 5.8: Secern stage of the situational attack



Legend:

Urban area — River — Road — Area of UAS effect

SAFE (Safe) Orange zones — SPF EW Special Purpose Forces EW teams

FIFC Fused Integrated Fires Command CP — PSYWAR continues

Op Operational level UAS ISR — Emplaced sensor — Current route

MSE (Engr) Movement Support Element — UGV (standard recon Pl equipment)

DET Main Body Detachment — CRP Combat Recon Patrol

Recon Pl UAS screening

5.41 During the secern stage the attack force approaches the urban area in a doctrinal formation, with a UGV/UAS element a tactical band ahead of the combat reconnaissance patrol made up of a reconnaissance section, mechanised platoon and at least one tank. If an engineer movement support element has been allocated this will follow on tactical band ahead of the attack detachment. This is shown at Figure 5.8.

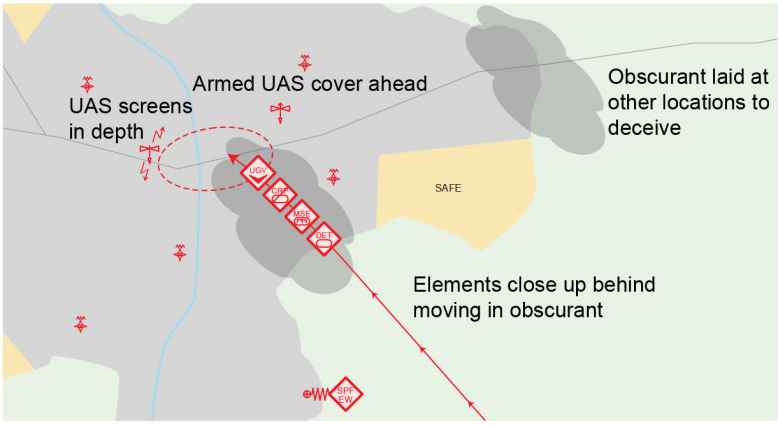
Mask and penetrate stage

5.42 The key enabler of the Olvanan situational attack is the capability of Olvanan AFV to 'transit' under obscuration. As further explained below in the subsequent section, the obscurants used on the intended route are likely to be thermal imaging (TI) translucent while TI opaque screens are delivered elsewhere as deceptions. Some units have trained to use the Enclosure world system to navigate for short distances completely blind, however extensive use of TI opaque smoke precludes the effective use of un-crewed systems. For ethical reasons the Olvanans prefer to use low hazard smokes, however a penetration immediately after a 'fire strike' with incendiary smoke offers a mechanised force greater advantage against an unprepared defender. To maximise the shock effect of a rapid armoured advance under obscuration the Olvanans are likely to deliver precision strikes with guided munitions or from armed UAS.

5.43 To conduct a situational enclosure attack against an unprepared enemy, the Olvanans will seek relatively open transit routes, preferring exposure to the risk of being halted at defiles. They will especially favour approaches that are unexpected because they appear obstructed by structures or natural obstacles. To exploit these, they will attach engineer elements that can provide rapid crossing or breaching by bridging, fascines or demolition. The data in Enclosure-world allows them to reliably identify suitable locations.

5.44 Figure 5.9 shows the detachment penetrating the urban area in a conventional march order but much more closed up. In particular, and unlike in open terrain, the combat reconnaissance patrol is only just ahead of the movement support element. The intention is to exploit shock, surprise and obscuration to move rapidly to the objective, supported by armed UAS. The Olvanans will also concurrently lay obscurant on other likely approaches as a deception or feint. Note that in this and the following two illustrations the higher formation-level UAS support that is present is not shown.

Figure 5.9: Mask and penetrate stage of the situational attack



Legend:

Urban area — River — Road — SAFE (Safe) Orange zones

Recon Pl UAS screening — SPF EW Special Purpose Forces EW teams

Recon Pl armed UAS — Emplaced sensor — Current route

MSE Movement Support Element — UGV (standard recon Pl equipment)

CBR Combat Recon Patrol — Obscurant smoke area

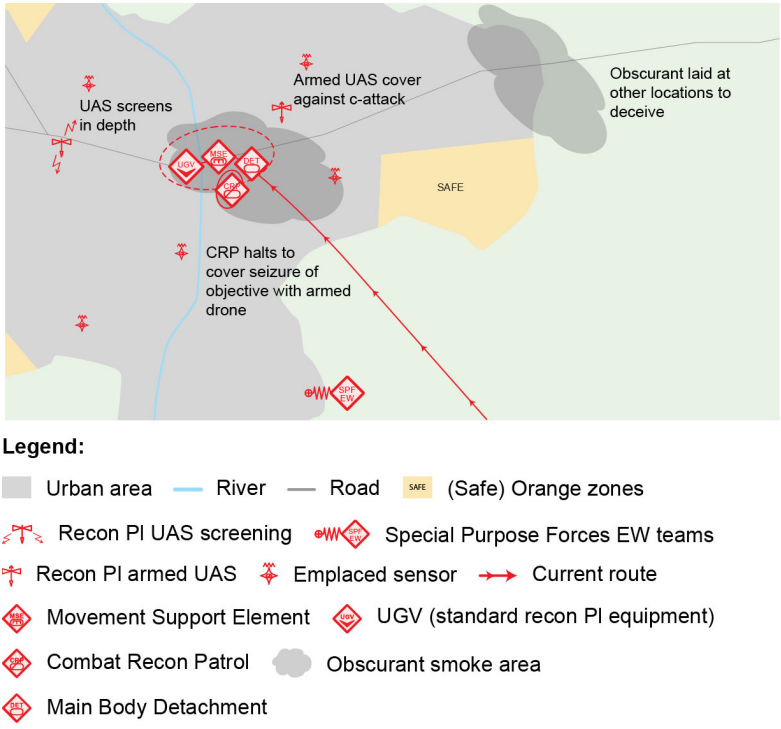
DET Main Body Detachment

The seize stage

5.45 The concept of the situational enclosed attack is to exploit obscuration, speed, shock and drive right up to, or ram, breach and enter carefully selected objective buildings. This may exploit prior precision attack or support from armed UAS. The Olvanan preference is to seize and occupy undefended buildings and use these as base for coordinating the destruction of defended buildings using precision munitions. If they encounter significant resistance at this stage, an option that exploits the Enclosure-world facility to precisely locate their own troops, is to deploy opaque obscurant while destruction is occurring.

5.46 If destruction levels of supporting firepower are not available and the objective is defended, the leading elements of the attack detachment and the tanks halt to provide a base of fire, engaging objective buildings to neutralise them and create breaches while the IFV then dismount their infantry at, or within objective buildings. Figure 5.10 does not attempt to show this detail. It indicates that the combat reconnaissance patrol has halted and taken up hasty defensive position to cover the UGV, engineers and main body advancing directly to their assigned objectives or fire positions.

Figure 5.10: Seize stage of the situational attack



5.47 The Olvanans teach that the key to success lies in distributing high explosive (HE) and thermobaric munitions into all parts of buildings that are to be seized and the use of incendiary smoke to deny other buildings. To achieve this a direct fire plan is provided to each AFV via Enclosure-world and to achieve what they call ‘mutual support’ two platforms are tasked to engage each identified target.

5.48 A hasty defence is established with UGV pushed forwards, while UAS are tasked in ‘hunting’ mode to target counter-attacking elements. The Olvanans consider UAS a great threat and will rapidly move AFV’s into cover. At the end of the seize stage, the Olvanans seek to occupy selected structures from which they can dominate. Other buildings or structures will have been destroyed (collapsed), cleared using remote systems and/or denied by burning and incendiary smoke. Armoured vehicles are in protected positions, preferably within buildings. They regard a seized position as a base from which to use remote and precision systems to destroy the enemy reacting to their arrival and anticipate only minor opportunistic further clearances.

Consolidation stage

5.49 Olvanan operational analysis has convincingly shown that the success of a contested situational enclosure attack is determined in the short period immediately following the arrival of the force on the objective. Consequently, they organise the attacking force to deploy to deliver to maximum firepower immediately followed by concurrent building entries across the objective. Any reserve formed is likely to be modest.

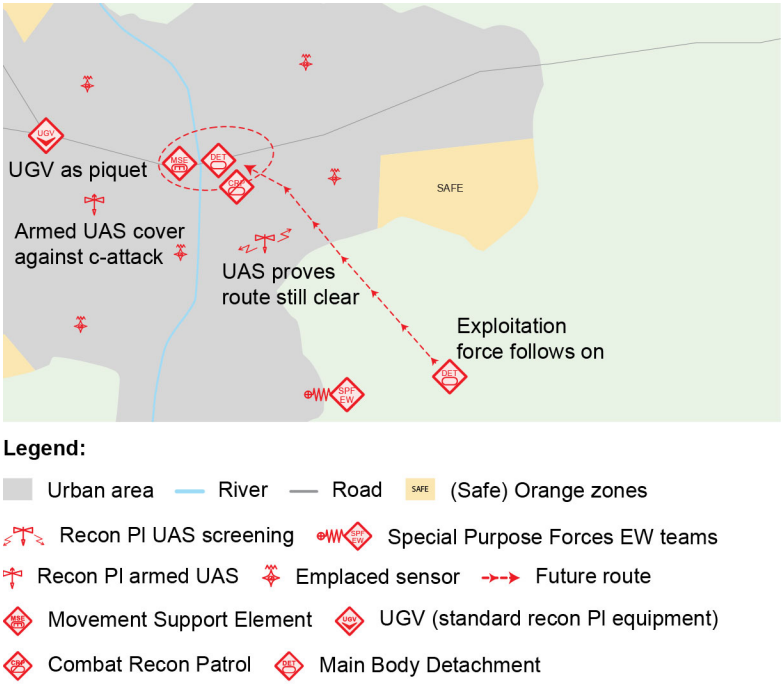
5.50 The exploitation of a successful seizure will be the task of a separate force or detachment. If this is not deployed so that it is able to immediately follow-up without delay, the Olvanans warn commanders to beware of being ambushed or struck with precision munitions or scatterable mine systems if reusing the original route.

5.51 A situational enclosed attack is predicated on an assessment that a substantial enemy counter move is unlikely and assumes decisive support is provided from artillery systems and formation level UAS cued by the IFC-CP. Nevertheless, the Olvanans are conscious of the risk of immediate local counter-attacks. They consider that the

best protection lies in maintaining ambiguity as to their dispositions, obscuration, concealing AFV and conducting aggressive action with un-crewed armed systems.

5.52 In Figure 5.11, the detachment finishes securing the objective, with UGV positioned forward as a picket and with armed drones covering against counter-attack. If an exploitation force will follow on using the same route that was used for the attack, UAS are deployed rearwards to prove (i.e. check) that it is still clear (this exploits UAS operators familiarity with terrain).

Figure 5.11: Consolidation stage of the situational attack



Dispersed enclosed attack

5.53 A dispersed enclosed attack regroups and deploys multiple detachments on independent approaches to concentrate overwhelming combat power at a selected objective. It is a standard Olvanan tactic in response to over-match by enemy sensors and precision stand-off weapons. On urban terrain it avoids presenting a concentrated linear target and the risk of an entire force being halted at one or two defiles. Dispersal reduces vulnerability to a mobile defence with a strong counter penetration force. The advent of increasingly capable UGV mitigates the vulnerability of a dispersed attack to isolation and piecemeal destruction on individual approaches. The tactic requires some regrouping and considerable coordination so only highly trained troops will be able to conduct it as a short notice ‘situational’ attack.

Overview

5.54 The dispersed attack may be conducted mounted or dismounted, but in either case for each avenue of approach task organised groupings are formed, normally with integral engineering, direct fire, indirect fire control, chemical smoke and UGV/UAS control elements. An allocation of un-crewed systems is made for the attack. Where the force on an approach is less than company-sized it is referred to as a strike, seizure, storm or confine Platoon Enclosure Detachment (PEDET) or Grupa (depending on attack method to be used).

5.55 Conceptually, the conduct is similar whether executed by small groups of AFV moving at speed under obscuration on roads, AFV or UGV ‘tunnelling’ and mechanically breaching pathways through and between buildings or dismounted troops infiltrating including through close country, reticulation systems or within buildings.

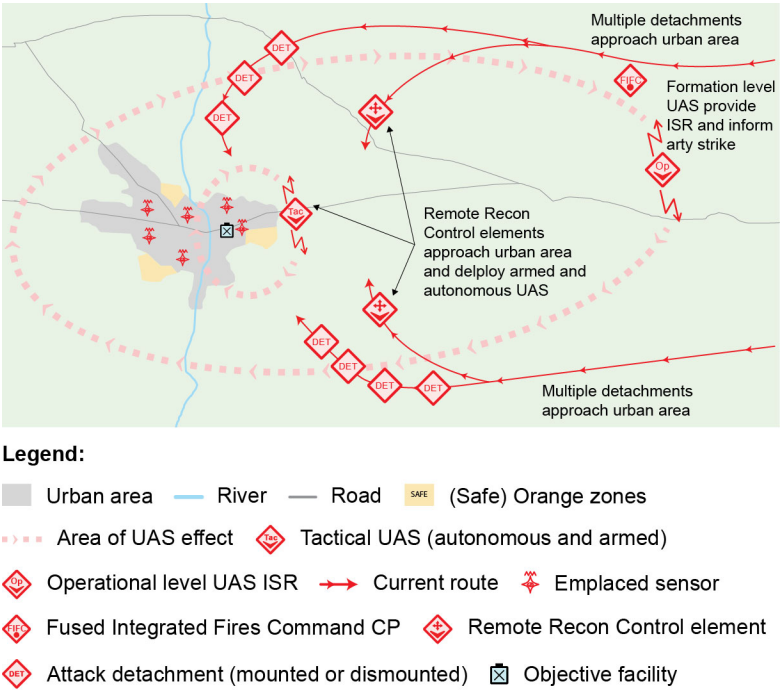
5.56 The possible conduct of a dispersed attack is illustrated in the scenario below which sketches the deployment to seize a facility in the centre of an urban area. Note: the example shows an ideal situation where an envelopment of the urban area is possible. The dispersed attack is also often used on a single frontage.

Secern stage

5.57 During the first stage of the attack favourable conditions are established while the attack elements regroup and begin their approach. Formation level UAS and previously emplaced sensor networks within the urban area reconnoitre broadly to confirm the intelligence picture, working back to the IFC CP who will task fire assets to be prepared to conduct a reconnaissance strike.

5.58 As shown in Figure 5.12, control elements from a RRC deploy towards the urban perimeter and position sensors or perching drones within the urban area, then autonomous UAS probe the over the area of the attack to update the intelligence picture and seek to unmask enemy CUAS. Target data may be passed to the IFC CP or targets may be struck by the armed UAS.

Figure 5.12: Secern stage of the dispersed attack

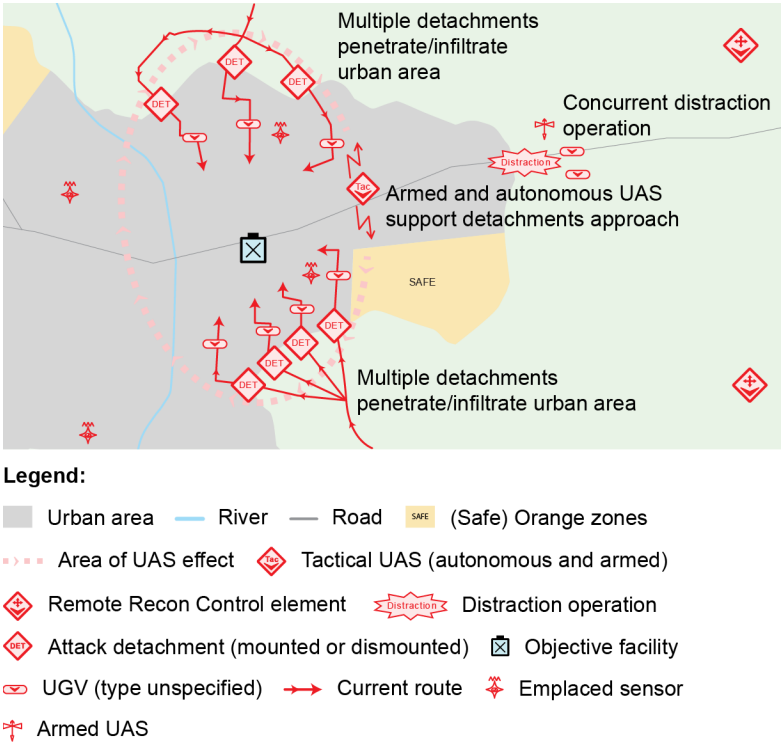


Mask and penetrate stage

5.59 The simple concept of multiple dispersed penetrations can be masked in different ways, with the choice of masking method distinguishing the attack. In some circumstances, particularly an unoccupied urban area, dismounted soldiers may infiltrate on foot relying on stealth to infiltrate through dense urban areas or foliage. Alternatively, UGV or engineering vehicles might be used to open pathways through structures or simply moving at speed under obscurants. As the force begins to penetrate the urban perimeter, as shown in Figure 5.13, UAS are concentrated into the manoeuvre area ahead of them.

5.60 The common feature of detachments conducting a dispersed attack are; the use of un-crewed systems to probe the route immediately ahead, and deploying with fire support elements well forwards so that their immediate action on contact is to use thermobaric and smoke munitions and attempt to outflank any blocking position. A detachment will also organise small patrols to be dropped off during the approach to provide rear security. Finally, during this stage the Olvanans will invariably mount deception activities to maintain ambiguity, using firepower, remote systems or combat elements.

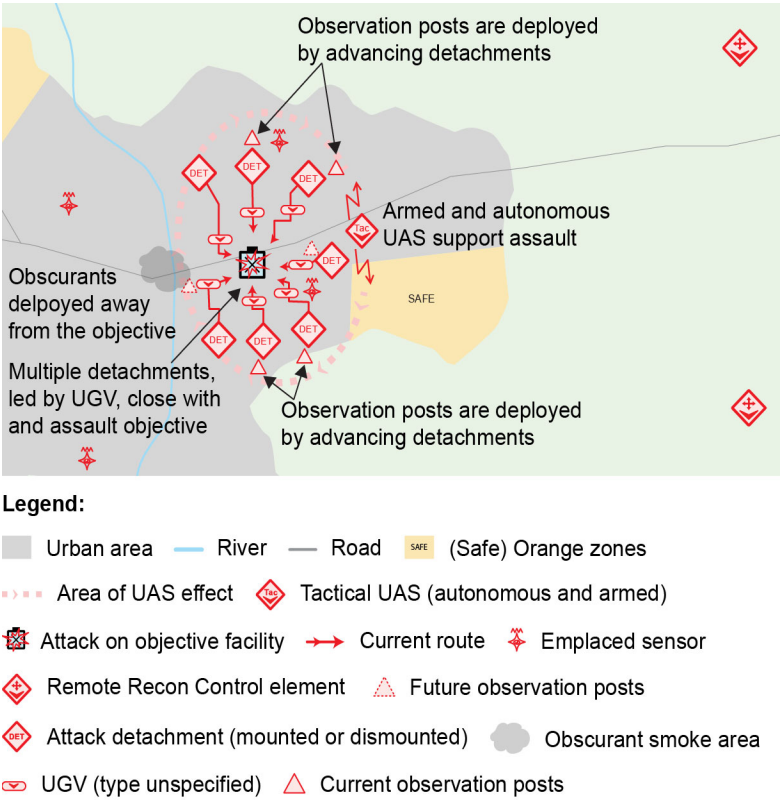
Figure 5.13: Mask and penetrate stage of the dispersed attack



Seize stage

5.61 The concept of the dispersed enclosed attack is to avoid presenting a concentrated target and maintain uncertainty for as long as possible, before local concentration to attack in force. To reduce the risk of losing essential capabilities if particular detachments failed to reach the objective, they would normally all be similarly organised, labelled and tasked as strike, seizure, storm or confine detachments. At forming up positions, if not before, the security OPs are dropped off and the detachments prepared to assault the objective(s) using tactics described in the next section. The deployment of security OPs is illustrated at Figure 5.14.

Figure 5.14: Seize stage of the dispersed attack



‘Orange action’ and ‘purple pre-bombardment’

5.62 Counter to Western military thinking, if surprise has been lost, the Olvanan commander may, especially if there is good cover available for the enveloping force in the forming up positions, deploy a UGV or UAS to call on the surrounded objective to surrender. An enemy failure to do so is, in Olvanan eyes, complete justification for bombardment with thermobaric or less-lethal chemical munitions. The risk of confusion during an attack with converging axes is high, so obscurants or incendiary smokes are unlikely to be used on the

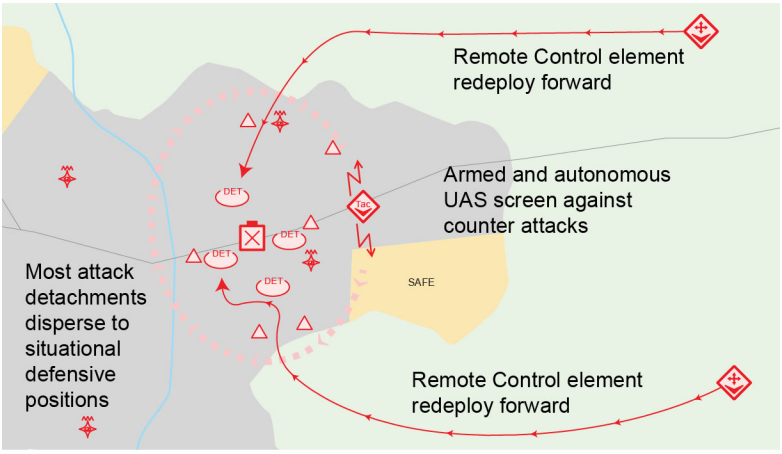
objective itself, however TI opaque or translucent obscurants are likely to be used to isolate the attack area from depth and surrounding positions.

Consolidation stage

5.63 The context for mounting a dispersed attack is likely to be a significant enemy response capability, so the Olvanan will seek to minimise the forces that they leave on or near positions known to the enemy as soon as possible after the attack. They will disperse most elements to pre-selected concealed situational defensive positions, relying on the previously positioned observation post (OP) to provide security while they do so. Having so dispersed, and being equipped with remote weapon systems, their preferred tactic is to remain static (with aggressive security patrolling) and force their enemy to expose themselves, rather than risking being ambushed during an exfiltration.

5.64 This dispersal to defensive positions away from the objective is shown at Figure 5.15. Note also that the robotic control teams that have been providing ‘foot on the ground’ during the attack now re-join the force.

Figure 5.15: Consolidation stage of the dispersed attack



The integrated enclosed attack

5.65 The integrated enclosed attack is conducted by regrouped and rehearsed combined arms teams that are tailored to task and fight fully integrated with joint effects. It is characteristic of the Olvanan approach to urban warfare and reflects the historical emphasis on storm grupas and storm detachments, themselves derived from Donovian tactics. The essence is organising the attacking force into many functional combined arms task grupas concurrently or consecutively carrying out separate tasks. It is explicitly a method for a force moving on urban terrain to mitigate the isolation and compartmentalisation of forces and obstruction of weapons effects.

Overview

5.66 The contemporary integrated enclosure attack exploits technology to build on the historical method, not only by integrating remote combat techniques, but also by delivering functional and C2 integration of many task-organised detachments, grupas and elements. This is achieved using Enclosure-world data and AI decision-making tools. The machine learning system takes the commanders scheme of manoeuvre, and applies it to the 3D model of the environment and threat to generate detailed movement and engagement directions for every force element. Rather than generating a single plan, however, the AI provides for multiple options, branches and sequels. The result is Olvanan advantage in speed of both decision and manoeuvre.

5.67 While the integrated attack prescribes combined arms regrouping and explicit functional tasking in detail, it is not prescriptive about execution. As the name suggests the intention is to integrate multiple manoeuvres and effects to offset the defensive value of urban terrain and psychologically overwhelm the enemy commander. The Olvanan commander has, in effect, a menu of choices between forms of manoeuvre (e.g. transits in streets or penetrations between and through buildings), masking effects (obscuring or denying) and actions on objectives (e.g. to strike, seize or storm). The method is extremely flexible and will mostly be guided by the overarching concept of fused warfare.

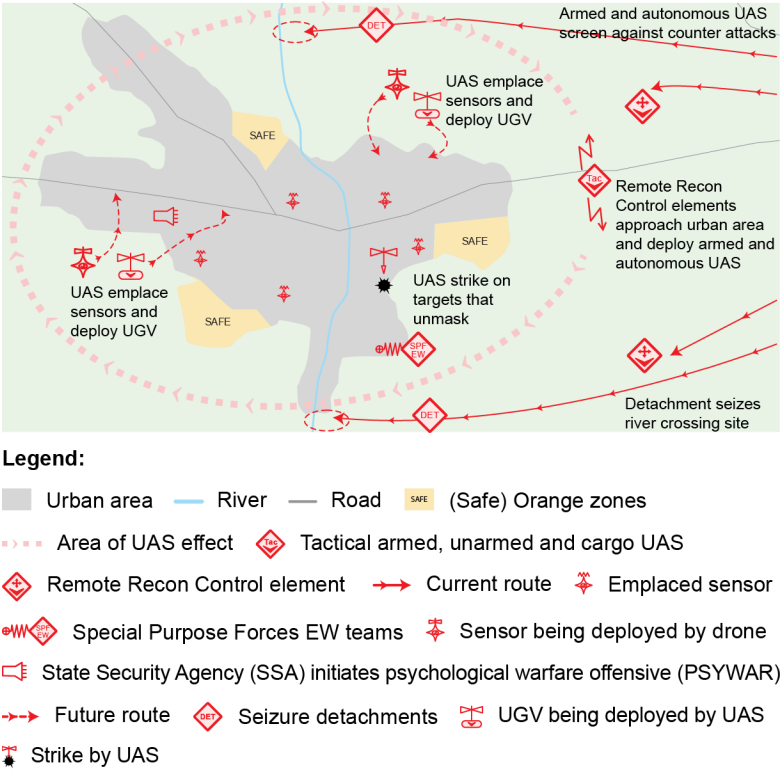
5.68 An Olvanan commander will, when given a mission, seek to secern, that is focus down onto the parts of the urban battlefield that must be influenced and the subparts that must be manoeuvred through or effected. Having done that they will consider how to isolate and mask from enemy influence these secerned areas and their own force as it manoeuvres. Then they will allocate resources to exert psychological, informational and electromagnetic effects on the immediate battle space especially using remote systems.

5.69 The example below is intended only to illustrate the way in which the integrated attack combines the actions of different functional task groupings.

Integrated enclosed attack – secern stage

5.70 This scenario envisages that an Olvanan Division (or multi-brigade task force) intends to secure a river crossing in the centre of an urban area and will focus their attack on that endstate rather than securing the entire urban area. Prior operations have shaped the population, including nominating orange ‘safe areas’ and have provided a basic picture of enemy dispositions. Formation level UAS coordinated from the IFC CP validate the picture and poise to strike unmasking high-value targets with long-range precision fires.

Figure 5.16: Secern stage of the integrated attack



5.71 The first echelon brigade has a RRC attached and is tasked to conduct the 'toward-enclosure' operation. The RRC first deploy control elements towards the urban perimeter, as shown at Figure 5.16, then deploy autonomous and semi-autonomous UAS to both screen widely for enemy forces and probe in detail along possible routes. UAS lifting platforms emplace sensor systems at inaccessible locations across the urban area and also deploy a small number of armed UGV as a distraction. Precision strikes are made against enemy weapon systems that unmask, as well as positions on the perimeter. Psychological operations and electromagnetic warfare within the urban area now intensify.

5.72 Two toward-enclosure seizure detachments are launched to secure possible amphibious crossing or bridging points north and south of the urban area. During this stage, the second and third echelon brigades of the division regroup to form seizure, storm and penetration detachments and rehearse their tasks, while the Fused Integrated Fires Command (Forward) CPs of both brigades are separately deployed as far forwards as possible (not shown but as in earlier illustrations).

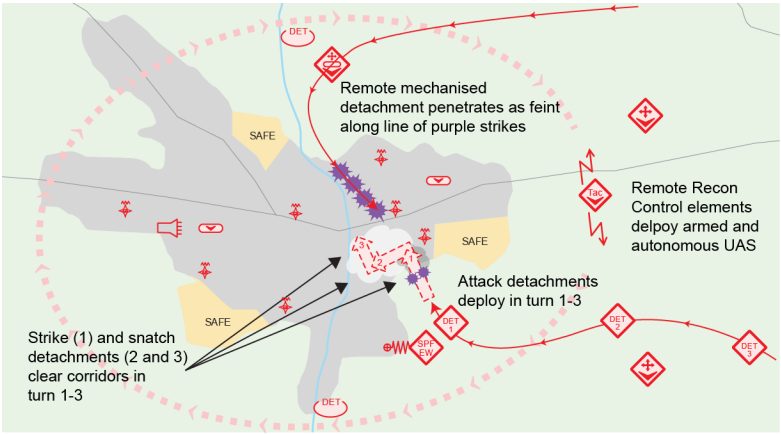
Integrated attack – mask and penetrate stage

5.73 Integrated attacks allow maximum scope for synchronising psychological and kinetic effects, especially the characteristic Olvanan use of UAS to make warning loudspeaker announcements and the tactic of first 'purple (roof) knocking' buildings with purple smoke munitions and then a set time afterwards striking with precision munitions. Once a clear pattern of warning is established, further purple smoke munitions are delivered in other areas, only some of which correspond to intended objectives. Such strikes continue progressively to include destroying the enemy positions around the bridge.

5.74 The attack commences in an area the Olvanans have determined is relatively unpopulated (eg. an industrial area on the riverside). In Figure 5.17 this is indicated by the line of four purple strikes on the north side of the urban area. The first manoeuvre is by an (un-crewed) mechanised remote combat detachment which advances from the north along the line of the initial strikes. Human controllers only follow a short distance into the urban area and

operate the platforms from a secured position. The intent is to both deceive and threaten the withdrawal route of enemy perimeter forces, encouraging them to unmask and withdraw. The likelihood of the un-crewed force being disrupted or defeated is accepted.

Figure 5.17: Mask and penetrate stage of the integrated attack



Legend:

Urban area — River — Road — SAFE (Safe) Orange zones

Area of UAS effect — Tactical armed, unarmed and cargo UAS

Current route — Emplaced sensor — Detachment in defence

Psychological warfare (PSYWAR) continues — UAS control element

Special Purpose Forces EW teams — Detachment attacks

Purple strikes (coloured smoke precedes HE) — TI opaque obscurant

TI translucent obscurant — UAS-deployed UGV (indicative of many)

Attack detachments (Strike # followed by two Snatch #)

5.75 The second manoeuvre of this stage is executed by three attack detachments leapfrogging to secure successive parts of a corridor from the perimeter to the bridge numbered 1-3. This is ‘doglegged’ to deceive. The first ‘strike’ detachment (Det 1) exploits a gap in defences created by large munitions, to secure a short corridor (1) with its attack obscured by TI opaque smoke and with armoured vehicles navigating blind. The subsequent two detachments (Det’ 2 and 3) conduct snatch attacks to secure a series of positions along their respective corridors (2 and 3) operations operating under TI translucent smoke. Obscuring smoke is applied elsewhere as a diversion. The stage ends with a detachment poised to seize the bridge and a secured corridor up to it.

5.76 Note that as elsewhere in Olvanan doctrine, one stage of an operation at a superior level (in this case the task force level mask and penetrate stage) may be conducted as four separate stages by the subordinate formation. In this case each detachment will secure its corridor in four stages, but this detail is not shown.

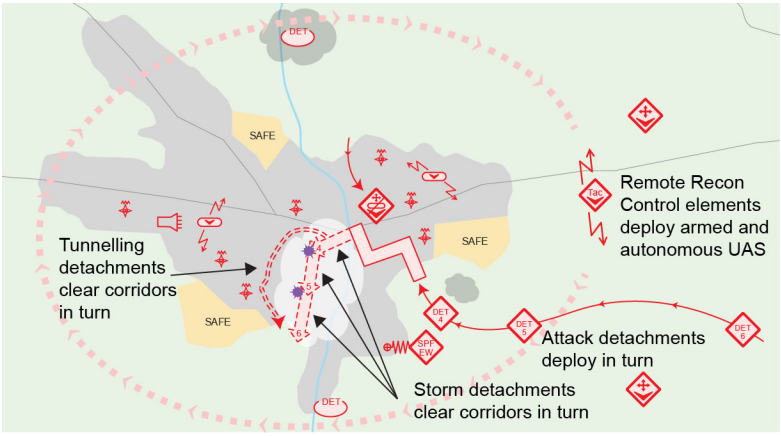
Integrated attack – seize stage

5.77 The bridge is secured by a strike operation, that is, the key buildings surrounding it are collapsed to destroy defences within and obscure line of sight from other weapon systems. The strike detachment is engineer heavy with armoured engineer vehicles to clear rubble, and a bridge layer as a contingency against partial enemy demolition of the bridge. The engineers do not clear the collapsed building in detail but use incendiary smoke munitions to neutralise them and allow the force to advance. The strike operation is not shown on Figure 5.18, rather the diagram shows the subsequent parts of the seize stage.

5.78 In anticipation of an aggressive enemy response, the next manoeuvre after securing the bridge is to drive a tunnelling detachment through lines of buildings on the exposed flank of the next objectives. This is shown by the double dotted line arrow curving downwards to the left of the numbered corridors 4, 5 and 6. The manoeuvre uses medium dozer-blade equipped UGV to drive concealed within buildings, breaching walls to make a path for accompanying dismounted infantry who secure a series of OP’s.

5.79 Anticipating that on the far side of the river they will encounter prepared defences, the following three groupings are configured as storm detachments. They cross the bridge and in turn detachments 4-6 secure sections of corridor 4-6 pushing south to the perimeter (continuing ‘purple strikes’). During this, obscuration is placed on the northern potential crossing point to maintain ambiguity. Concurrently, the remote reconnaissance control elements that conducted the earlier feint now leapfrog forwards to be positioned to push the remote reconnaissance screen further into the contested urban area. This stage ends with a continuous corridor secured through the urban area across the bridge.

Figure 5.18: Seize stage of the integrated attack



Legend:

Urban area — River — Road — SAFE (Safe) Orange zones

Area of UAS effect — Tactical armed, unarmed and cargo UAS

Current route — Emplaced sensors — DET Detachment in defence

Psychological warfare (PSYWAR) continues — UAS control element

SPF EW Special Purpose Forces EW teams — Detachment attacks

Purple strikes (coloured smoke precedes HE) — TI opaque obscurant

TI translucent obscurant — UAS-deployed UGV screening

DET Attack detachments — Cleared corridor — Alternate tunnelled corridor

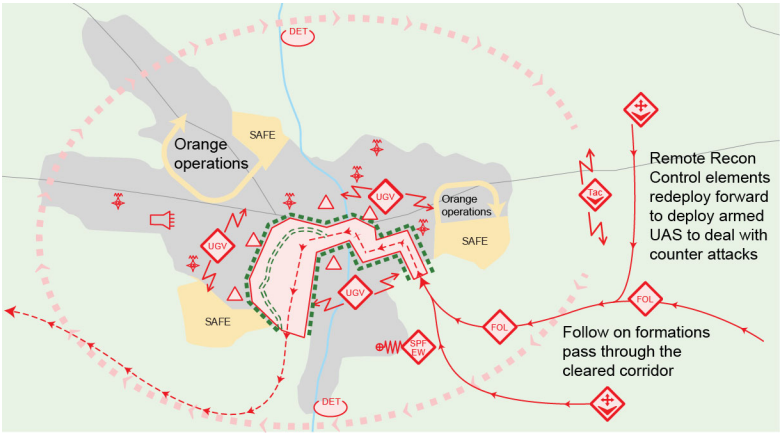
Integrated attack consolidation stage

5.80 The consolidation stage involves reinforcing the cleared corridor with soldiers and un-crewed systems as well as constructing obstacles to deny movement. Figure 5.19 shows thick green dotted lines to indicate where engineers employ rapid laying machinery to quickly establish obstacles to deny enemy infiltration. These also serve as minefield fences behind which intelligent anti-armour mines and anti-personnel remote weapons station (RWS) are positioned, operated by robotics control teams in observation positions. The lighter green dotted lines represent fortification along the axis of tunnelling. This route offers movement protected against UAS and enables the Olvanans to deploy counter-attack elements rapidly and relatively securely if required.

5.81 Importantly, the Olvanans insist that the consolidation stage must militarily and politically (i.e. in Information Operations terms) retain the initiative to deny the enemy the opportunity to counter-attack. Un-crewed systems operating in a hunter-killer mode are the prime tool. The Olvanans anticipate that the combination of prior fusing, UAS positioned sensors and aggressive use of UAS/UGV will provide an information advantage such that counter attacks can be defeated. The use of tunnelled routes and obscurants can reduce the exposure of following-on elements to precision weapon attacks launched by depth enemy. The political or psychological initiative emphasises Orange Jackets operations. They immediately begin rescue and relief tasks, guiding non-combatants to move to safer areas and to distribution points for food and water. The Olvanans do not imagine that these actions will necessarily deter enemy counter moves, but they see a great narrative advantage if their humanitarian efforts are subject to attack.

5.82 At this stage the RRC elements that have provided overwatch from outside the urban area close up, while follow-on formations pass through the cleared corridor.

Figure 5.19: Consolidation stage of the integrated attack



Legend:

Urban area — River — Road — (Safe) Orange zones

Area of UAS effect — Tactical armed, unarmed and cargo UAS

Current route — Emplaced sensors — Detachment in defence

Psychological warfare (PSYWAR) continues — UAS control element

Special Purpose Forces EW teams — Cleared and secured corridor

Future route — Observation posts — Follow on elements exploiting

Orange operations (movement of civilians) — UGV deployed to guard

Tunnelled corridor — Constructed barriers/obstacles

This page intentionally blank

Chapter 6

Planning and organising the enclosed attack

6.1 The Olvanan approach depends on detailed coordination of manoeuvre, fire, engineering and other effects. This relies upon common understanding of terms, techniques, reliance on drills and functional regrouping. This section provides essential understanding by introducing the Olvanan functional vocabulary for the attack and providing examples. Their approach is flexible and modular, allowing commanders to apply different tactics and techniques within a single operation. The examples show how this might be done, but they should not be regarded as prescriptive.

6.2 The section is organised as follows:

a. Key terms, with illustrated explanation of the types of attack.

b. Regrouping, with illustrated examples of groupings.

c. Listing of different functional elements and explanation of their tasks.

d. Planning and control measures.

Key terms for the attack

6.3 The Olvanans use specific terms to describe different techniques for enclosure attacks, levels of security imposed and forms of manoeuvre. They consider the term assault insufficiently specific but often informally use the preferred historical labels of Socialist countries. Storm detachments referred to unit level task groupings that were traditionally assigned to assault an associated set of objective buildings. Storm grupas were subunit level groupings that traditionally attacked individual or closely associated objective buildings. Strictly speaking, ‘storm’ now refers to one particular method of attack.

6.4 The different actions on objectives are:

a. Snatch attack

b. Strike attack

c. Storming attack

d. Containment

e. Back clearing

f. Occupation.

Snatch attack

6.5 Snatch is the technique normally used for a situational attack, is only mounted against a weak or unprepared position and does not depend upon special capabilities and remote systems beyond those normally carried in an infantry platoon. Conceptually, it approximates to a sudden conventional attack in open country that seizes positions across an unprepared defence to cause sudden collapse. Risk is accepted to maximise speed, shock and surprise, dislocate defences and minimise exposure in the killing areas immediately outside of buildings. Groupings assault multiple sub-objectives simultaneously, under obscurant and/or immediately after indirect firepower is delivered across the objective. Preferably this firepower is airburst fused to avoid rubble blocking planned pathways.

6.6 The basis of the snatch attack technique is shock explosive or mechanical breaching to rapidly seize initial bounds at multiple points across the objective and where the attackers will then be relatively secure. Initial bounds are selected to disrupt the coherence of the defence and be least vulnerable to counter-attack or counter-fire. These may be towards the centre of the position. The remainder of the objectives are cleared (proved) in slow time by small teams using remote systems, if possible after giving non-combatants the opportunity to evacuate and defenders to surrender.

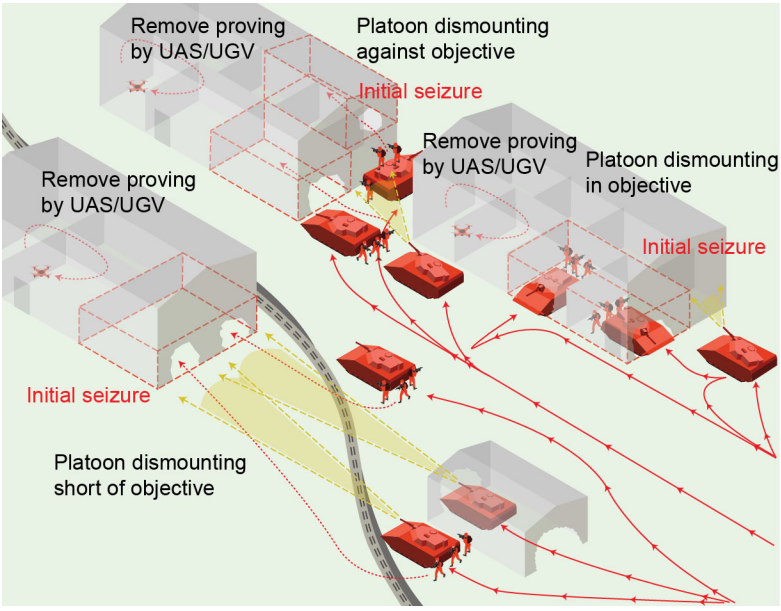
Example: Mechanised snatch

6.7 Figure 6.1 illustrates the three (three vehicle) platoons of a mechanised company each snatch one of three buildings. The final approach is conducted under obscurant.

6.8 For the purposes of this example, the three buildings are assaulted in three different ways as dictated by building construction and obstacles. The right-hand building is of a construction type that allows the AFV to physically breach the walls and conduct a platoon

dismount in the objective. The top building behind the first is too strongly constructed to enable mechanical breaching so the platoon dismount occurs against the objective. The grey line with double dashes running from top left to centre of the diagram represents a storm drain that cannot be crossed by the AFV. This requires the platoon attacking the lower left building to dismount short of the objective.

Figure 6.1: Example of a mechanised company snatch attack



6.9 The small building in the lower part of the diagram represents an undefended structure which is opportunistically used as cover.

6.10 In the first case (top right building) two of the platoon APC/IFV use the preferred Olvanan method and reverse into the objective to create a mechanical breach (for more deliberate attacks, AFV are prepared with frame-mounted breaching charges to ease this). This ‘ramming entry’ is covered by the third, platoon commanders, vehicle, whose section remains a reserve. If the objective is a multi-level building, the covering APC/IFV will engage upper floors while the

initial breaching and snatch occurs. The two snatch sections exploit the shock of breaching to dismount and seize an initial bound, which may be a substantial part or even all of one level. Once this is secure each section deploys a small team using their section drones to check (prove) the remainder of the building, including upper levels and basements.

6.11 In the second case, top left, the building is unsuitable for mechanical breaching, so two of the APC/IFV approach and then halt close alongside the objective. As they do so again covered by the third APC/IFV, which uses its armament to make a kinetic breach (because of stand-off and minimum warhead arming distance). The snatch APC/IFV engage through the wall as they approach. Where possible the entry will be made on the first floor and accessed by climbing on the APC/IFV. If this is not possible the APC/IFV try to deploy with the backs of the vehicles facing each other to create a sheltered space to dismount. Two snatch sections similarly seize an initial bound, which when they do not have their APC/IFV in the building for protection, is always large enough to disperse the soldiers, since the Olvanans believe the greatest threat at this stage is un-aimed fire through walls and floors or grenades. They then prove using the drone.

6.12 In the third case, the building shown bottom right, there is a storm drain that prevents the AFV closing with the platoon objective. The vehicles create kinetic breaches and suppress the building while the two snatch sections dismount and assault. As for the other two platoons, they snatch an initial bound and then deploy proving teams.

6.13 In this example the third, platoon commanders, vehicle remains back from the objective building and the section within it remains uncommitted. The platoon commander’s focus is to deliver direct fire support for the proving teams, and they are likely to deploy their section drone on the outside of the objective building. The example uses a three-vehicle platoon, but procedure is the same if there are four vehicles. If tanks equipped with dozer blades are grouped with mechanised infantry they may be tasked to ‘swipe’ along building facias to facilitate other vehicles entering.

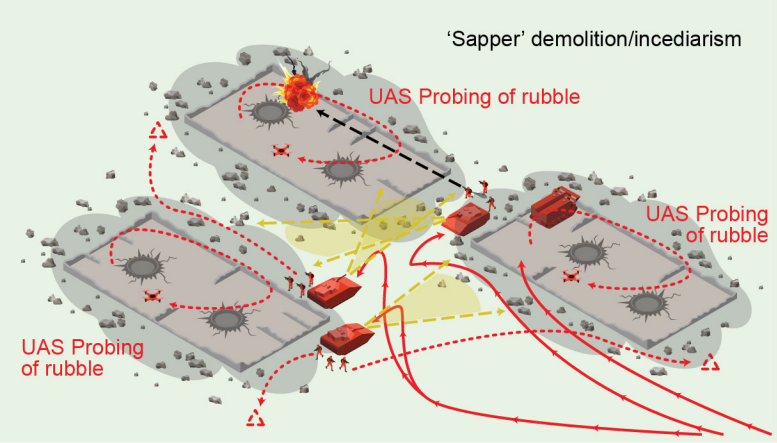
Strike attack

6.14 A strike attack is where heavy (larger than 200 mm calibre) munitions or demolition charges are delivered onto an objective as the primary effect. If buildings are not physically collapsed, all potentially occupied parts above ground have either been blasted open and can be entered by UAS or are burnt out. Strike infers ‘annihilation’ effects (80-90% casualties). Normally a strike attack will be preceded by a so-called ‘purple knock’ where purple smoke rounds will be delivered several minutes ahead. The Olvanans would expect to have multiple sensors in the objective area observing any redeployment that occurs at this point and might even deploy an autonomous loudspeaker drone. The role of the attacking force is to secure against counter-attack and either ‘prove’ (check clear) the remaining structure and rubble by maximising the use of remote platforms, or deny it by further demolition or incendiarism.

Example: Mechanised strike

6.15 In the example illustrated below at Figure 6.2, a mechanised platoon with an engineer section is tasked to secure the strike objective, which consists of three destroyed buildings. Other elements are securing the outer approaches. The APC/IFV advance onto the position under obscurant and adopt an ‘inwards facing’ posture. This ensures both that the objectives are observed and can be engaged with vehicle armament (beyond arming distances) and that there is mutual overwatch of otherwise vulnerable close-in approaches. The infantry sections deploy OP’s out to secure both the external approaches to the objective and sentries at the close approaches to the vehicles. At this point the Olvanans will make a loudspeaker announcement calling for non-combatant survivors to identify themselves and enemy soldiers to surrender. The proving teams then concurrently use their section UAS to prove remaining structures and rubble. In each section, this action is covered by a soldier with a launcher loaded with enhanced blast or incendiary munitions. The platoon commander uses feedback from the infantry sections to task the engineers who prove the rubble and place demolitions or incendiaries, whenever possible using load carrying drones. The engineers may also use dogs to identify the presence of survivors in the rubble and drones to confirm whether they remain a threat.

Figure 6.2: Example of a mechanised platoon strike attack



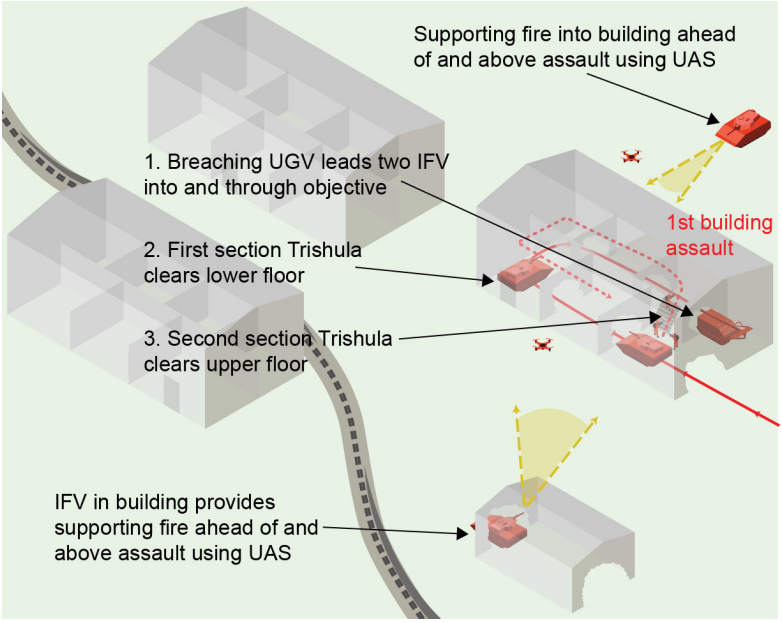
Storming attack

6.16 The storming attack is also sometimes known as 'blooming lotus', referring to the Olvanan term for blitzkrieg. It suggests moving through a small gap and expanding. It is an assault into objectives where each assaulting grouping enters through breaches created by explosives, vehicles or engineering equipment. The emphasis is on rapid penetration in depth before clearance, as well as the extensive use of explosives and explosive munitions within structures. This method not only offers maximum shock effect and neutralises enemy mines and booby-traps, the explosive or mechanical breaching allows avoidance of doorways and stairwells where attackers are especially vulnerable. In keeping with the Olvanan emphasis on vehicle firepower, AFV, whether inside or outside of the objective building by default prophylactically engage areas beyond the bound being assaulted. After the 'storming' of an initial bound (which may be the complete objective), the subsequent 'proving' routinely continues to use explosives as well as remote platforms, (where available dogs) and probes to minimise risk to the attackers.

Example: mechanised/sapper storming attack

6.17 Below is an example of a reinforced mechanised platoon including an engineer section with an engineering UGV storming an objective which consists of three buildings. This is illustrated in three stages corresponding to the attacks on the different buildings. The first assault is shown at Figure 6.3. Other elements are securing the outer.

Figure 6.3: Example of a reinforced mechanised platoon storming – Phase 1

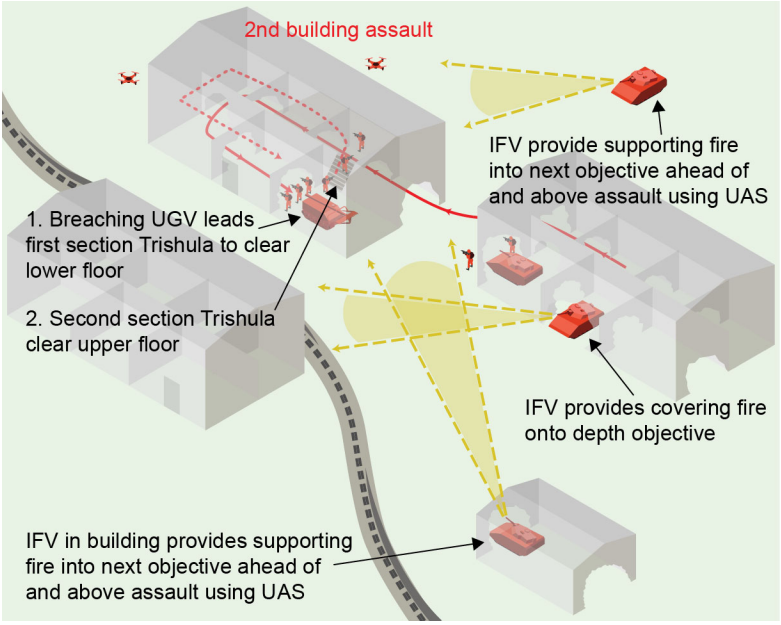


6.18 **Phase 1.** Under obscuration the engineering UGV leads the advance and mechanically breaches directly into the first objective building (right), while APC/IFV provide covering fire onto all three buildings (only fire on immediate objective is shown).

6.19 After entry the UGV moves quickly through the building, breaching internal walls and discharging concussion grenades as it enters new spaces. It is immediately followed by an APC/IVF which has its section still aboard and remains closed down as a ‘mounted reserve’ (and protected from ‘friendly fire’). Immediately behind it a dismounted section closely follows-up the shock of the two vehicles and the concussion grenades. It ‘proves’ the ground level, working outwards from the ‘tunnelled’ path breached by the UGV. The other APC/IFV continue covering fire into the upper levels of the assaulted building and other buildings, deploying their UAS close to the buildings to probe for targets within. The (platoon) commander personally coordinates the movement of soldiers to prove the upper levels of the building with the commanders of overwatching APC/IFV.

6.20 **Phase 2.** As soon as the (platoon) commander is satisfied there is minimal risk of counter-attack from within the first objective building (right), (which may be before it is thoroughly proved), he orders the next assault as shown at Figure 6.4. In this case the second objective building (top left) is not suitable for the preferred method of assault mounted in APC/IFV. The leading APC/IFV within the first building delivers preparatory and breaching fire onto the second one (top left) while its section dismount and prepare to attack. The other APC/IFV, whose section has secured the building, moves within it to cover outwards onto the third objective (bottom left).

Figure 6.4: Example of a reinforced mechanised platoon storming – Phase 2

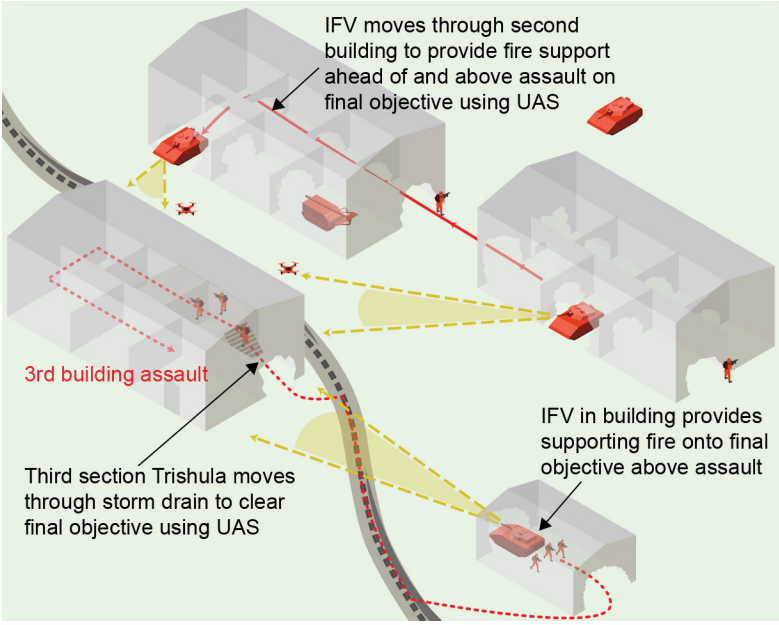


6.21 The assaulting section now use tube launchers to engage the first part of their objective with thermobaric munitions and then place obscurants. The UGV mechanically breaches out of the first objective and into the next, repeating the pattern of discharging concussion grenades as it moves. The section follow on to prove the building clear, with fire from APV/IFV continuing into the upper level as the lower is cleared and with the (platoon) commander again coordinating this fire and its switch away for the upper floor assault.

6.22 **Phase 3.** The third objective (bottom left) is inaccessible to vehicles because of a drainage ditch, and a dismounted assault across an open area is required as shown in Figure 6.5. Prior to this the building is probed with a UAS that searches for targets for the overwatching APC/IFV. During this, the commander confirms that a suitable breach has been made in the objective building wall and mines or obstacles have been disrupted. If vehicle cannon fire has not

unambiguously achieved this, thermobaric and breaching tube launched munitions are employed before placing obscurant. The storming of a building without mechanical breaching is executed with successive breaching munitions. The launchers are fired from the cover of a breach or doorway to make a further breach in a further wall. The tactics, techniques, and procedures (TTP) for this 'Sapper Storming' are described in later sections of this doctrine.

Figure 6.5: Example of a reinforced mechanised platoon storming – Phase 3



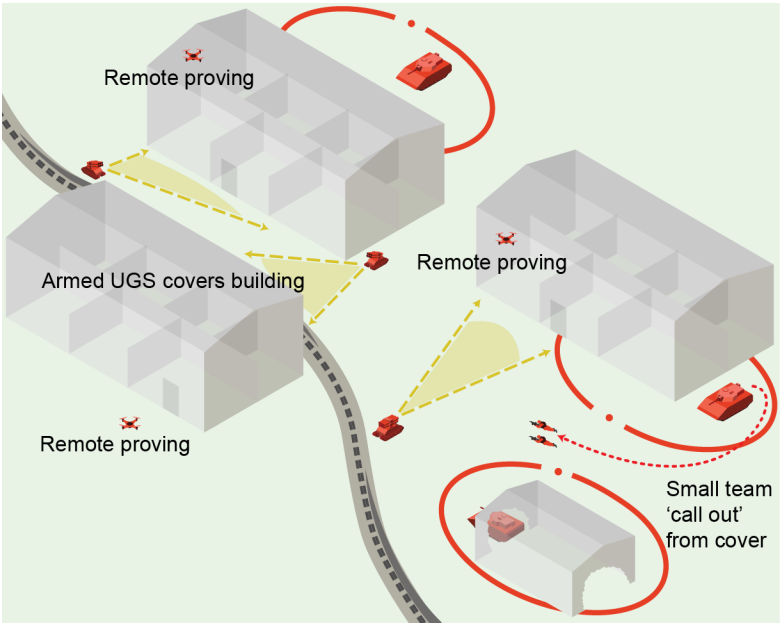
Containment

6.23 Containment is a tactic that has both an ethical and tactical purpose, largely made feasible by the use of semi and fully autonomous systems. Tactically, during the attack it minimises delay while reducing the risk of bypassing uncleared structures on the path of the advance or around an objective. Security elements, preferably using un-crewed systems, are deployed to dominate the uncleared structures and open spaces around and in between them. Parts of buildings, particularly ground floors may be cleared, but systematic clearance of the interiors does not initially occur. An element (usually a semi-autonomous system) is overtly positioned to decisively neutralise threats that may emerge from within the structure, which may be a direct fire system, command detonated demolition or in particular, incendiary charges. Whenever possible the area is ‘purple fenced’ against accidental entry, and within these zones ‘intelligent’ weapons systems are authorised to operate autonomously.

Example: containment

6.24 In the example illustrated at Figure 6.6, a reinforced mechanised platoon of three APC/IFV with three armed UGV is tasked to contain the objective of three buildings. The vehicles deploy to form a perimeter that isolates the objective and the UGV are positioned to dominate the buildings and their main entry points. Concurrently teams dismount to provide local protection for the vehicles and UAS begin proving the buildings initially from the outside.

Figure 6.6: Example of a containment



6.25 The (platoon) commander, with a small escort, moves to a covered position and uses loudspeakers to warn occupants of the 'contain' weapon/demolition charge and direct them to evacuate (and any defenders present to surrender).If Orange Jacket personnel are immediately available, they may be tasked to approach the buildings under a white flag. If there is a response, occupants are ordered out and told to leave all doors and windows open. To maintain momentum, initial proving clear may be limited to parts of the building. Security elements tailored to task from robotic units, the OPAP, Enclosure Pioneers (dog units) 'secure' the area by dominating the outside of the buildings and space between. The key is the use of autonomous weapons in secerned areas. The Olvanans have fence-deploying equipment which allows them to rapidly (in minutes) 'fence off' 'Purple zones' from accidental entry. Within these they deploy weapons with fully autonomous capability.

Orange operations: containing and calling-out

6.26 Urban objectives is a tactic central to fused warfare where civilians and defenders are given a warning to evacuate or surrender. While the basis is ethical, Olvanan commanders expect information warfare benefits and cascading psychological warfare benefits as positions surrender. For this reason they may accept the risks involved in giving defenders warning and time for preparation. However, and crucially, if resistance is encountered from a building, they will destroy it without hesitation. As they will constantly publicise by multiple means, if resistance occurs in the close presence of civilians or during their evacuation they will regard that as perfidy. The preferred doctrinal response is to 'special smoke' munitions (not white phosphorus [WP]) into the building on the basis that this will deny the building, force any defenders into the open where they can be killed, and, while it will cause fires there will still be the opportunity for civilians to escape.

Occupy

6.27 To occupy is to take control of structures where resistance is not expected. The occupying groupings remain organised for self-defence and security. This is the subject of other doctrine but is not significantly different from Western practice.

Enclosed 'securing and controlling' actions

6.28 While the Olvanans seek to focus on defeating enemy systems rather than capturing ground, establishing control of an urban area will often be essential. Ultimately this will be a control and stability operation, which is addressed in separate doctrine. Nevertheless, offensive operations set the conditions. Besides distinguishing between containing and occupying as described above, the Olvanans use specific task verbs to indicate the level of verifying the threat status of ground they occupy or move over, or the level of security they then impose. It is important to note that, these (translated) terms have slightly different meanings to Western use:

a. Probe is entry by a person, dog or sensor that is focused on detecting enemy, and targeting it does not verify systematically.

b. Prove is a rapid verification, by a person, dog or sensor, of absence of unconcealed threats in tactically significant interior spaces from which an enemy might substantially threaten the mission. It implies accepting risk for speed. This is a translation of the Olvanan term and differs from the more Western meaning related to a thorough checking after obstacle clearance.

c. Search is thorough checking of all the interior and adjacent spaces of the structure, including for nominated concealed threats, by persons, dogs and sensors.

d. Picket is positioning persons or sensors ahead of, to the flank of or behind main forces tasked to detect enemy movement in specified zones.

e. Secrete is deploying the bulk of a grouping for concealment and protection within structures, with defensive positions not occupied but identified and sentries posted.

f. Defend is deploying in or around a structure sited for immediate self-defence.

g. Fortify is deploying within structures and carrying out works to survive, defeat attacks in depth and deceive/conceal.

Enclosed manoeuvres

6.29 Achieving and maintaining security whilst moving across urban terrain requires specific techniques.

Enclosure infiltration

6.30 Infiltration is the movement across enclosed terrain of persons or small un-crewed systems in small groupings moving independently with freedom of action to manoeuvre to avoid detection or decisive engagement. It may move within structures, especially subterranean systems, but is not normally organised or equipped to continuously breach its own path.

Penetration lanes

6.31 Penetration is tactical movement on a narrow front across and through urban terrain that makes the best use of cover and concealment, mainly moving within foliage, structures or narrow spaces between them. The Olvanan regard the key to a successful penetration as relative speed. Its security mainly derives from moving faster than an adversary can respond. While normally this means a rapid advance enabled by machines, in dense urban terrain where open spaces and streets prevent redeployment, penetration by dismounted engineer breaching of buildings may still be considered viable.

a. Sapped penetration is conducted by a dismounted grouping equipped and organised to create a covered route through buildings by successive breaches, whether by explosives or mechanical systems and platforms.

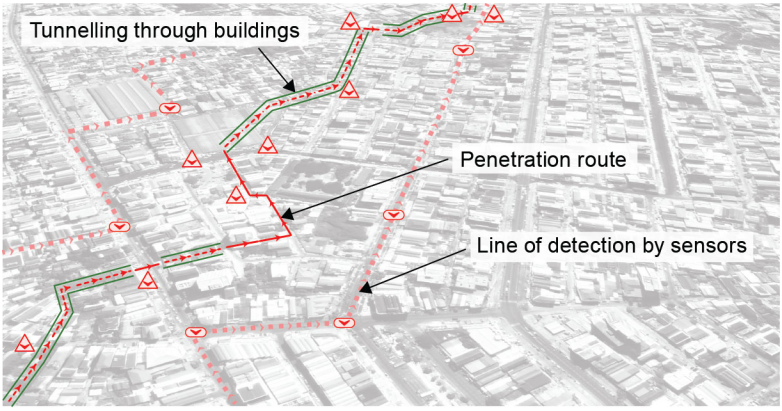
b. Tunnel penetration is conducted by a mounted grouping equipped and organised to mechanically breach a pathway for its component vehicles to move through and within buildings. This will typically be achieved using armoured engineering vehicles. The term tunnelling describes the capability, although a tunnel penetration might only pass through buildings intermittently.

c. Picketed penetration detaches OP's along its route to detect enemy movement.

d. Secured penetration deploys elements along its route to deny enemy freedom of action.

6.32 An example of penetration is shown at Figure 6.7. As described above, a route is created across an urban area, mostly by penetrating through buildings but also using better concealed 'back lanes' etc. Vision screens may be erected where the penetration crosses very exposed points. OPs are deployed on the flanks of the penetration and they operate UGV further out to maintain a detection line.

Figure 6.7: A picketed and tunnelled penetration



Legend:

- Penetration route in open
- Penetration route through buildings
- Tunnels cut through buildings
- Security detection line (UGV sensors)
- Key uncrewed ground vehicles/systems
- Observation posts controlling uncrewed systems

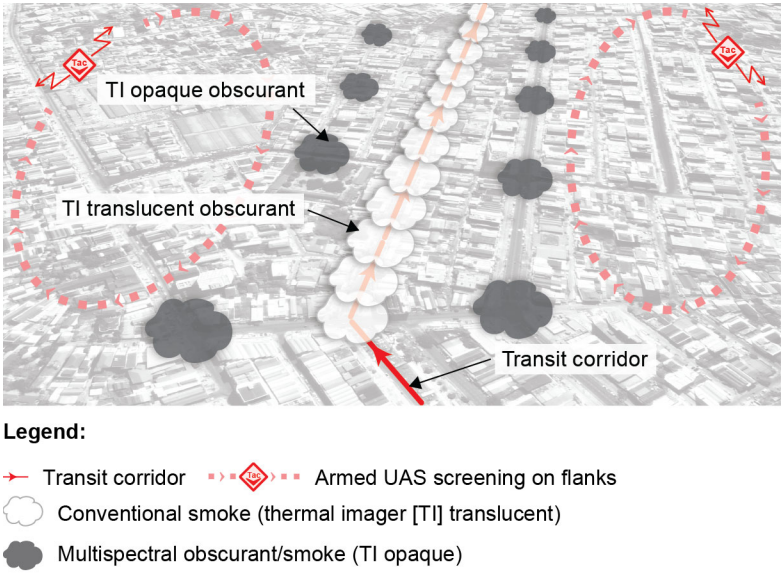
Enclosure – corridors

6.33 A corridor is a route across urban terrain, usually but not always, a formed road or track, that is overwatched by flanking structures which, when not cleared, represent potential ambush positions but also offer concealment and protection from observation and fire from further away. If the detachment passes over urban terrain but does not secure the route, this is called a transit corridor. If on the other hand the overwatch and buildings are cleared and secured, it is referred to as a secure corridor. The Olvanans consider creating the following corridors.

a. Obscured corridor – manoeuvre within obscurants, both mounted and dismounted, is a key Olvanan tool for enabling a rapid offensive on enclosed terrain, using a variety of obscurants and smokes ranging from non-toxic glycol vapour generated by AFV and UGV, through specialised low-hazard smoke rockets to incendiary red and WP artillery shells. For

planning purposes obscuration is imposed for a given time. An obscured corridor is illustrated at Figure 6.8. The axis is obscured with thermal imaging (TI) translucent smoke, while TI opaque obscurant is deployed at junctions and dominating points further out. Armed UAS are deployed aggressively on the flanks.

Figure 6.8: An obscured corridor



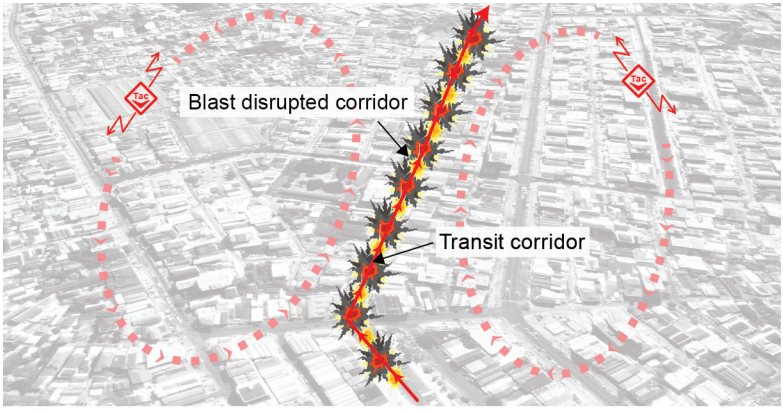
b. Denied corridor – using incendiary munitions to set fire to the buildings along a corridor will create a heat zone from which there is a low likelihood of enemy engaging from, waiting in ambush or moving through them for a period of up to hours. Armoured vehicles then advance between the burning buildings.

c. Blast disrupted – in some circumstances, depending on the types of buildings and the width of the street, large volumes of explosive may be employed in a linear 'blast-disruption along an intended route to neutralise the threat from both enemy elements and munitions. The tactic will completely collapse

lighter buildings and the façades of more substantial ones, greatly reducing the likelihood of ambush engagements. Linear blast-disruption normally achieved by a relay of mine-clearing AFV launching a series of rocket-towed explosive minefield-clearing hoses as was illustrated earlier at Figure 5.5. An older Olvanan minefield breaching method has also been adapted for linear blast-disruption. This involves engineer AFV pushing ‘oversized Bangalore torpedos’ (assembled from multiple sections of steel pipe packed explosive) ahead of themselves with the tip mounted on a sledge. Once the charge is in position the AFV reverses and initiates the explosive by firing its machinegun into a special screen at its base. This method has been improved for enclosure warfare with the use of semi steerable wheels. In the case of a wide street, MLRS thermobaric salvos fired to strike along-the-street may be similarly used.

6.34 The use of linear-blast munitions on a route is likely to not only neutralise defenders but, at least as important, will damage, disrupt or degrade sensors for self-initiating off-route and buried munitions. A blast disrupted corridor is illustrated at Figure 6.9. This example is a transit corridor meaning that the entire advancing Olvanan force on this axis will rapidly follow up the explosive detonations to exploit shock and obscuration, and not clear or secure the path. Protection is sought by deploying armed UAS to operate aggressively on the flanks.

Figure 6.9: A blast disrupted corridor



Legend:

Transit corridor — Armed UAS screening on flanks

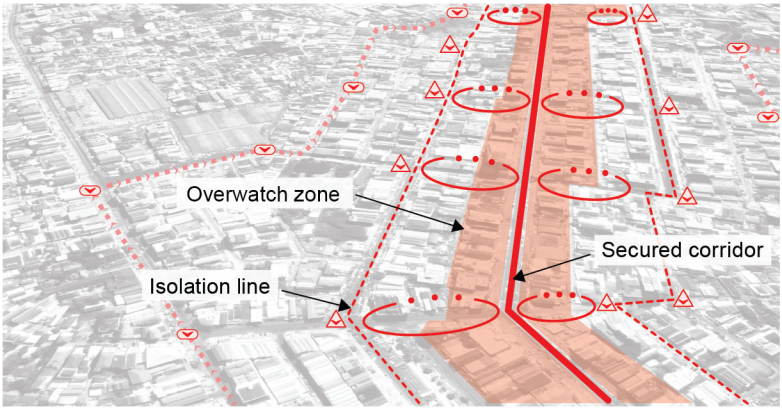
Linea explosive blast

a. Picketed – a force transiting a corridor may detach small elements along its path to observe.

b. Anchored – the force transiting a corridor may detach elements to establish defensive positions at selected points along the corridor, which may not have been cleared in detail

c. Secured – part of the force transiting the corridor, or other forces tasked for the purpose, clear buildings on the flanks of the corridor and subsequently secure the approaches.

Figure 6.10: A secured corridor



Legend:

- Secured corridor
- Isolation line (no troops beyond)
- Overwatch zone (to be denied – from where enemy would threaten the corridor)
- Observation post controlling uncrewed systems
- Anchoring defensive positions
- Key uncrewed ground vehicle/systems
- Security detection line (UGV sensors)

6.35 Figure 6.10 illustrates a secured corridor where an advancing detachment has ‘cleared and secured’ its path. In the ‘Overwatch Zone’, ground and buildings which overlook the corridor are ‘secured’ to a degree specified (ranging from probed to searched). Along the corridor at intervals are ‘anchoring’ defensive positions which defend it. Suitable highly visible features, usually streets, are nominated as the isolation line beyond which no troops will be deployed. Along this line are series of OPs from which robotic systems are controlled. These are deployed further out to maintain a continuous line of detection.

Canyon flight

6.36 Canyon flight is tactical movement by air vehicles along corridors below the mean crest of the structures (currently this term is relevant to loitering munitions, UAS and light Olvanan platforms such as gyrocopters). This technique is increasingly important to mitigate enemy CUAS capabilities, and is considered as part of Fires and EW planning.

Regrouping for the attack

6.37 Olvanan doctrine emphasises battle drills and functional groupings to save time. The labels they use convey not only the primary task of a grouping, but also indicate the default techniques it uses. Uniquely in enclosure operations, different combined arms task groupings are formed down as low as individual section and vehicle level. (This is to overcome the isolation of elements and reduction in normal mutual support caused by obstruction to line of sight). The attachment of specialist subunits from the Asymmetric Warfare Brigade is a further potential complication. For simplicity and consistency with other doctrine, functional groupings for enclosure operations are similar to those for other offensive operations: enabling, action, exploitation and support.

6.38 There is one significant departure from normal grouping. In enclosure operations, a distinct fixing force or grouping is not usually formed at any given level. This is not because the Olvanans regard this task of preventing the enemy manoeuvring in response to an attack as unimportant, rather that it is very important but difficult for an advancing force to achieve because of terrain obstruction. Therefore, at every level it is made the responsibility of the higher-level formation. So, for example one of the higher command level objectives of a Brigade toward-enclosure operation that precedes an attack is to fix defenders for an attacking BDET. Furthermore, any enabling grouping almost always has a localised fix function.

Functional groupings, groups and elements

6.39 For clarity, the word grupa is used to describe a main subordinate part of an enclosure detachment which may be a BEDET or a CEDET [exceptionally a PEDET, where a small all-arms grouping based on a platoon is tasked to operate completely independently].

The component parts of a grupa are described as elements. In a large Brigade Task Group (BDETG) enclosure operation, the leading grouping might be an enabling BDET, while conversely the platoon sized storm grupa might have a section sized enabling element.

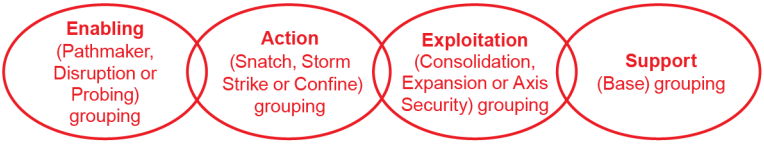
6.40 An enabling grupa (or detachment) has an unchanged function during enclosure warfare, however, as discussed earlier, it may be relabelled more specifically to emphasise its exact function from the various possibilities discussed below. For example, it might be called the pathmaker grupa to emphasise a route clearing and breaching function a penetration or converging grupa if these terms better describe its main task.

6.41 Similarly, while the action and exploitation groupings have a broadly unchanged function, they may also be renamed for clarity. For example, the action grupa may be labelled ‘storm grupa’. The support grupa may be labelled the ‘base’ to emphasise a logistic and security function (but also referring to a ‘base of fire’).

Four basic groups

6.42 The four Olvanan main doctrinal functional groupings and possible variations of subgroups are listed at Figure 6.11. Which ones are formed will be determined by the type of attack and the commander’s plan. This list is comparable to a menu. The list is not exhaustive and similar elements may be formed in more than one subgroup. Where an element has a general purpose role such as direct fire support, the standard labels continue to be used.

Figure 6.11: Four functional groupings



Examples of regrouping and basic deployment

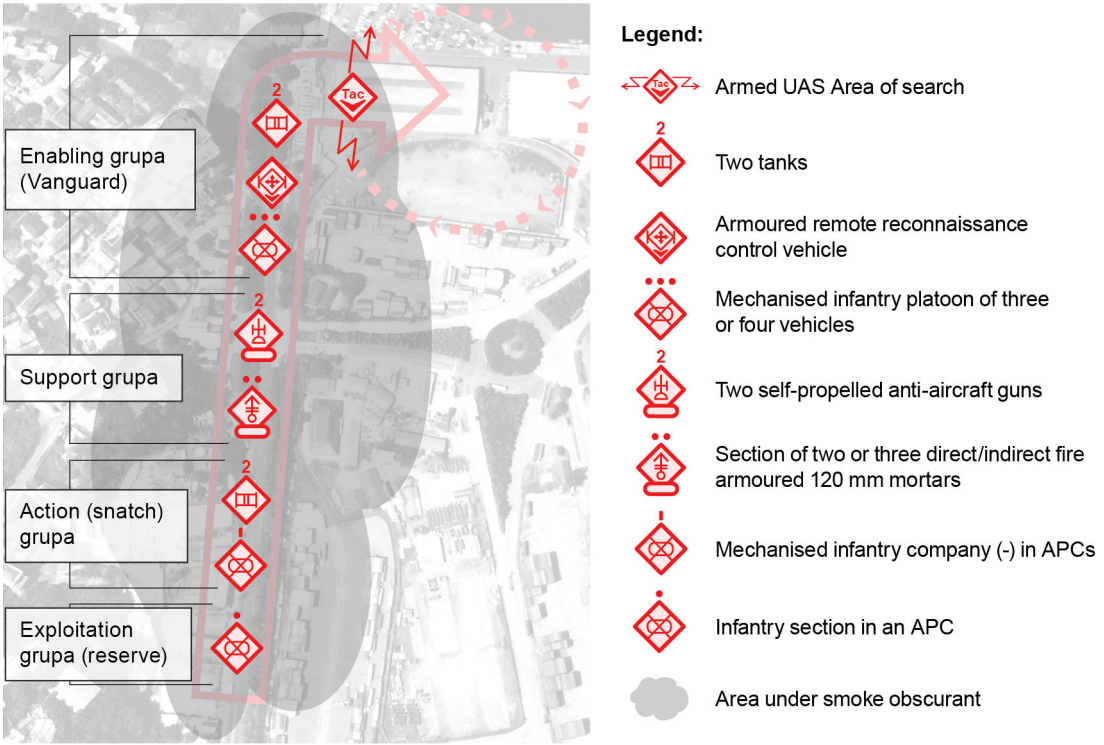
6.43 The following examples show how different elements may be regrouped to form grupas and then detachments. Regrouping for the enclosure battle, especially for the integrated attack is very flexible, allowing the commander to tailor groupings to task in detail. What is described below is indicative rather than prescriptive.

Situational attack

6.44 Figure 6.12 offers an example of a situational attack grouping and deployment option for a CDET snap attack based on a mechanised infantry company with its habitual supporting tank platoon, section of self-propelled mortars and an air defence (cannon) section. It is accompanied by a section from the battalion reconnaissance platoon who operate a drone.

6.45 The scenario envisages that the detachment is exploiting an unprepared and disorganised enemy defence to employ an obscured corridor to drive deep into the urban area and seize an undefended or barely defended objective. The tactic assumes the opportunity to conduct initial movement across open ground under infrared opaque obscuration, navigating using Enclosure-world data and switching subsequently to infrared navigation under conventional smoke within the urban area itself.

Figure 6.12: Example of grouping for a situational attack



OFFICIAL

6.46 The CDET is led by the enabling grupa or Vanguard preceded by a UAS, led by two tanks in turn followed by the reconnaissance section vehicle which controls the UAS and then a mechanised infantry platoon.

6.47 A tactical bound behind the Vanguard is the support grupa made up of the mortar and air defence sections, positioned well forwards to deliver immediate fire support if the Vanguard encounters resistance.

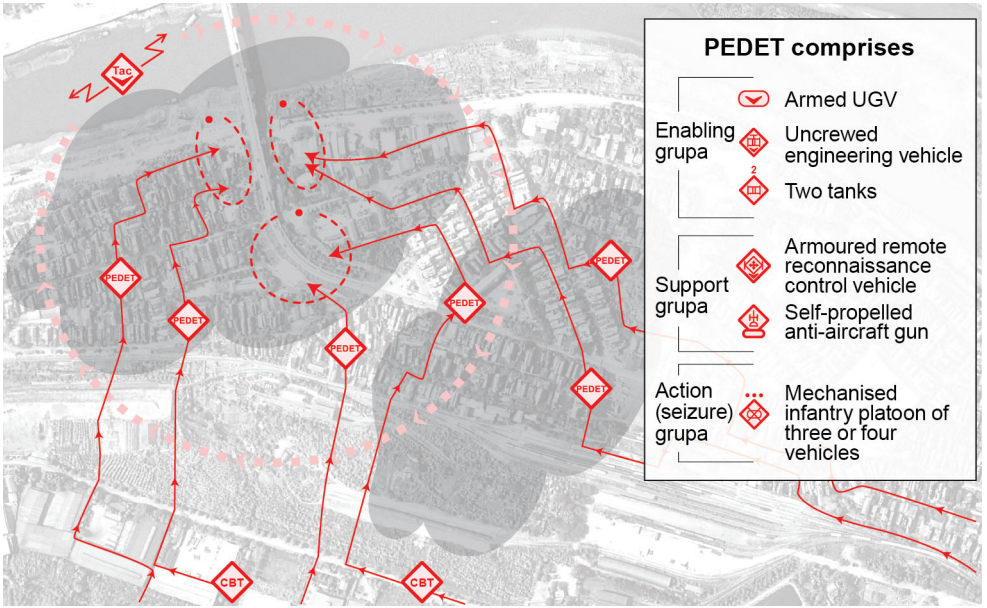
6.48 The largest component of the detachment is the action or snatch grupa which comprises the two other tanks and most of the rest of the mechanised company. Their task is to seize the objective, if necessary by bypassing resistance encountered and fixed by the Vanguard. In this case a reserve of one mechanised section has been formed.

Dispersed penetration attack

6.49 The graphic below at Figure 6.13 offers an example of a mechanised BDET, reinforced by a remote close combat company (UGV) regrouped and deployed for a dispersed penetration attack on six reinforced platoon axes.

6.50 The scenario envisages a mission to seize the southern end of a bridge as part of a larger operation. Fusing and Prior operations have provided the Olvanan commander with a high degree of confidence in the locations of the main defensive positions which they plan to bypass while suppressed by higher-level assets. The penetration attack will concurrently advance on multiple converging routes that as far as possible avoid established roads, using parks, alleyways and back lanes and relying on un-crewed engineering vehicles to mechanically open penetration lanes. With similarly grouped forces on multiple axes of approach.

Figure 6.13: Example of groupings for the dispersed attack



Legend:

Armed UAS area of search

Platoon Enclosure Detachment comprising elements

Area under smoke obscurant

OFFICIAL

6.51 The BEDET has regrouped into similarly organised PEDET based on reinforced mechanised platoons. Each of these has an enabling or path grupa consisting of several UGV leading a section of un-crewed combat engineering vehicles, overwatched by two tanks. The support grupa moves close behind and comprises the UGV control vehicle and an air defence vehicle. The action or seizure grupa is the mechanised infantry platoon moving at the rear. In this case there is no attached exploitation grupa, a function that is provided at BEDET level.

6.52 The illustration shows three sections of UAS providing a screen over the advancing detachments, six of which are moving under obscuration on separate penetration routes to converge on the objectives around the bridge. On the lower part of the illustration two further, similarly organised, CEDET follow on as a reserve, to be deployed along the most advantageous penetrations or used to bypass unexpected resistance.

6.53 While this example shows a mounted penetration attack, a dismounted infiltration attack is conducted in a similar fashion, noting that such long infiltration routes through urban areas would probably be avoided if possible.

Integrated attack

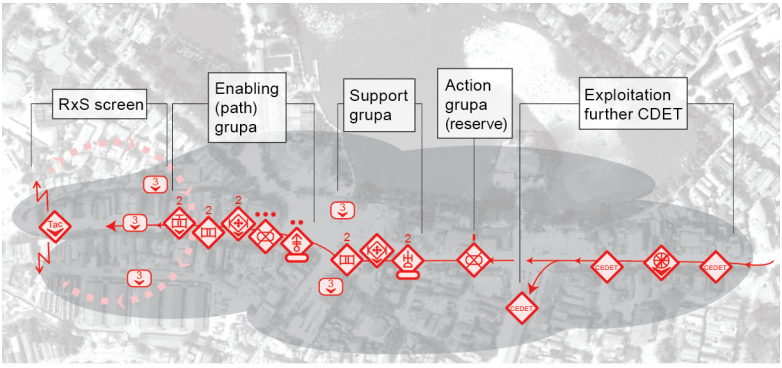
6.54 Figure 6.14 offers an example of a BEDET grouping and deployment for an integrated attack to secure an anchored corridor (objectives secured at intervals along the route) across an urban area.

6.55 The scenario envisages that the detachment is advancing against a comparatively weak defending force which is conducting delaying operations, with the Olvanan commander assessing that it is unlikely that the enemy will leave substantial counter penetration forces behind. This justifies the risk of only proving (quickly checking) and anchoring the corridor.

6.56 The BDET is preceded by a robotic warfare grouping that combines overhead UAS with UGV moving not only on the axis of advance, but on flanking routes. A tactical bound behind this the path grupa is led by a section of robotic armoured engineering vehicles, covered by a section of tanks and immediately backed up by a mechanised infantry platoon and an air defence vehicle. The support

grupa is grouped a further bound behind, consisting of a further section of tanks, a robotic control vehicle and a section of mechanised direct/indirect mortars. The path and support grupas remain on the axis to clear a path, while they are followed by a mechanised company which is the action grupa. In this case the commanders reserve is available for supporting manoeuvre. Exploitation is executed by following CEDET which deploy in turn, off the axis to secure anchor positions as shown in the lower right part of Figure 6.14.

Figure 6.14: Example of groupings for the integrated attack



Legend:

Armed UAS area of search
Trishula of UGV/UAS
Two tanks
Company Enclosure Detachment
Uncrewed engineering vehicle
Armoured remote reconnaissance control vehicle
Two self-propelled anti-aircraft guns
Area under smoke obscurant
Mechanised Infantry Company (-) in APCs
Self-propelled anti-aircraft gun
Mechanised infantry platoon of three or four vehicles
UAS/UGV transport element

Functional elements within the attack groupings

6.57 The Olvanan commander will task organise the grupas within an attack detachment according to the type of attack, type of terrain

and enemy threat. While the doctrinal use of four different groups mirrors practice on other terrain (usually enabling, support, action and exploitation groups), the grupas themselves are flexibly assembled from a menu of task elements. The functions of each of these different elements, and the techniques they use are prescribed, so the manner in which the Olvanan commander assembles and tailors the groups informs subordinates how the battle is to be fought.

6.58 In the attack, if the enabling grouping is described as the path making grouping it is responsible for creating, proving and marking a cleared path(s) up to and, if not created by others, into the objective. It is also responsible for actions to prevent interference from outside the objective. An enabling grupa might comprise:

a. Disruption elements carry out actions ahead and to their flanks of the attacking force. The Olvanans traditionally emphasised the use of infantry in this way to envelop defenders and aid the advance. The task is increasingly allocated to remote systems.

b. Probing elements use remote systems ahead of the force locate and target enemy positions, obstacles and other threats.

c. Path-opening elements create cleared and covered pathways. They may be specified as:

    (1) Breaching-shaping elements use machinery, explosives or hand tools to create safe pathways through obstacles. Importantly, it may also reshape buildings and rubble to create cover or mechanically demolish buildings.

    (2) Sapping/Tunnelling elements uses machinery explosives or hand tools to create pathways through buildings and structures, which depending on context will be for soldiers or for larger platform including AFV.

d. Seizure elements clear and secure terrain.

e. Fire support may be further specified as:

    (1) Fire support Trishula move on foot to provide fire support with launchers.

(2) Cross-fire elements provide covering fire from within or near a building across the street to support movement on the far side.

(3) Eviction-denial elements use incendiary munitions to burn buildings and deny their use to the enemy.

(4) Obscuration elements use smoke generators, dischargers and UGV to screen movement and blind enemy positions.

f. Flank security:

(1) Blocking elements move on the flanks of the grouping to maintain security, especially in lower density urban areas.

(2) Outwatch elements move in or near buildings on the axis of advance and provide covering fire outwards.

6.59 Figure 6.15 provides a more detailed illustrative example of how functional elements are assembled. In this case the component elements of an enabling, pathmaker grupa (note that informally the Olvanans might call this a leading storm grupa because the latter term is often used for offensive groupings). Figure 6.15 is merely schematic and, in particular, the dismounted elements would be dispersed and moving through and between buildings.

6.60 Leading (on the left) are two UGV providing a probing function, and behind them are four further armed (rocket launcher) UGV. In this case they are specified as crossfire elements meaning that they are deployed on the flanks to engage inwards in order to suppress interference from the opposite side of the street (eg. to obscure with smoke, or deny within incendiaries).

6.61 Behind the fire support UGV is a path opening element (eg. an engineering UGV). On either side of the street amongst the buildings are dismounted seizure elements that alternately bound forwards with immediate local support from a (small) fire support Trishula. However, the Olvanans emphasise that whenever possible fire support should be provided by vehicles, which will be delivered by the two tanks and

two APCs slightly to the rear, with the latter employing crossfire. Following on behind are a series of blocking groups which deploy outwards to prevent interference from the flanks.

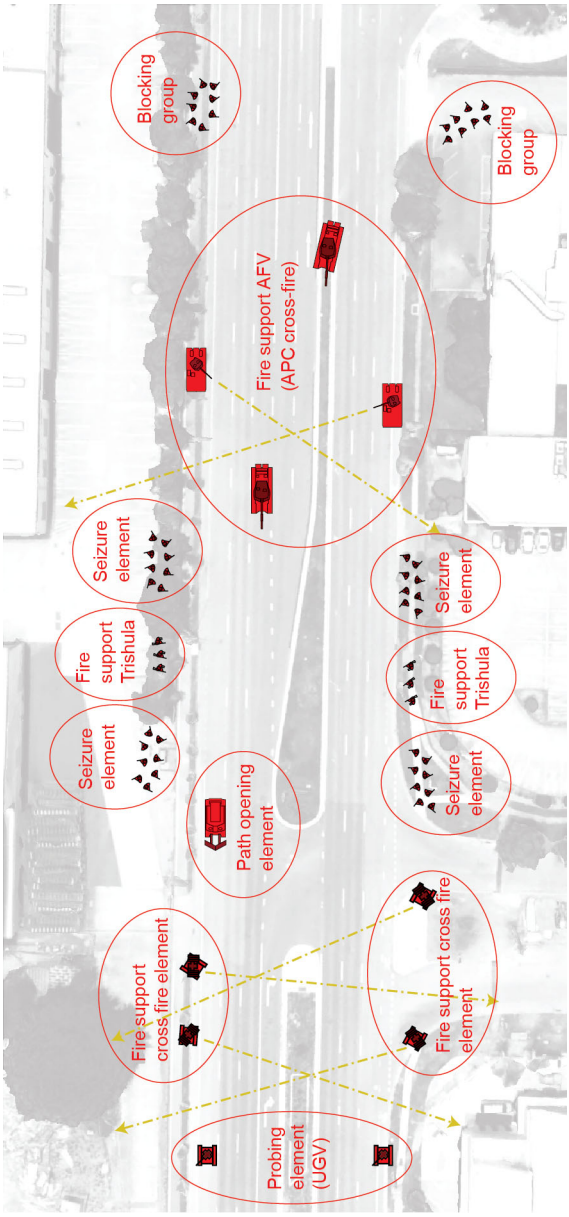


Figure 6.15: A schematic example of how elements of a pathmaker grupa are organised

Action grouping

6.62 By default the main attack grouping in an enclosed attack will be labelled the attack grouping, but may be given one of the labels below to make its method of attack explicit. If the primary attack method is a strike executed by demolition, the action grouping might be called a demolition grouping, which would itself have a number of elements including demolition element. An action grupa might comprise:

a. Strike elements execute the Olvanan preferred method of dealing with centres of resistance (ie. to destroy the structure involved). However, such fire typically requires large calibre munitions in excess of 200 mm which will normally be delivered by artillery or air from outside of the immediate combat area. The strike element within an attack detachment is the grouping that secures the destroyed ground but may involve only relatively small numbers of troops and rely on exploiting robotic systems. Exceptionally, a strike element may include the structure destroying weapon systems which are most likely to be multi-barrelled thermobaric rocket launchers or medium self-propelled artillery.

b. Demolition elements represent the Olvanan second best option for executing a strike attack, typically using large demolition or incendiary charges delivered by UGV.

c. Storm elements are equipped to use machinery or explosives to penetrate rapidly into an urban position, with further use of explosives and robotic systems to complete the clearing.

d. Snatch elements conduct a ‘traditional’ urban assault based on exploiting shock where multiple entries are used to concurrently enter different parts of an objective building at speed. This is the least preferred technique of the Olvanan and is normally only entertained for a situational attack.

e. Contain elements conduct the Olvanan method of building clearing which assumes minimal threat. A similar technique is used for buildings occupied by non-combatants as for a collapsed pile of rubble. Soldiers or, preferably, UGV are

deployed to isolate the building and a small team using dogs and remote systems conduct search.

f. Breaching elements that are assigned within an action group are responsible for clearing obstacles on the immediate approaches to and within the objective.

g. Deep Incursion elements attack the deep interiors of buildings or subterranean structures that are largely immune to the effects of fire effects. They make extensive use of remote systems, specialised demolitions and routinely operate with rebreathing apparatus, allowing the use of explosive and incendiary eviction agents.

h. Reinforcing and holding elements follow an attack to secure it from subsequent enemy counter-attack and provide fire support to flanking groups.

Exploitation grouping

6.63 The exploitation group may remain relatively uncommitted and maintain that label or be nominated as a reserve. Alternatively, it will be given one of the following labels to indicate its main task, equipped accordingly and organised into appropriate elements as above. An exploitation grouping may be grupa sized, but may also be larger. It may comprise:

a. Consolidation groupings follow up an attack and prepare assaulted buildings for defence.

b. Expansion groupings follow up on attack and deploy out from secured objectives to occupy undefended buildings and ground.

c. Attack groupings (of the various named types) attack subsequent objectives.

d. Anchor and picketing groupings (usually elements) are employed when attacks are not continuously clearing terrain in order to secure a corridor to the rear.

Support (base) groupings

6.64 Support groupings may be deployed in various ways with their elements distributed in different parts of the supported entity. A support group might comprise:

a. Flank-isolation elements travel towards the rear of the detachment deployed to the flanks to exploit the fire lanes formed by streets parallel to the axis. It is a frequent tasking for APC's whose soldiers have dismounted to fight.

b. Hi-low fire elements are mortars and artillery systems that are expected to provide both direct and indirect fire. This distinguishes them from elements tasked to only one of these roles.

c. Overhead-protection elements are those that both provide anti-air, CUAS, and increasingly counter munition effects, through kinetic, EW, obscurant and passive measures.

d. Base-security elements provide security for the headquarters, logistics and other elements deployed in the 'base'.

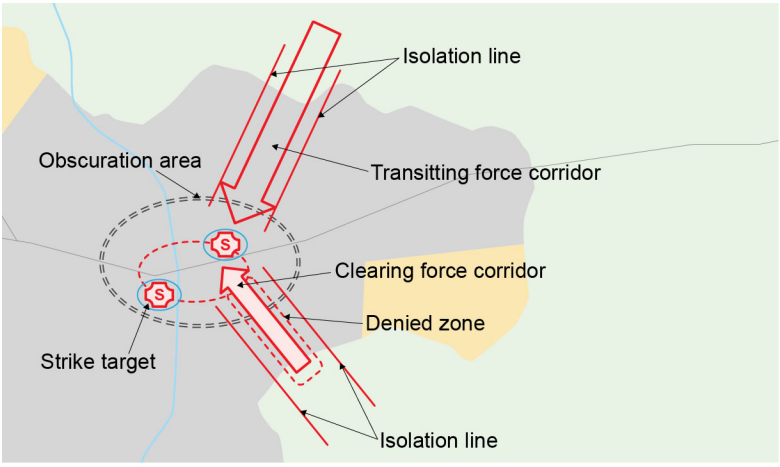
e. Link elements coordinate with and guide following and relieving detachments.

f. Logistics elements maintain stocks of combat supplies forwards and are reinforced with utility UGV or additional personnel.

Planning and control measures

6.65 Offensive enclosure operations require specific additional non-standard control measures. Key ones and their marking are illustrated at Figure 6.16. The hollow arrows show corridors, with a secured corridor having a solid 'fill'. On either flank of these are the isolation lines beyond which Olvanans on the axis will not move without clearance from higher command. The lower, 'cleared' arrow has a further line around it, this is the area which must be denied. The two other key features are the 'strike targets' and the obscuration area.

Figure 6.16: Key control measures



6.66 Additional control measures include the following. The related control of fires support and robotics is explained in more detail as follows.

a. Orange and purple plan:

(1) Declared orange zones

(2) Purple knocking policy

(3) Messaging policy and methods

(4) Orange Jacket forces and deployment.

b. Sensor plan:

(1) Prior placement – reliability and currency update

(2) Joint and strategic update and availability

(3) Formation UAS plan

(4) Remote sensors plan.

c. Lines and points of reconnaissance/probe:

(1) Assets, allocation and control

(2) Communications connectivity policy

(3) Scheme of probing.

d. Objectives and targets:

(1) Strike objectives and systems

(2) Demolition, storm, snatch, and constrain objectives

(3) Protective fire targets.

e. Penetrations and corridors:

(1) Scheme of manoeuvre

(2) Manoeuvre zones and orange zones

(3) Lines of penetration

(4) Corridors and enabling effects

(5) Corridor boundaries

(6) Overwatching structures and facias

(7) Flank zones – areas dominated on the flanks of a corridor

(8) Isolation/control separation lines

(9) Sectors of control/bounds.

f. Enabling effects:

(1) Obscurant zones – indicating minimum extent of zone and type

(2) Chemical degradation – irritants and less lethal chemicals

(3) Denial – incendiary/smoke

(4) Blast disruption.

g. Disruption and deception:

(1) Deception concept

(2) Disruption actions.

h. Chemical munitions planning.

6.67 The Olvanan consider flame, obscurant and thermobaric munitions to be chemical. Planning may involve the following natures:

a. Thermobaric

b. Incendiary smoke (WP)

c. Non WP incendiary smoke

d. Low hazard smoke

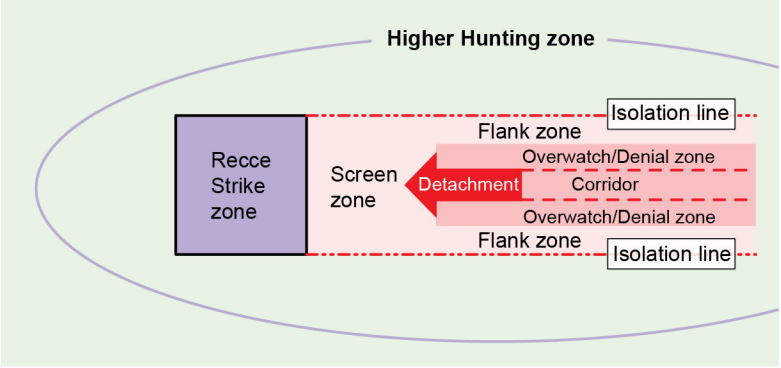
e. Irritant smoke

f. Sedative vapours/gases.

Fire support coordination boxes

6.68 Fused-masked-secerned warfare offers unprecedented levels of information and UAS and UGV feeds from within the deployed detachments and from supporting reconnaissance units supplement this. While this provides exceptional opportunities for targeting, the Olvanans are very aware of the risk of fratricide demonstrated during urban operations in the last 20 years. They have therefore adopted a standard enclosure operations Fire Support Coordination Matrix which delineates the responsibilities and scope for fire support. The key concept is a box within which the detachment commander has responsibility and beyond which the higher command, usually artillery, commander has responsibility, with a shared responsibility for a zone ahead of the advance. This is shown at Figure 6.17 and explained in further paragraphs.

Figure 6.17: Control measures for security and fire control around an advancing Enclosure Detachment



In the box

6.69 The detachment is the force moving on the ground, with the corridor being the ground over which it has passed. On either side there is a denial zone of buildings which overwatch the corridor and may be obscured, denied by incendiarism or 'cleared' to some specified level ranging from probe to search. Outside and beyond this is a flank zone which may be secured by elements deployed from detachments moving on the corridor but these are will not proceed beyond an isolation line. The isolation line defines a boundary beyond where higher formation support has freedom of action and autonomous systems may be employed. Forward of the detachment is the screen zone which is where a robotic screening and probing force will operate. Human disruption elements, especially from SPFs, may be deployed beyond the isolation line, but this is carefully coordinated with and directed by the higher formation.

Outside the box

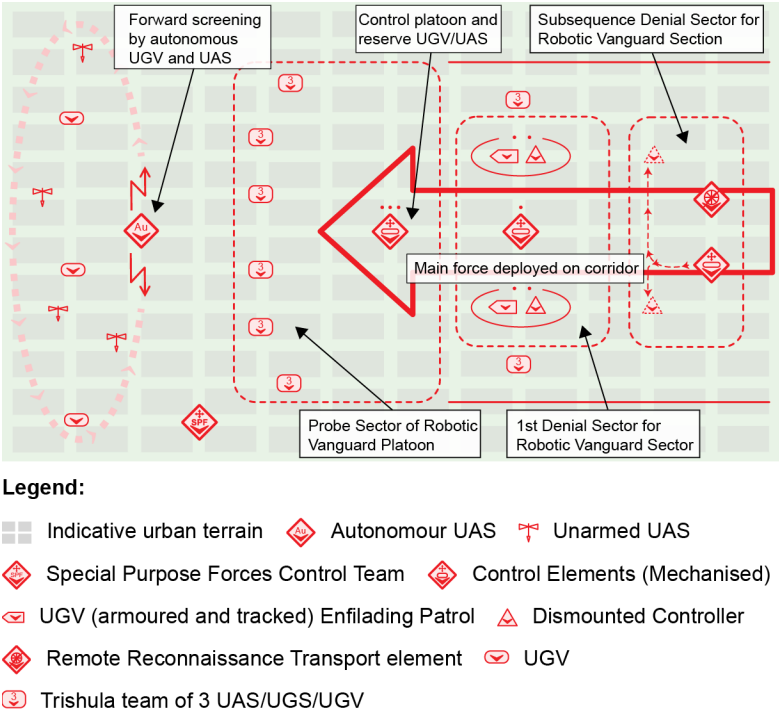
6.70 Forward of the screen zone is the Recce Strike Zone, in which high level artillery command focus their efforts, they operate proactively but obtain clearance from the detachment commander before striking. Beyond the isolation lines and the Recce Strike Zone

is the Higher Hunting Zone where, within the operating constraints of protecting non-combatants, higher level fires have freedom to engage.

Robotics control measures and planning

6.71 The Fire Control Coordination Boxes described above are closely are integrated into the measures for coordinating the employment of UGV/UAS by the Robotics Companies. Robotic systems reconnoitre, fix and protect the advance on its flanks. Figure 6.18 shows how the screen zone is divided between different robotic groupings and sectors are formed behind this.

Figure 6.18: Sectors as control measures for robotic systems



6.72 Forward of the leading human crewed elements there is a wider screen sector where autonomous UAS/UGV (usually deployed by a RRC) operate. Behind this there is a probe sector within which the lead element (typically platoon) of the Remote Vanguard Company (RVC) deploys its 'human-overseen' systems. Generally, the RVC systems operate in Trishula of three platforms, two ground and one air, under one operator. This apparently high load is enabled by the system's capacity to operate in a semi-autonomous mode, navigating pre-selected routes in bounds from waypoint to waypoint, way perch to way perch or in leader-follower mode. The operator typically focusses on the lead platform and responds to events and alerts from the other two by exception.

6.73 For flank protection, sub-elements of the RVC, usually sections in a single robotic control vehicle with four or more operators, move with the lead detachment in the corridor. As it advances, sections halt at specified intervals corresponding to Denial Sectors. Dismounting from the control vehicle they deploy pairs of robotic control operators outwards to establish concealed OP on each flank, ideally locating with dismounted denial elements for protection. Like the lead RVC elements, those on the flanks typically operate a Robotic Trishula of two UGV and a UAS in their immediate vicinity for 'close defence', but the second operator controls a UAS Trishula further out on the isolation line, again with two platforms in semi-autonomous mode or perched.

6.74 Other robotics planning:

a. Planning for robotic systems also includes

b. EW summary

c. Electromagnetic spectrum concept of operations

d. Priorities of effort:

(1) Air

(2) Ground.

This page intentionally blank

Chapter 7

An introduction to Olvanan urban offensive tactics techniques and procedures

7.1 The OPA offensive TTP for the urban environment differ markedly from Western practice. This is not necessarily obvious to outside observers, because almost all of the imagery and footage that shows urban training is being conducted by their SPFs or the OPAP. This does broadly emulate what is done elsewhere, and furthermore is part of messaging that is carefully designed to communicate equivalence or superiority.

7.2 The OPA approach to urban combat remains anchored in the experience of conventional conflict from the Torbian and Second World War, the Olvanans having never departed from focus on what NATO countries now call peer-to-peer combat. While they gave support and expertise to anti-imperialist insurgents, this perspective was necessarily about fighting a militarily much more powerful enemy. While force is applied selectively and even reluctantly, when it is required, it is maximised.

7.3 Unlike the Anglophone armies, the OPA have not adopted tactical norms that emphasise the reticence and distinction that Western norms consider appropriate for offshore counterinsurgency operations. They are, for explicit political, ideological and ethical reasons as least as concerned about harm to non-combatants as any Western army, and this is often seen in the lectures from company political instructors (i.e. second-in-command). This attitude mostly translates to strategic and operational decisions and initiatives such as the Orange Jackets, the declaration of orange zones and the use of purple marker rounds to warn civilians. It influences tactics more than techniques.

7.4 At the tactical level, the Olvanans emphasise proactive measures to induce non-combatants to escape and combatants to surrender. However, they take a binary moral position from this point. When people in an area or building do not take advantage of the opportunity to escape, declare the area ‘open and undefended’ or

surrender, they are considered entirely responsible for the consequence. Indeed, the Olvanans believe that an opponent who abuses their humanitarian efforts is especially morally culpable. Explicitly, they teach their soldiers that civilians who remain in place without clearly demonstrating non-combatants status and separation from combatants are voluntarily attempting to be human shields. If they are prevented from taking advantage of warnings, then they consider the preventing actor is fully responsible for consequences. Noting that the Olvanans recognise that their efforts to warn civilians also gives their enemies opportunity to take shelter, it is considered particularly reprehensible for an Olvanan officer to subsequently expose soldiers to tactical risk to reduce harm to non-combatants given that risk has already been taken.

7.5 The Olvanan experience of defensive battles of the early 20th century was of attritional slaughter of infantry by superior firepower in the streets, at barricades and then within the enclosures themselves. Their own artillery explosive firepower was inadequate for counter-attacking, and localised tactical successes, usually at great cost, were often achieved with the use of grenades and mines. The lesson the Olvanan is have taken from the historical experience is the primacy of explosive effects and their analysis of more recent wars only reinforces that view. Overlaying this is the more recent successes and even mythology of ‘penetration’ sapper attacks in SE Asian wars of liberation. The result of this is that the Olvanan prescription for success in the urban fight is identical to the fight for fortifications (the latter of which they share with the West), systematic destruction by explosives, flame and chemicals with infantry expected to only mop up in detail. To this they now add remote control technology.

Trishula concept

7.6 At the heart of the Olvanan approach to the enclosure warfare is the Trishula, the fundamental fighting team. The name originates in the Hindu word for Trident and echoes the Donovian use of Troika. Historically, groups of three martial arts warriors would work together to using pole ladders to climb into fortifications and use sulphur grenades to evict defenders. In the Second World War, teams of three

using pole charges formed ‘Trishula storming’ that were responsible for heroic actions that destroyed armoured vehicles and breached fortifications during counter-attacks in the great urban battles.

7.7 The term Trishula now refers to the smallest team that ever carries out one task alone (and exceptionally might be two or four soldiers) but the label is not limited to assault groupings and ‘Trishula storm’. For instance, it may also describe groups of three soldiers with a crew served weapons such as a machine gun or three soldiers each carrying shoulder launched weapons (especially teams supporting assaults with thermobaric and incendiary munitions).

7.8 In contrast to Western practice, while the soldiers in a Trishula storming work together to overcome obstacles they typically do not assault an enclosure altogether. In training they explicitly say that it is foolish if ‘all rush together and all die together’. If one man is wounded his comrades can drag him into cover. This idea has been reinforced in recent years as Olvanan analysts have noticed the frequency of assaulting troops becoming casualties to IEDs. For them the searching of a room or large space is a one-person task with another observing from cover. However, this must be understood in the context of never entering a space without first neutralising it in some potent way or searching it from outside.

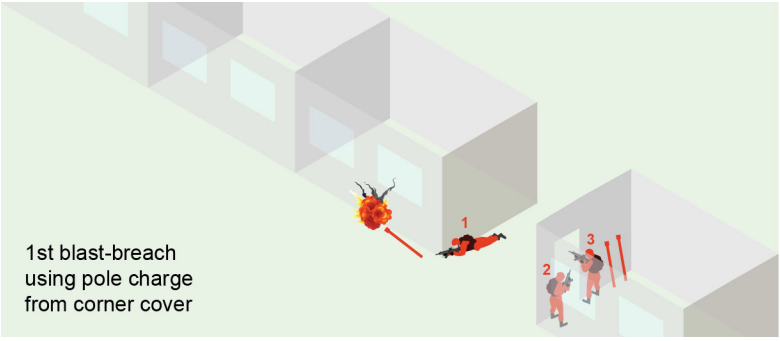
7.9 During enclosure assaults the Trishula will often mix different capabilities to achieve the task. For example one soldier may hold a blast shield, another cover with a grenade launcher and the third use a probe or robotic device – so one shield, one grenade launcher one camera probe or robotic device. This three-person or three-platform (for un-crewed systems) approach is used for many military tasks, including reconnaissance, support weapons and robotics control teams.

7.10 The Trishula storming method is simple and potent. While it depends on confident and aggressive use of explosives to neutralise enemies, soldiers can quickly master it. Since it is both key to Olvanan enclosure tactics and representative of their approach, the basic procedure and two variations are explained with Figure 7.1 to Figure 7.9.

Trishula storming: ‘Blast-breaching with pole charges

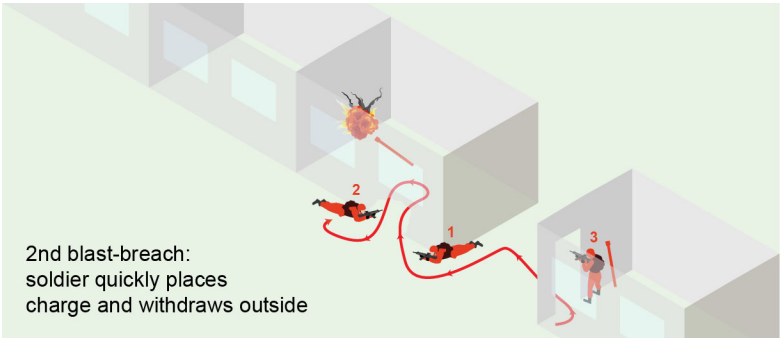
7.11 The basic procedure for a ‘Trishula storming’ using pole charges has changed little since the 1930s. A substantial HE charge, varying with target wall thickness, but typically of about 800 g is fixed to one end of a bamboo pole about 1.8 m long, which can be connected to other poles if required. The poles are carried forward in bundles and usually each Trishula member will assault with several. Historically initiation was by burning time fuse, but now non-electric flash tube or RF devices are used to initiate. The procedure as shown below may be continued through the objective and adapted to fight vertically between levels.

Figure 7.1: Storming with pole charges – Step 1



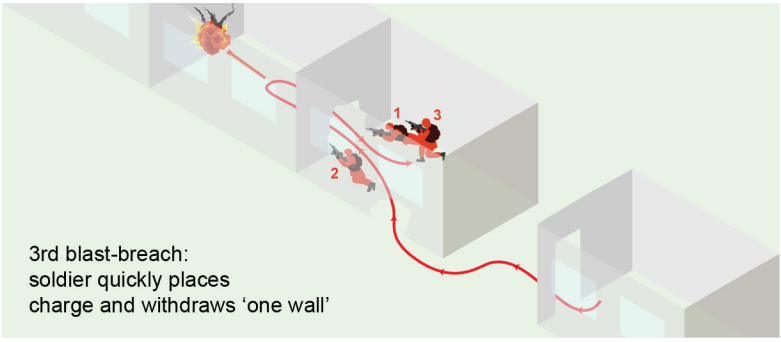
7.12 The storming starts when soldier 1 moves from a final assault position to the objective building, extends a pole charge around a corner to a breach point and then moves back around to take cover and detonate the charge.

Figure 7.2: Storming with pole charges – Step 2



7.13 On the first detonation, soldier 1 moves to the breach, confirms it is passable and covers inwards while soldier 2 moves from cover with another pole charge, enters the breach, places the second charge against an interior wall, immediately exits and detonates the charge.

Figure 7.3: Storming with pole charges – Step 3

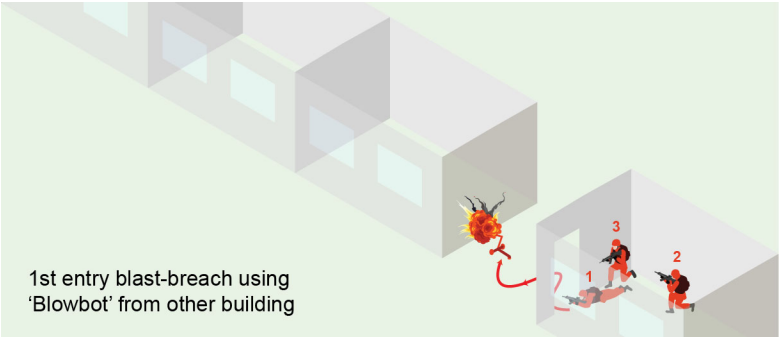


7.14 On the second detonation, soldiers 1 and 2 enter and 'prove' the initial space. Soldier 3 follows into the building and moves through the internal breach to position the next pole charge before withdrawing behind the internal wall to detonate the charge.

Trishula storming – 'Blast-breaching' with 'Blowbots'

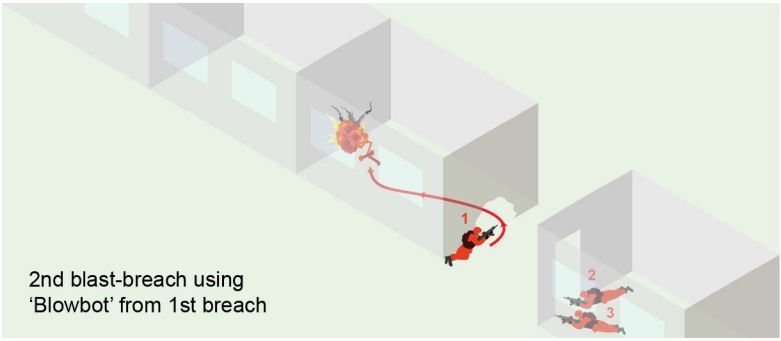
7.15 The Olvanan concept of man-machine fusing is seen in their embrace of robotic systems for enclosure warfare. Reflecting technological change, they use a frequently updated variety of remote controlled devices. An important example is the 'Breachbot' which is similar to Western 'Throwbots' in that it can be thrown or placed into an objective area and conduct a search there by remote control. However, the Breachbot is a simpler, cheaper cable controlled device which also has an articulated arm which can be used to place or launch explosive charges.

Figure 7.4: Storming with Blowbots – Step 1



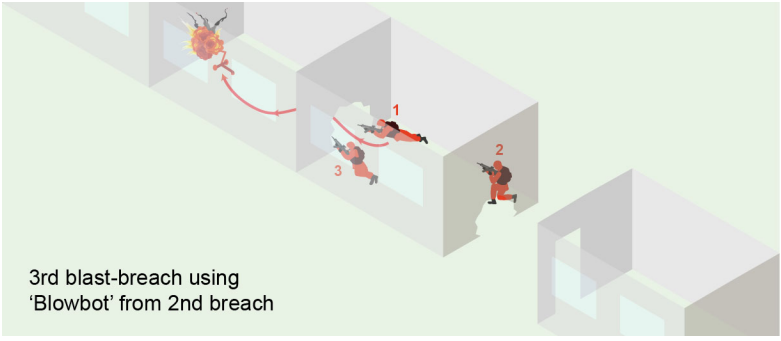
7.16 The storming starts when soldier 1, while still in the final assault position throws or positions a Blowbot near the chosen breach into the objective building. It is then 'driven' into position to place an adhesive charge which is then detonated (for larger charges the bot is sacrificed).

Figure 7.5: Storming with Blowbots – Step 2



7.17 On the first detonation soldier 1 moves to the breach, covered by soldiers 2 and 3, confirms it is passable and then throws a Blowbot inside. Controlled by either soldier 1 or 2 the bot searches the initial space and positions a breaching charge which is detonated.

Figure 7.6: Storming with Blowbots – Step 3

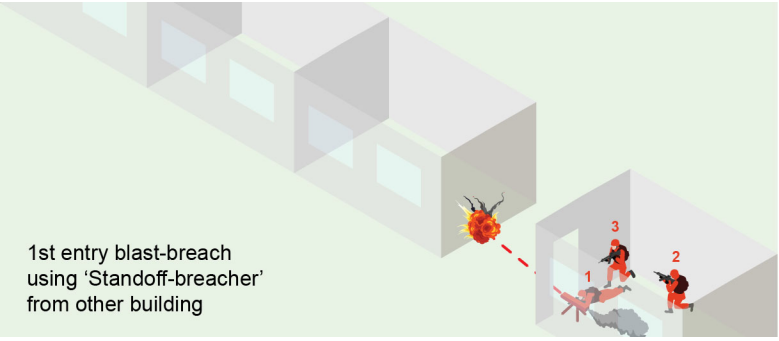


7.18 On the second detonation, the soldiers enter in order 3, 2 and 1 to 'prove' the initial space (typically moving prone). Soldier 1 then either recharges the initial bot or throws another through the breach and uses it to place and detonate a further breaching charge.

Trishula storming: ‘Blast-breaching’ with ‘Standoff-breachers’

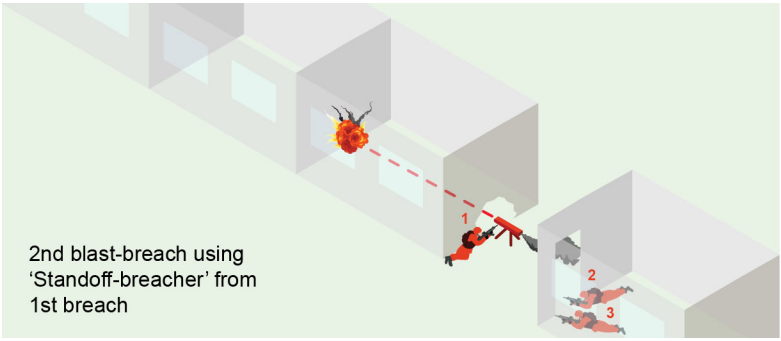
7.19 The preferred Olvanan method of ‘blast-breaching is using stand-off munitions which allows a faster and less exposed assault. Most Olvanan shoulder launched weapons have tripods which will allow them to be used in this way, but they have two types of dedicated wall breaching standoff tools. They are both cable fired from a tripod with a counter mass system that allows the special wall breaching warhead/munition to be launched in a confined space. One type detonates within the wall to create a breach and the larger version detonates short and ‘cuts’ with an explosively projected metal annulus.

Figure 7.7: Storming with Standoff-breachers – Step 1



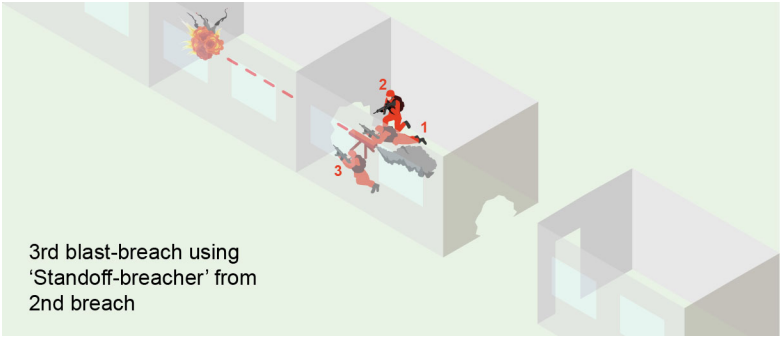
7.20 The storming starts when soldier 1 positions and fires a ‘standoff-breacher’ from cover in the final assault position. The munition impacts and breaches an entry.

Figure 7.8: Storming with Standoff-breachers – Step 2



7.21 After the munition impacts, soldier 1 visually checks a breach has been made then carries another 'standoff-breacher' forward to the breach and sets it up, covered by soldiers 2 and 3. The second munition is then fired into the building to breach an internal wall.

Figure 7.9: Storming with Standoff-breachers – Step 3



7.22 On the second munition impact, soldiers 3 and 2 moves rapidly from the final assault position, past soldier 1 and into the building to prove the initial space. They drop additional munitions next to soldier 1 who brings them in and sets one up at the initial internal breach to create another at the next internal wall. The method is repeated as required.

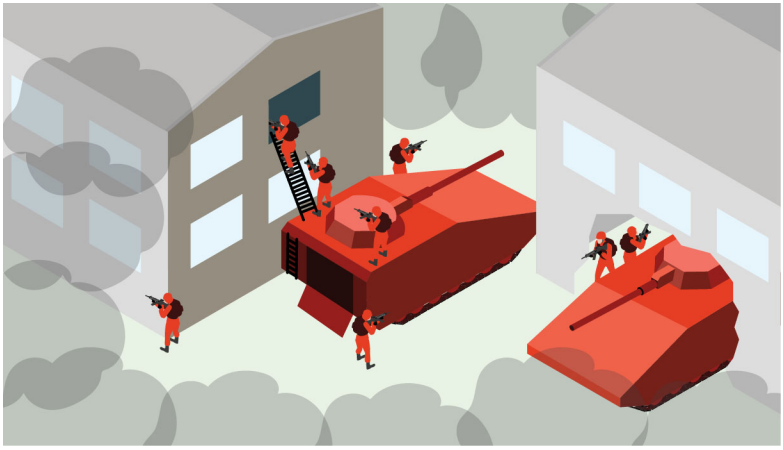
Section level methods

7.23 The smallest Olvanan grouping that will engage in urban offensive action is the section, but this still revolves around the Trishula. The section commander and two soldiers work together to execute the core task, while the rest of the section performs individual tasks to support them. The one exception is the snatch attack (which exploits unpreparedness) when a second Trishula is formed (or even three in a dismounted section) with the remaining soldier acting as link and support.

The mechanised section: Narrative example

7.24 There is substantial OPA investment in developing mechanised and armoured forces to match world best practice, so their urban attack procedures for APC mounted units represent contemporary Olvanan thinking. They emphasise that dismounts and their vehicle operate together as an integrated system, often commanded from within the vehicle. Their optimum means of conducting a section building assault is to execute a reverse ram breach with the APC and dismount directly into the objective, with a preferred alternative being to hold the vehicle against the side of the building and use the hull to climb into upper windows. Such assaults are conducted under obscuration (see Figure 7.10).

Figure 7.10: Olvanan preferred methods of mechanised enclosed assault



7.25 The drill for a section assaulting from just short of the urban objective is most illustrative. The Trishula consists of the section 2IC who has a flexible camera probe, a 'pole' soldier who carries explosive charges and a throw-bot and a grenadier as rifle has a 35mm grenade launcher. Their immediate backup is provided by section soldiers both of whom carry several slung launchers with both wall breaching and incendiary munitions.

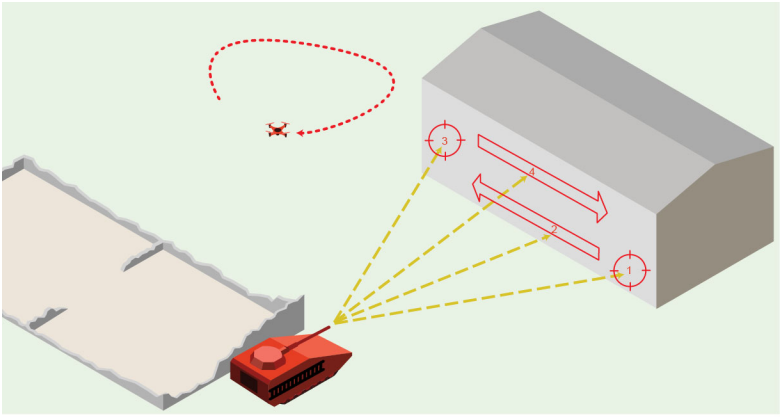
Secern

7.26 The assumption is that the section is part of a CDET that drives onto the objective under obscuration. A UAS with a loudspeaker has probed ahead and 'called out' for the defenders to surrender and any civilians to reveal themselves. The APCs halt, almost invisible in the drifting smoke, using cover where available and scan for a response. They take a moment to orientate crews to their individual objectives, which the Enclosure-world system highlights on the weapon gun sights and on each soldiers individual display screen.

7.27 Each APC fires several main HE rounds until a clear entry breach is evident at one end of the building, then fires several more rounds at the level of the ceiling floor interface at the other end of the

building before switching to cannon fire into first the lower windows and then the upper level. This is shown at Figure 7.11. As the fire switches to the upper level, the section commander gives the signal for launching a drone which responds to his finger on his touchscreen to fly ahead and move along the outside of the building transmitting blended visual/thermal images to both his and the gunners display as he seeks targets. Finding none he directs the drone to enter the building through the breach and orders his section to dismount.

Figure 7.11: How an armoured fighting vehicle engages an objective building prior to assault



Note:

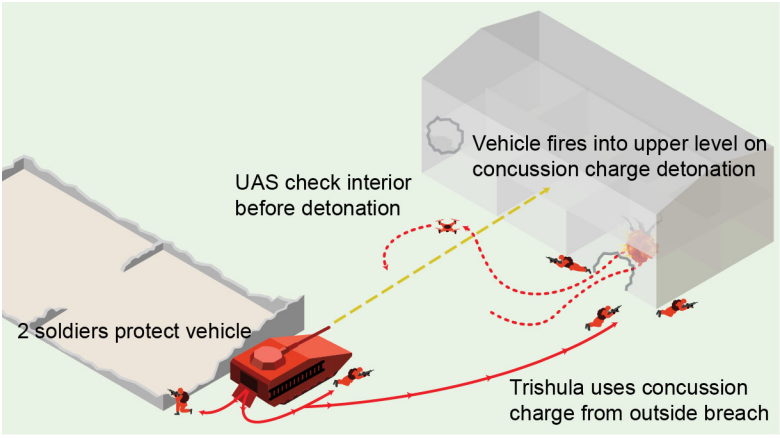
1. Creates breach
2. Engages lower floor systematically
3. Creates interfloor breach
4. Engages upper floor systematically

Mask and penetrate

7.28 As the ramp drops, two soldiers drop to the ground next to the vehicle as local protection, while the section 2IC and two men forming the Trishula move all the way to the breach and drop just outside it, the ‘pole’ soldier throwing a munition inside that trails a firing cable back to the thrower. Two other soldiers remain poised just inside the APC. The section commander directs the drone to spin and scan within the first room and seeing no threat on the imagery directs it to

return to the APC. The section 2IC calls in the local language ‘any civilians there?’ …and after a short pause nods to the thrower who initiates the concussion charge. This is shown at Figure 7.12. As it detonates the APC gunner fires ball ammunition into the upper levels (to avoid fragmentation hazard to soldiers outside the building) and the Trishula move into the building at intervals of several seconds and spread out so that the first soldier is propped in a corner before the second enters. The detonation is also the signal for the two (follow on) soldiers in the APC to move to the position just outside the breach.

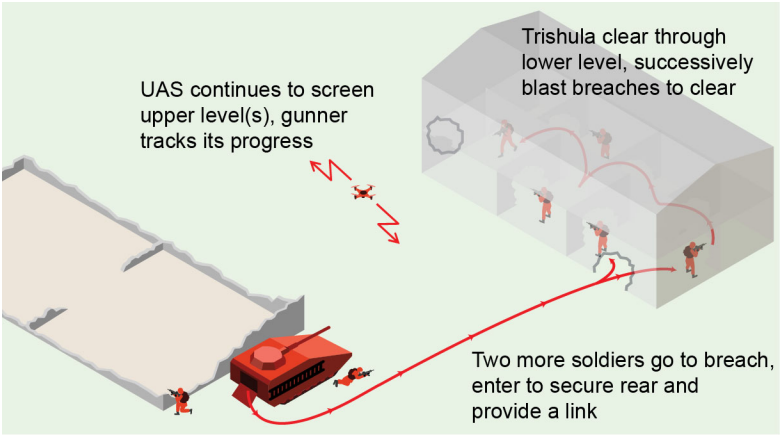
Figure 7.12: How an armoured fighting vehicle supports its section’s initial penetration with a concussion charge



7.29 The ‘pole’ soldier is the 3rd to enter and, following a plan already rehearsed virtually in Enclosure-world, moves to an internal doorway and launches the throw-bot with attached concussion charge through it. With a couple of swift movements on the wrist control the bot has ejected the concussion charge in the far corner of the next room and automatically move back towards its thrower. The 2IC pushes the tip of the camera probe through the doorway and nods to signal the next initiation. This blast knocks down a section of interior wall and the 2IC signals for the ‘pole’ soldier to check beyond with the bot. Concurrently, the soldiers still outside the breach move into the first room, one propping in the corner and the other moving to the

internal doorway to link with the 2IC, reporting to the section commander on the section internal radio net that they are inside and the gunner is free to use HE ammunition again. Throughout, the section commander continues to operate the drone in search mode outside the upper levels of the building. The Trishula continue the pattern of probing ahead and using command concussion charges, breach interior walls and avoid using existing doorways. This is shown at Figure 7.13. When they reach far end of the building they report that the APC fire has created a viable breach in the ceiling.

Figure 7.13: How an armoured fighting vehicle continues to provide support to its section clearing the lower level



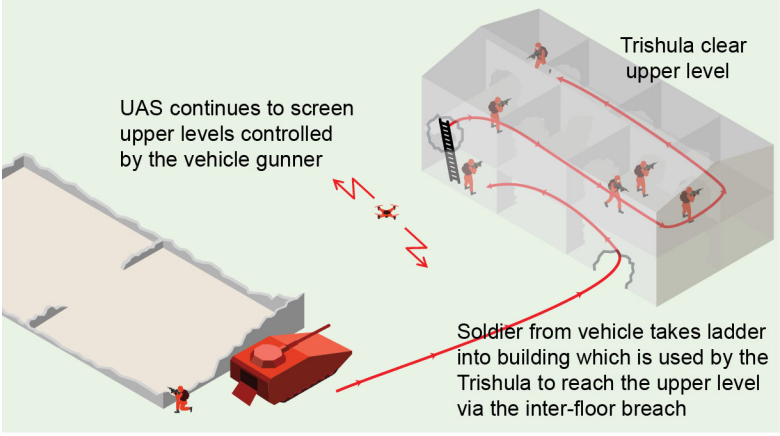
Seize

7.30 One of the two soldiers remaining with the APC has been following events on the section radio and soon he hears the order he unhooks the folding ladder from the side of the vehicle and runs over to the breach to hand it to the soldier inside who takes it forward to the 2IC. The ‘pole’ soldier extends it and fits concussion charge into the bracket at the top, reporting to the section commander that the team are ready for cannon fire. The gunner then traverses across the first level firing several rounds through windows into the depth of the building. Covered by this distracting fire the ‘pole’ soldier extends the ladder up through the rupture in the ceiling, and soon as it is in place

moves one wall back to initiate the charge. The 2IC immediately moves to the ladder, tests it and mounts high enough to be able to reach through the rupture to check around with the probe.

7.31 Satisfied, he reports on the section radio and quickly climbs followed by the rest of the Trishula, who clear a further two rooms with the concussion charge technique. This is shown at Figure 7.14. The other two soldiers moved to the ladder and of the building, while the soldier who brought the ladder remains just inside the breach at the other. At this point the 2IC pauses and confers with the section commander, proposing to switch mode of clearance. With no sign of further resistance or devices, this is agreed. The Trishula continues to prop while the section commander flies a drone into the broken windows of the upper levels of the building in turn all the time being tracked by the gunner prepared to engage. Satisfied, he gives the order to consolidate.

Figure 7.14: How a ladder from the armoured fighting vehicle is brought forward to enable the clearing of the upper level



Consolidate

7.32 The consolidation, in this case the checking of the rest of the building, does not end the golden rule of a human never being the first thing into a threat space. The ‘pole’ soldier now continues throw a

concussion charge ahead of every movement and the other soldier within now uses a tethered drone to check that space. However, now the detonation of the charges remains at contingency against the possibility of locating a threat rather than one being fired prior to every move. Only when the section 2IC is satisfied there is no further threat does the gunner stop tracking ahead of the Trishula movement ready to provide fire support.

The dismounted section

7.33 The procedure for a dismounted section to clear a building is essentially similar, but the larger dismounted section size provides for a fire support Trishula with large calibre launchers and/or automatic grenade launchers. This may remain outside of the building, taking a comparable role to that of the APC armament or move inside to provide fire support using breaches in interior walls. An essential doctrinal difference is that the fire support Trishula will always precede an assault with a wall breaching munition followed by a thermobaric round.

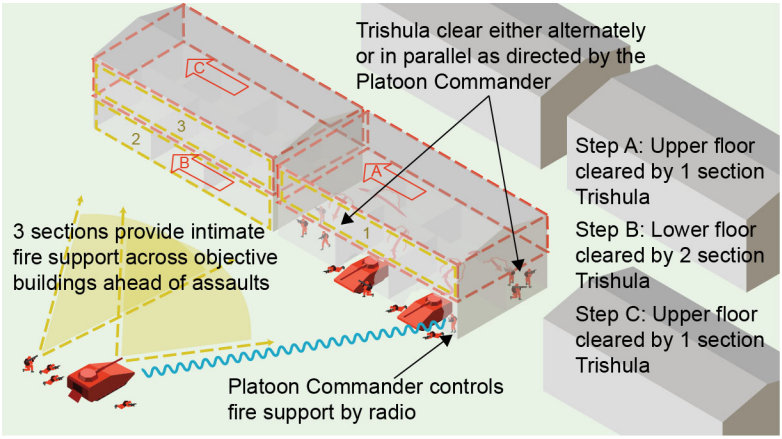
Platoon level

7.34 The above drill represents the basic method. In practice the Olvanans treat the platoon as the smallest practical attack grouping. The platoon will form at least two assault Trishula led by two of the section commanders, and each backed up by a further pair of soldiers, while the rest of the platoon is assigned to various fire support and security tasks. Typically, the commander will move inside the objective behind the assault Trishula commanders controlling the intimate fire support from vehicles all weapons outside the building and may also take two soldiers to form his own Trishula as a reserve.

7.35 Figure 7.15 illustrates a platoon conducting a building assault. That platoon commander's vehicle has stopped short of the objective, and also dismounted section, to provide fire support. Two AFV have conducted a reverse mechanical breach into the objective building and a Trishula from each of has dismounted to secure an initial bound. The platoon commander will now personally control the attack. First, one section's Trishula will prove the upper level of the building the vehicles are in (A), after which the other sections Trishula will clear the lower section of the second part of the building (B) followed by the

aforementioned Trishula clearing the final upper floor part of the building (C).

Figure 7.15: A platoon assaulting a building



Armoured fighting vehicle preparation

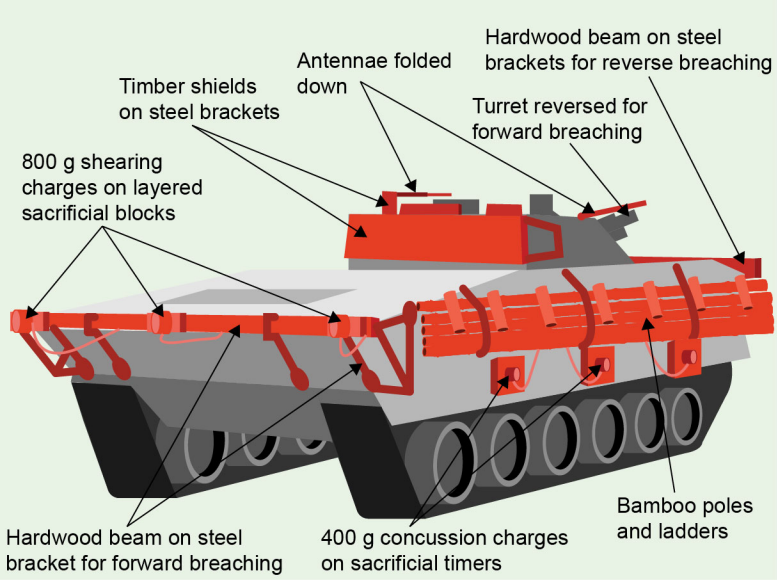
7.36 The Olvanans teach the aggressive use of armoured vehicles in urban terrain, emphasising that the shock value of driving in and through buildings is immense and that very few anti-armour weapons can be used against them at short indoor ranges. While they are not normally permitted to use their service vehicles to practice these techniques, some of the training areas have obsolescent vehicles that are used for demonstrations and, whenever industrial demolitions are occurring, they seek the opportunity to practice there.

7.37 The basic armoured vehicle course teaches the preparation of armoured vehicles, especially the attachment of a sacrificial wooden or metal beam across the back of the vehicle attached by the suspension shackles as well as using scrap timber to make simple protectors for fragile fittings which also provide a camouflage effect. Some units have been observed to remove turret machine guns and modify antenna so they can lie flat and various articles in professional journals discuss the use of explosive charges mounted on wooden blast attenuators on the outside of armoured vehicles. The need for a

generous scale of dozer blades for tanks and specialist vehicles working in the urban environment is accepted and some sources report that there is a standard kit consisting of a blade and a rear mounted structure which has a hinged door-like armoured panel to provide some protection for infantry moving behind tanks and that also has an anchor like projecting hook. By driving close to a building wall a panel can be ripped out, creating a breach with negligible risk of the building collapsing and trapping the vehicle.

7.38 Figure 7.16 illustrates a selection of fairly standard Olvanan AFV preparations for enclosure operations.

Figure 7.16: An armoured fighting vehicle prepared for enclosure operations



Chapter 8

Overview of enclosed defensive operations

8.1 The Olvanan approach to defensive operations is moulded by their Second World War experience of massive losses of some of their best troops in city battles which were also ultimately defeats. A resulting reluctance to conduct a protracted positional defence has only been compounded by their observation of recent urban conflicts where extremely strong defensive positions have been systematically reduced with precision munitions. However, this caution does not translate to avoiding the urban defence: far from it. They understand that the protection that urban terrain offers from sensor systems and overhead threats, dictates that this will be increasingly the combat environment of the future. Indeed, their wider defensive doctrine rests increasingly heavily on the notion of a complex battle position which is almost invariably an urban one. What their experience does teach them is to choose where and how to fight carefully – to secern. They especially believe it provides an environment where a comparatively small defending force can exploit emerging technologies to devastating effect.

8.2 The practical application of the concept of fused warfare as described in an earlier section on prior operations, envisages tapping into the city as an ‘information system of systems’ to achieve not only unprecedented levels of situational awareness, but to turn the urban environment into a targeting system for precision and intelligent weapons.

8.3 Crucially, but not necessarily obviously to observers, the Olvanans emphasise offensive action and offensive manoeuvres in all phases of war and conceive the effective use of firepower as also being offensive. The defence is envisaged as a temporary condition pending returning to the offensive or political settlement. By default, Olvanan commanders conducting the defence will endeavour to form the largest possible reserves and use them for counter penetration, spoiling and counter-attack manoeuvres. They automatically consider

that their doctrine for the enclosed attack is what will be applied whenever the opportunity presents itself and creating such an opportunity is their focus as they defend.

8.4 Increasingly, as precision munitions become available in mass, the urban defensive battle is fought to shape the enemy for an ‘offensive’ strike with these. The Olvanan concept for enclosed defence in the future is that their soldiers move between and fight from a set of duplicated, well concealed and protected OP using a variety of remote and autonomous combat systems.

Types of tactical urban defensive operations

8.5 The Olvanan’s consider three main types of defensive operations, area, mobile and manoeuvre defence. These continue to provide the operational level framework, but within urban terrain they distinguish between three sub-types of defensive tactical urban operations:

a. Degradation

b. Dispersed defence

c. Channelled defence.

8.6 The enclosed degradation is effectively equivalent to manoeuvre defence but executed at a much smaller scale. Dispersed defence and channelled defence represent two different approaches to area defence. The Olvanans consider that the urban environment may allow systems warfare generally, and precision weapons in particular, to deliver decisive effects while reducing the requirement for close combat. Dispersed defence exploits these developments, while channelling defence is a refinement of existing area defence doctrine that assumes decisive engagement of the main body of the force.

8.7 The Olvanans do not consider mobile defence feasible on urban terrain because it precludes the space for manoeuvring combined arms in mass, however they believe that increasingly urban terrain will be where mobile defence is mounted from. (Note: Stability and control operations will be conducted in conjunction with defensive operations but are the subject of separate doctrine).

8.8 On other terrain, the Olvanans typically distinguish between a situational defence which normally employs simple battle positions on the enemy axis of advance and planned defence using complex battle positions which may be off the axis. In the urban environment it is more likely that under time pressure they will employ simple battle positions to conduct an enclosed degradation, which approximates to Western delay or manoeuvre defence. Similarly, they will use mostly complex battle positions to conduct a planned integrated defence, using combinations of dispersed and channelling defence.

Operational level aspects

8.9 The Olvanan's consider that dedicated doctrine for enclosure operations is applicable at the tactical level, with operational level approaches remaining valid above this.

Purposes of defence

8.10 Olvanan doctrine specifies three operational level purposes for the defence: to Destroy, to Preserve or to Deny. As for offensive operations, the planning of the defence at the divisional task group level or above on urban terrain does not substantially change as the distinct methods for enclosure defence occur at brigade level or below. However, while mobile defence will not be conducted within an urban terrain, it may be used to launch such a manoeuvre. At formation level urban terrain will modify the purposes in the following ways.

Defence to destroy

8.11 A defence to destroy is designed to eliminate an attacking formations ability to continue offensive operations. Urban terrain is regarded as particularly favourable for applying the Olvanan notion of systems warfare which focuses on the destruction of essential elements of the enemy system rather than the will to fight. In general, the Olvanans seek to use urban terrain to force an enemy to deploy in a vulnerable manner on the approaches or within. While this is likely to involve multiple tactical actions, the emphasis is likely to be on delay and manoeuvre defence to fix the enemy force and destroy key elements, with material destruction achieved with offensive fires.

Defence to preserve

8.12 A defence to preserve is most frequently mounted within urban terrain in order to take advantage of the concealment and protection available. When denial of the urban terrain is not a priority, a dispersed defence will be employed.

Defence to deny

8.13 The Olvanans seek to avoid attritional defensive engagements in urban areas, but they recognise that they may have to deny key facilities, communication hubs or nodes, especially bridges. Alternatively, and more challengingly, they may have to deny the enemy terrain from where they can deny Olvanan use of such key terrain. In either case they emphasise occupying the minimum amount of terrain to achieve this result. They seek to deliver the denial effect by minefields, demolitions, firepower and remote attack.

Operational level functional organisation and conduct

8.14 Rather than allocating narrow and deep sectors of urban terrain for formations to defend, the Olvanans are likely to assign different formations forward to conduct degradation and manoeuvre defence while other formations develop defences behind. This reflects their belief that the area defence is most effectively conducted by combined arms teams based on dismounted infantry reinforced with engineers, whereas in contrast mechanised units are especially suitable for the degradation battle. The highest available level of headquarters will be assigned the urban defensive mission in order to leverage high-level C3 systems that can exploit and fuse the influence, information and effects available within a city.

Operational level approaches to defensive enclosure operations

8.15 As is the case for offensive operations, the concept of fused-masked-secerned warfare provides the overarching framing for Olvanan conduct of defensive urban operations. Given possession of the terrain, the construct of fusing is expected to deliver even more to the defender. It is expected to not only provide real-time information of what is occurring within an urban area, but to turn the entire urban area into a targeting system. Furthermore, and even more important to the Olvanans given their political understanding of war, they believe

they will have far greater scope for both psychologically shaping the population and, using the Orange Jackets in particular, driving the narrative of battle. Masking within the physical, political and electromagnetic terrain provides the opportunity for defenders to remain undetected and unscathed while initiating remote and precision attack. Secerning becomes an emphasis on applying systems warfare at focus points to excise key enemy capabilities, seeking separation, isolation or stand-off between troops and effects to reduce vulnerability. In particular, it translates to tactical siting selectivity that minimises reliance on identifiable strong points that are vulnerable to precision attack.

8.16 We have already encountered three important Olvanan ideas for offensive operation at the operational level: the notion of disruption and the tension between seizing opportunities with alacrity and the need for regrouping and task organising. Their view is that these are broadly reciprocal, a high-level command considering the urban defence will need to consider the following, some aspects of which are explored in more detail in the next section.

Counter disruption

8.17 For the same reasons that the attacking commander considers disrupting preparations for defence, the defender must pre-empt or counter such disruption. This is likely to require the timely deployment of security elements to the perimeter, and other dominant positions, with anti-air systems being a likely priority.

Technical and political alacrity

8.18 In the urban defence, the Olvanans emphasise the need for alacrity at the political and technical levels. Control of information into and within the city as well as the management of resources including water, power, food and access to medical treatment are potent levers, and must be wielded early. If evacuations of a town or city or relocations within them are necessary arrangements must begin early. The Olvanans overtly favour evacuations for tactical and humanitarian reasons, however their motivations are deeper. While the logistic costs may be huge, so potentially are the broader political narrative benefits. Less obviously, a population and urban leadership preoccupied with making arrangements for preserving its property

and comforts is more likely to be quiescent, while the process of evacuation is disruptive to political opposition clandestinely support to adversaries. An early emphasis on securing the property of evacuated areas positively frames approaches such as autonomously guarded zones. Similarly, the obvious need to provide for evacuated populations provides the basis for getting civil authorities to cooperate with taking control of resources.

8.19 Responsibility for this planning rests with the FOO who not only conduct regular contingency exercises, but also use the Enclosure-world models and machine learning based simulations to evaluate different options in different scenarios. Detailed planning data covers issues such as evacuation timings, methods, routes, emergency and alternative accommodation, legislative and regulatory frameworks that apply. Implementation is the responsibility of the Orange Jackets organisation supported by the expeditionary elements of the OPAP. Importantly, the OPAP are explicitly subordinate in this relationship and their role is to ‘protect the humanitarians’. This obviously serves the internationalist political agenda, but less obviously reflects actual power relationships. The Orange Jackets is, despite being unarmed, separate from the OPA chain of command and with an overtly humanitarian culture and ethic, a robust tool of the party and its leadership is populated by the offspring of the well-connected.

Forces for courses – tailoring

8.20 The requirement to regroup and reorganise for enclosure operations applies as much to the defence as the attack. The scope and need for engineering and robotics capabilities is, if anything, greater. Where the mission is to deny the urban area (as opposed to preserving the force), the optimum force is also built around engineering and asymmetric warfare capabilities, but again, as with offensive operations recognises that the many of the capabilities of the first line formations are not put to best use in an urban area defence. The optimum mix is considered to be one mechanised brigade with two dismounted, motorised or high mobility brigades.

Chapter 9

Features of tactical enclosed defensive operations

Key features of proto-defensive actions for enclosed operations

9.1 The Olvanans conduct toward operations in order to establish conditions within urban areas for subsequent offensive operations in around them. Similarly, but on a more localised scale, where an urban area has significance within a defensive scheme they will conduct preparatory proto-defensive actions. These features are:

a. Population management

b. Information effect fusing and defensive C3

c. The sensing city and supplementary communications

d. Special provision for deployment.

Population management

9.2 The Olvanan understanding of warfare as a primarily political act requires that the non-combatant population are a major consideration in operational thinking and a range of contingency plans are maintained by the whole-of-government FOO for different scenarios. For proclaimed ethical reasons their default preference is maximum evacuation, however it is clear that they also believe that deserted areas are easier to secure and this approach this will give them far greater freedom of action to use autonomous weapons systems, demolitions and incendiaries.

Evacuation

9.3 On exercises, the Olvanans frequently practice selective evacuation where some zones are cleared of all occupants, with the displaced population being concentrated in nominated safe orange zones. These may be variously established at schools, in light industrial areas or by billeting evacuees in other residential areas. These actions are integrated with information operations that highlight the threat from approaching enemy forces and herald the Olvanan

actions as exemplary and inspired by IHL. However, it is evident that whatever the sympathies of the civilian population, a benefit is psychological dislocation which will assist with compliance and subsequent manipulation. Generally, they believe that proactive evacuation sets favours desired political outcomes, with the caveat that there must be time to move the population and they must not be seen to suffer disproportionately. Thus the constraint on evacuation in the Olvanan view is logistic.

Conduct

9.4 The handling of the civilian populations is set at the highest political level, and is manifest in the guidance provided by the FOO, which will typically specify orange zones and orange evacuation routes, the military commander has freedom of action in defining the tactical zones and can request changes upwards. The public face of implementation is the Orange Jackets organisation who make announcements, marshal on evacuation routes, distribute necessities and coordinate reception in orange areas. The unarmed Orange Jacket organisation are provided arm's-length protection by teams from the expeditionary force of the OPAP working with the indigenous police force.

9.5 The OPAP and the Orange Jackets operate a current and stick approach, with the latter carefully maintaining a benign humanitarian front, while away from scrutiny the OPAP are robust in enforcing evacuation. In similar vein, the OPAP normally remain outside of orange areas (humanitarian zones) but will be ruthless in their containment.

Information effect fusing and defensive C3

9.6 The heart of the Olvanan concept of fused warfare is the synthesis of information and effects, kinetic and non-kinetic, to gain advantage on the urban battlefield. This integration is enabled by two levels of organisation. First, the 30 person IEF teams (and detachable cells) from the whole of government FOO that are embedded in the task force (divisional level) headquarters responsible for the enclosure operation. Second, the section-sized FWCE formed by subordinate brigades and reinforced by cells detached from the IEF teams.

9.7 These capabilities will be deployed early, reflecting that the Olvanan first principle of defence is to build an effective command system. They consider redundancy of communication systems and CPs vital, and establish at least two and preferably four CPs at brigade level and above. An IEF team will be deployed to the relevant task force (divisional level) headquarters, but more significantly they will detach elements to form FWC sections at both the base (main) and forward CPs of each brigade deployed into an urban area. This arrangement is intended to ensure that either the commander or their delegate always has the Enclosure-world battle picture in real time.

The sensing-city and supplementary communications

9.8 The Olvanan concept of fused warfare that taps into a sensing city to collect data depends on robust connectivity into the IT communications infrastructure. The Enclosure-world has detailed records of reticulation of all kinds which allows specialist technicians to readily locate and (physically or proximally) rapidly connect at key nodes, such as mobile telephone towers, to enable collection and/or take control of networks for information operations purposes.

Exploiting data bearers

9.9 The capability to connect to into major data bearers is also exploited to provide alternative and supplementary communications links across urban areas. The Olvanans anticipate that the contest for the electromagnetic spectrum will be especially intense in the congested urban environment. In order to achieve ‘electromagnetic superiority’ a priority task for infrastructure communications units when deployed into urban areas is to build a resilient cable/fibre-optic backbone for a distributed system of transmitter receiver nodes to provide remote control of robotic platforms.

Analogue opportunities

9.10 In addition to exploiting communication system nodes and data cabling, Olvanan specialist signals units also have stocks of enclosure communication modules that ‘piggyback’ on other cabling and piping (including live mains electrical systems). With a few minutes training, any soldier can connect a device to an electrical mains outlet or metal water pipe and communicate with another similar device nearby. While these only offer very limited bandwidth,

they do provide a means to communicate with minimal electromagnetic radiation, and importantly, often provide the basis for otherwise problematic subterranean communication. Similar devices also provide the opportunity to quickly remote antenna from one part of a building to another without cabling, which can not only aid deception and concealment, but is particularly useful for siting directional antenna.

Special provision for enclosure defence deployment

9.11 During offensive planning, the Olvanans place great store by disrupting an opponent's urban defensive preparations, and this is reflected in their own tactical provision for such operations. The basis is standard doctrine for protecting a force deploying into defence, modified for the terrain, to address the threat of coup de main/desant operations and, increasingly that from UAS and loitering munitions. The significant differences, which have been recently discussed in Olvanan professional journals, are a key role for SPFs and the use of two obsolescent capabilities.

9.12 Media reporting of recent major defensive exercises has increasingly shown the deployment of obsolescent light towed air defence guns, both onto dominating buildings and at major intersections where they command the streets in multiple directions. In many cases these are co-located with single towed 107 mm multiple rocket launchers. Neither type of system is considered effective or survivable in their primary role for contemporary conventional warfare, however the urban environment is said to be an exception. Analysis of recent operations, in Syria in particular, have concluded that both systems offer deterrent capability during preliminary operations, with the rocket launcher systems provide an interim obscurant capability for rapid protection against loitering munitions. Crews are also trained to deploy these weapon systems concealed within buildings. Significantly, because most such equipment is held in reserve or militia units, their appearance is an indicator of intention to defend an urban area.

9.13 Another indicator Olvanan arrangement of preparation for an urban defensive is the key role of SPFs. By deploying them early the commander gains unitary continuous surveillance over the depth of the battlefield in what is expected to be a confusing and politically

sensitive operation. Another reason for this role is the question of operating in isolation. Olvanans generate morale collectively and their conventional soldiers expect to operate with support. There are two urban tasks where isolation of defenders is particularly likely: deep disruption and perimeter OPs.

Deep disruption

9.14 Peer adversaries conducting a major attack on an urban area are expected to rely heavily on precision munitions in volumes and with an assurance that air delivery is unlikely to be able to provide. Medium and heavy artillery is therefore likely to be a key asset for the attacker and can be expected to be deployed in zones where their maximum range reaches across the defended area. This deep disruption zone is also likely to contain enemy logistic elements, communication nodes and other high-value targets. In the context of a retrograde battle the Olvanan will deploy stay behind SPF observation teams in carefully selected and thoroughly concealed hides, from where they will monitor a network of passive sensors and, when high-value targets are presented, launch autonomous precision munitions. Clandestine construction and stocking of subsurface hides and launches will be disguised within the rearward deployment of covering forces.

Occupying high ground

9.15 The Olvanans also emphasise the importance of ‘occupying the high ground’ in the urban battle: observers in tall buildings can potentially dominate a large area and sniping from these places may be especially effective. However, they also recognise that when such positions are identified they are very vulnerable to direct fire and, if they are located on the perimeter of an urban area, isolation. Infiltrating, maintaining and exfiltrating an urban clandestine OP requires the skills and attitudes of the SPF. Additionally, they have the capability to operate surveillance systems and use weapons such as precision grenade launchers and low-level air defence missiles as well as be inserted or redeployed by aircraft. For these reasons, and to triangulate data from information effect fusing, SPF patrols are deployed early across the super surface of an urban area to be defended. Air insertion is currently by helicopter but the use of

autogyros and personal aircraft for individual and small team deployment is likely in the future.

Key features of enclosure defence operations

9.16 The features that distinguish the Olvanan defensive battle are:

a. Secerned system warfare

b. All-azimuth continuous threat

c. 3D-defilade

d. Masked combat

e. Delegated fires, remote attack, demolition and denial.

Secerned systems warfare

9.17 The Olvanans believe that the urban environment is particularly suited to applying their concept of systems warfare. This, contrary to Western focus on the will of the enemy, emphasises attacking their capability to fight by striking essential components. They assume that as adversaries increasingly depend on technologies such as artificial intelligence for processing data and robotics, the utility of the systems attack focus will only increase.

Terrain secerning

9.18 The idea of targeting and isolating particular systems such as engineering or C3 platforms is familiar to us. However, their concept develops this notion further for the urban fight, where they believe that the channelling and segmenting created by buildings forms engagement areas where enemy forces can be secerned (ie, in the sense of separated, overwhelmed and excised). Here a small force can concurrently concentrate several combat effects to achieve temporary local superiority.

9.19 To illustrate this, their doctrine uses an example where, a defending element may have a single CUAS platform, a single smoke generator, two weapons with thermal vision and a small number of mines. While this is objectively a limited set of capabilities, urban terrain offers opportunities to synthesise their effects to effectively attack a crucial enemy node. The four types of systems are deployed together to attack within a bounded urban space through which the

enemy force must advance. This approach offers a tactical window in which, protected by smoke, the weapon systems are able to destroy enemy mine clearance vehicles and withdraw cleanly because pursuit is deterred by the mines.

The robotics battle

9.20 Robotics represent increasingly important systems within the wider construct of systems warfare, and the Olvanans understand them as warfare changing technologies which will play to their advantages of industrial capabilities and investment in innovation. In particular, they anticipate that conventional warfare and battles will increasingly commence with a contest of robotic reconnaissance and surveillance battle and that once kinetic combat begins forces will joust to find the opportunity to strike with systems such as drone swarms. Importantly, however the Olvanans do not see this simply as a contest of technologies, rather it is the superior tactical and operational use of them that will deliver victory.

9.21 The notion of secerning on the urban battlefield in order to maximise advantages in quality and quantity and minimise disadvantages can be seen as simply a localised expression of the tactical advantage that all commanders seek. But it is secerning as isolation that is important to the robotic reconnaissance and surveillance battle. The rapid rate of technological change means that relative strengths are constantly changing and specific tactics must change to reflect this. However, the Olvanans recognise that the relative performance will be unknown until tested and so caution commanders that except where they have capabilities that can overwhelm both functionally and with mass, secerning is an essential tool to manage battlefield risk.

Tactical application

9.22 Secerning is seen as a practical adjunct to tactical technique. For example, currently, robotic platforms under remote human control are likely to detect, decide and engage more slowly than conventional platforms operated by humans. While this condition applies, it is likely to be effective to use crewed systems to initiate engagements against robotic systems, and effective use of terrain can offset advantages of robotic numbers or enemy loss tolerance. However, systems warfare

teaches that effects should be superimposed, and secerning offers the opportunity to achieve overwhelming layered advantage in an engagement area. Consequently, the Olvanans are taught to conduct ambushes that combine kinetic weapons effects with, environmental and electromagnetic ones. An ambush of leading robotic platforms might be initiated with an electromagnetic pulse weapon, immediately followed by command signal jamming, creating a window of advantage for brief kinetic engagement, itself covered by obscurants.

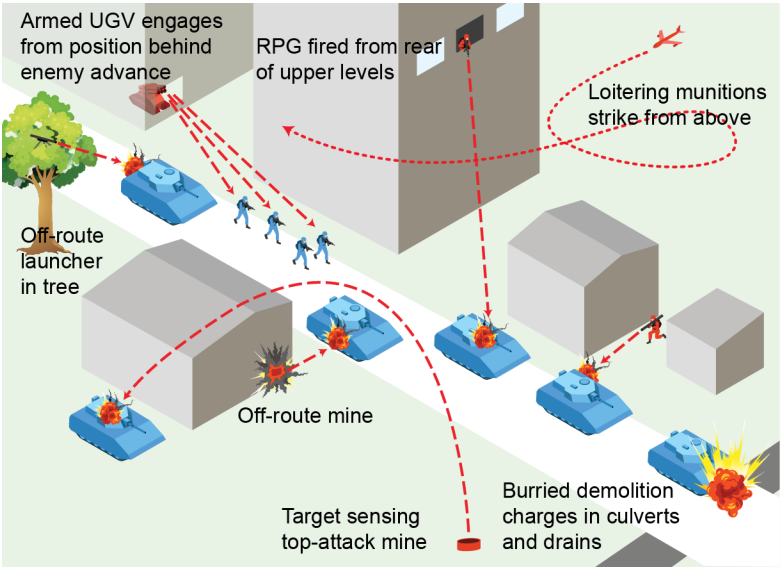
9.23 The key idea of secerned systems superiority is to concentrate effects in selected enemy systems on selected areas of the Urban battlefield which are both clearly defined and often physically and electromagnetically isolated. This sets the conditions for decisive engagement or destruction of the enemy exploiting systems such as multiple loitering munitions launchers.

All-azimuth continuous threat

9.24 Olvanan analysts have noted that while urban warfare literature emphasises a pervasive three-dimensional threat, in most cases engagement or assaults from anywhere other than ahead on the axis or from overwatch in buildings to either side is only occasional. They suggest this represents a missed opportunity and that defenders should consciously seek to engage by as many different means and from as many different directions as possible early in the defensive battle. Commanders are urged to instil in their soldiers the ‘spirit of the Hunter and Trapper’ and emphasise that retrograde urban operations provide a continuous opportunity for initiative and sapping the enemy’s will power and means.

9.25 Examples of all azimuth attack include the employment of off-route munitions from high in buildings, in trees and under bridges and the initiation of concealed demolition charges and large mines not only under leading but also against following elements. The Olvanans have a variety of such munitions ranging from smart mines with sophisticated seismic and infrared sensors that launch top attack munitions, through to simple kits to convert standard anti-armour rocket launchers into mines. Figure 9.1 is a conceptual illustration of some of the methods of achieving all-azimuth attack.

Figure 9.1: A portrayal of some of the methods of all-azimuth attack



9.26 The Olvanans also have a range of free flight artillery rockets, most of which can be launched by the simple expedient of propping them up at a suitable angle and fitting an electrical igniter. Engineers and artillery troops routinely practise this, especially using their substantial stocks of obsolescent 107 mm rockets. These are small and light enough to be easily emplaced and connected to sensor-based firing devices or radio initiators.

Mine marking

9.27 The Olvanans are expected to employ the more discriminant anti-armour munitions unmarked. Similarly, they will conceal command initiated antipersonnel directional (Claymore type) mines, which will increasingly be sited in conjunction with a targeting camera. However, during training there are scrupulous in marking and fencing hand and launcher laid antipersonnel target-initiated mines. Political instructors emphasise the importance of this to avoid alienating civilians who might be unintentionally harmed. While the Olvanans

emphasise their humanitarian motivations for this practice, the tactical benefits of this approach are high because it allows them to impose delay with the frequent use of minefields with very low ratios of mines, or indeed, phony minefields.

Strike from the rear

9.28 Defenders will make special effort to engage, and where possible assault, advancing enemies from behind, such that the defenders strike in the general direction of the attacker's axis of advance. This tactic is be expected to generate confusion, impose delay and responses are likely to be hesitant. The scope for striking from behind with modest risk has been dramatically increased by the widespread introduction of armed UGV and RWS.

Psychological intent

9.29 The object of all azimuth continuous threat is to achieve psychological ascendancy and the Olvanan say this requires deliberate design and close integration with the information operations plan. For example, they recommend the use of large demolition charges and sniping for early engagements as their analysis suggests this combination has been particularly effective against imperialist aggression in the first 20 years of this century. Such attacks will generate 'mine awareness' and 'sniper apprehension' but suggest this should be combined with the use of warning signs, leaflets or other media that explicitly state the threat that has been realised. The idea is to not only sensitise soldiers the kinetic threat but also the communication channels.

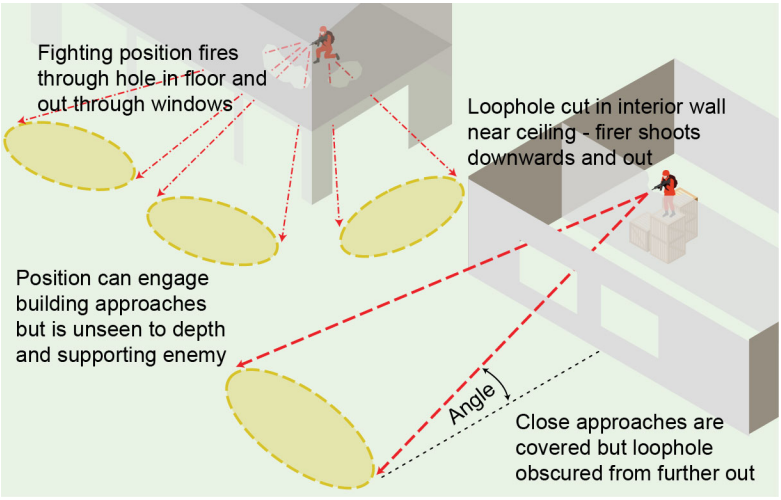
Three-dimensional defilade

9.30 The Olvanan concept of urban defilade is broader than the Anglophone, and is better conveyed by their expression 'a rebel arrow may fly from the latrine window, along the alley and kill the passing Emperor and the mightiest bodyguards not know whence it came'. While their use of the term encompasses the idea of engaging a visible leading element of an enemy force – in both the American understanding of 'reverse slope' and the British meaning of 'looking from behind raised ground across the enemy axis of advance', they have a more 'enclosed' interpretation.

9.31 Their basic illustration of urban defilade notion is a firer shooting out of a window from deep within the building. But they instruct their soldiers to seek more. This should not only be a firing position that only views, and is in turn only viewable from, a narrow or secerned part of the battlefield but also offers physical survivability. This is much more akin to Western understanding of sniper engagement, but with an even greater emphasis on the firer being protected and remaining concealed. An example is where a firing loophole is cut in the concrete wall of an interior staircase so that the firer looks from a protected position within, covering only the narrow arc of view and fire offered through a window.

9.32 Crucially, the Olvanans understand urban defilade three-dimensionally. This is illustrated by Figure 9.2. Defensive positions in buildings may have holes cut in upper floors near the walls so that defenders can look downwards out of the windows in the room below to cover the approaches to the building while being unseen and protected from enemies further away, as shown by the top left building. More commonly, loopholes are cut high in interior walls so that the arc of fire through external windows is downwards. This similarly ensures that the firing loophole will be hidden to enemies further away from the building as shown by the lower right building.

Figure 9.2: Schematic illustration of three-dimensional defilade, achieved by both cutting holed in upper floors and loopholes in interior walls near the ceiling

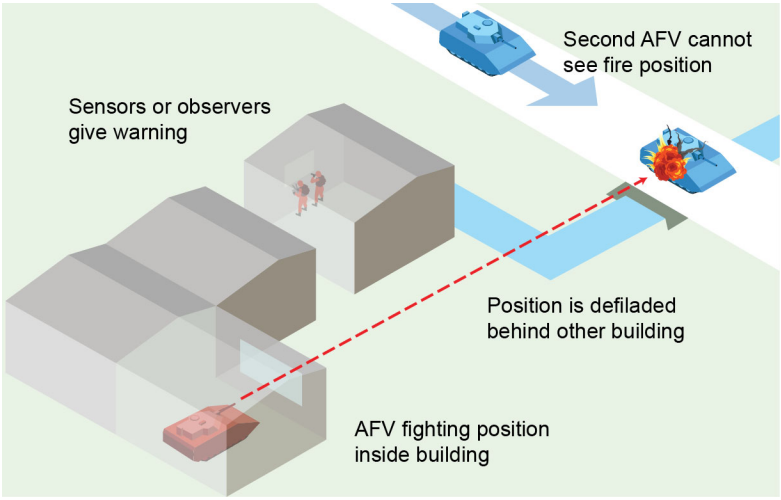


9.33 On the same principle, positions that engage outward from under bridges, either sited high on the wing walls or in robust buildings beyond, may achieve trajectory defilade. While there is a line of sight in both directions between the firer and a relatively distant target, this arrangement may ensure that there is a clear trajectory from the firer to the target, but not in reverse. Such siting is particularly useful for protecting flat trajectory snipers from counter fire by the more parabolic trajectories of grenade launchers and larger (slower) HE shells.

All arms application

9.34 Defilade is very much an all arms concept for the Olvanans. While its application by AFV to engage out along the laneway and streets into more open areas is familiar, they also seek to place their vehicles within buildings firing along narrow engagement areas that cross the enemy axis of advance. This tactic has been recently getting much attention because of the perceived threat of loitering precision munitions (see Figure 9.3).

Figure 9.3: A deeply defiladed armoured fighting vehicle fighting position inside a building



9.35 The threat from loitering munitions and especially its manifestation in swarming attacks has seen the air defence artillery adopt enclosure defilade as a technique. A cannon system deployed surrounded on two or more sides by high buildings or, preferably, firing from within a large warehouse type building out of an open door is able to secern a sector of the sky. This not only reduces the otherwise considerable danger of the system being overwhelmed by multiple concurrent attacks from different directions, it allows for the siting of anti-drone 'engagement walls' around selected sectors of the urban battlefield.

Masked combat

9.36 The Olvanan notion of masked combat, like their understanding of defilade, is more complicated than the English equivalent word. The meaning is closer to 'cover' in that it does not only suggest concealment but also a level of protection. Furthermore, it conveys the idea of concealing actual engagement as well as manoeuvre. Additionally, masking alludes to the ancient symbolism of

the mask, meaning deception and misleading action. Indeed, the Olvanan understanding might be best understood as a combination of the Donovian concept of Maskirovka synthesised with shielding.

9.37 Urban areas offer better physical and electromagnetic concealment than other environments. The Olvanans assess that this is particularly important while the balance between massed loitering anti-armour munitions and countermeasures appears to favour the former. Those who can best exploit urban masking to protect their platforms may have a decisive advantage. Nevertheless, the Olvanans assess that advances in overhead sensor technology, robotic reconnaissance platforms and information leakage because of the presence of civilians and extensive IT infrastructure, make it very likely that a proportion of individual systems or defensive preparations will be detected. Completely concealing large forces in urban areas is implausible. Their approach to this reality draws heavily on the Donovian concept of Maskirovka.

Maskirovka

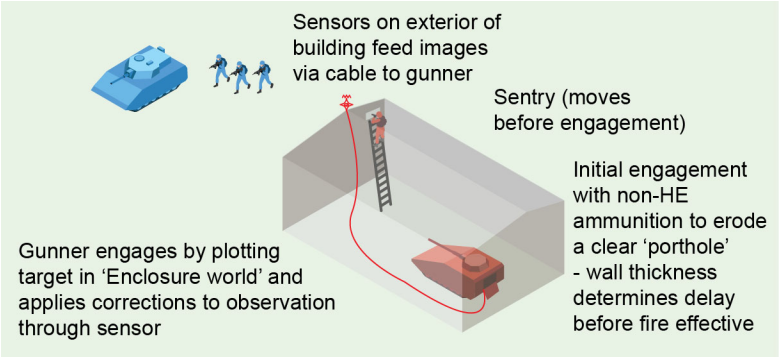
9.38 This can be considered as an embrace of deception as both a routine way of operating and a primary consideration in any commander's appreciation. They will invest effort in identifying the options that an enemy will expect and then invest resources in reinforcing a false impression. Where it is believed that the enemy are aware of the presence of defenders in urban area, the Olvanans are likely to move vehicles between actual and multiple deception positions and in the latter carry out minor defensive works to create ambiguity. Where time permits they will seek to construct obstacles and fighting positions in multiple areas to not only create ambiguity but maximise their tactical options. Importantly, in addition to decoy and duplication measures, they also display great ingenuity in camouflaging their systems in urban areas, with armoured vehicles on exercise appearing as trucks, small buildings and material stockpiles.

Blind engagement

9.39 The integration of digitised fire control systems and the data provided by Enclosure-world allows many Olvanan direct fire systems to be predictively laid onto the location of a target, notwithstanding that it is not visible to the firer and there may be multiple walls or other

barriers in between. This provides an emerging capability for systems, particularly machine guns and cannon on armoured vehicles, to be fired blind at targets such that the initial rounds breach barriers along the trajectory. This is shown at Figure 9.4.

Figure 9.4: An armoured fighting vehicle positioned to provide blind engagement from within a building



9.40 While it appears that attempts to apply adjustments to direct fire weapons by observers in different offset locations have proved erratic, it is evident that blind engagement offers the means to place direct harassing fire onto obstacles and nodes with a relatively low chance of the firing position being immediately identified.

Interior manoeuvre

9.41 Historically, well prepared defensive positions in strongly constructed buildings have been successfully defended for long periods of time, even when slowly reduced by bombardment. Olvanan analysis of Western defeat of Islamist enemies in cities has noted that once defensive positions have been identified they can be systematically eliminated with large calibre precision munitions. The same studies have also noted relative the success of these adversaries in preparing the interior of buildings for defence by opening passageways and building loopholes and bunkers to fight an interior battle with attacking troops. Apart from sentries, most defenders remain in strongly fortified or subterranean parts of the building from where they emerge once attackers have entered the

building. The Olvanans have adopted a similar approach to fixed defensive positions, except that they make extensive use of sensors and cameras to reduce the need for vulnerable and detectable sentries.

Delegated fires, demolition, denial and remote attack

9.42 Robotic capabilities are transforming the OPA and they believe their significance will only grow, and their leadership in the field will allow them to maintain a lead. Nevertheless, they have a realistic view of the technical challenges of controlling UGV and UAS, particularly armed systems, at a distance and acknowledge that the contest for assured bandwidth is not a foregone conclusion. This is reflected in how their doctrine maximises the use of tethers and keeping the gap between operator and system as short as possible. Given the probability that when defenders are located they may be quickly eliminated analysts have studied past campaigns to see where defenders fought effectively without revealing their positions.

Indirect fire

9.43 The primary conclusion is that a heavily outnumbered force defending from positions containing a handful of men have been successful when they have had assured and responsive indirect fire. The key has been to empower the ordinary sentry to immediately apply fire against pre-planned targets and without delays for approval. To achieve this, in urban terrain indirect systems, particularly 120 mm self-loading mortars, are deployed dispersed and well forwards, able to respond to fire missions digitally transmitted via Enclosure-world.

Defensive demolitions

9.44 A further insight that the Olvanans have drawn from the Middle East generally, and especially from the ISIS offensive in 2014 that seized Mosul is the tactical effectiveness of large demolitions. They observed the potent effect of vehicle borne IEDs involving more than several hundred kg of explosives or of defenders detonating large charges as buildings were being assaulted. While typically such a device would kill no more than a dozen, the effects would typically render an entire subunit ineffective.

9.45 The Olvanans have concluded that there is a high payoff in prepositioning concealed large command fired demolition charges in the path of the enemy advance, particularly at constriction points such as bridges or where buildings can be collapsed to both bury advancing troops and create an obstacle. Their engineers have a modular, trailer based rapid demolition system, which allow bulk explosive charges in multiples of 50 kg to be rapidly emplaced on selected targets in the disruption zone, and/or concealed in hides forwards of main defensive positions moved from where they are moved to selected targets once enemy axes of advance are identified.

Building denial

9.46 One of the main options for an Olvanan commander to shape the defensive battlefield is by incendiary denial. This can be achieved responsively by using incendiary munitions fired from the various in-service shoulder-controlled launchers with, when used in a furnished building will reliably set a fire that within a matter of minutes make that building unusable. However, to avoid both the risks of revealing the firer's position and the requirement to accurately deliver the munitions at a distance, doctrine now provides a simple method to pre-place such munitions and fire them from their packaging with a command wire or a radio initiation device.

Remote weapon systems

9.47 Other analysis from the Middle East has shown that a defenders use of even relatively crude improvised remote weapon systems can have significant psychological impact and greatly distort an attacker's plans, even though actual lethality has proven modest. Olvanan assessment is that integrated into complex defensive positions, though not necessarily within them, tethered RWS and armed UGV are major force multiplier because they cause an attacker to 'signal their punches'.

Example section position

9.48 Figure 9.5 Illustrates how the considerations discussed above might be applied in practice in a section level Olvanan complex defensive position. Reflecting Olvanan emphasis on protection and survival the heart of the position is a reinforced below ground shelter. This leads immediately to a reinforced fighting position above ground,

which while it may have arcs of small arms fire beyond the building, is primarily sited for concealment and to use small arms to engage assaulting troops within the building. A withdrawal tunnel connects to a building to the rear where the section AFV is concealed and where, as the battle develops, the driver and gunner may be sited for vehicle security and to provide defensive fire from within the building.

9.49 During defensive routine, most soldiers will remain below ground, from where they can observe the area on their personal monitors which are connected to the sensors around the buildings. A pair of sentries occupy a carefully concealed OP/listening post at the forward end of the building concealing the section position until the enemy close on the position or a bombardment commences. This primary building as well as the adjacent buildings are all prepared with mouse holes so that soldiers can move quickly within while remaining concealed.

9.50 The use of sensors positioned around and within buildings is key to the Olvanan concept of the fused-masked defence and the cuing of artillery and guided munitions (which may include small loitering munitions launched from within the position itself). This reliance on sensors allows the defenders to minimise exposure and the risk of detection, to reduce and delay electromagnetic radiation from the defensive position Olvanans will link their sensors, remote weapon systems, command fired mines and demolition charges with a laddered (duplicated) system of cabling.

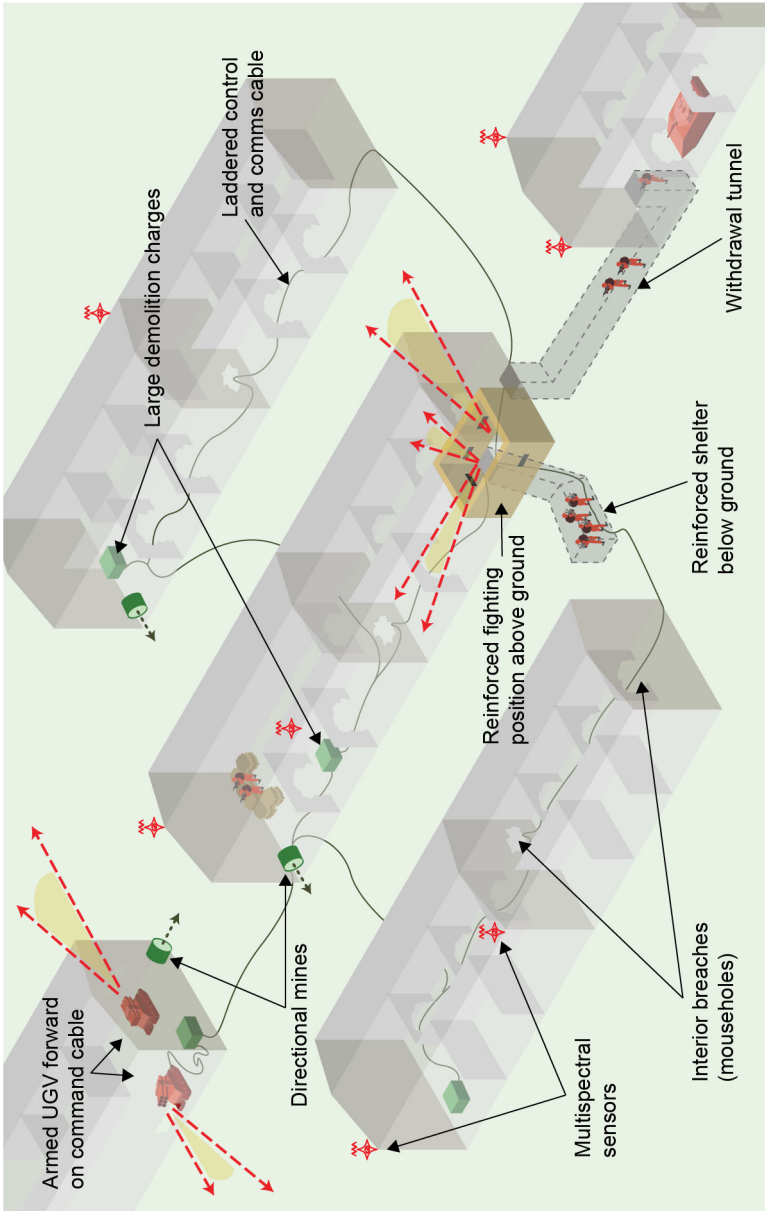


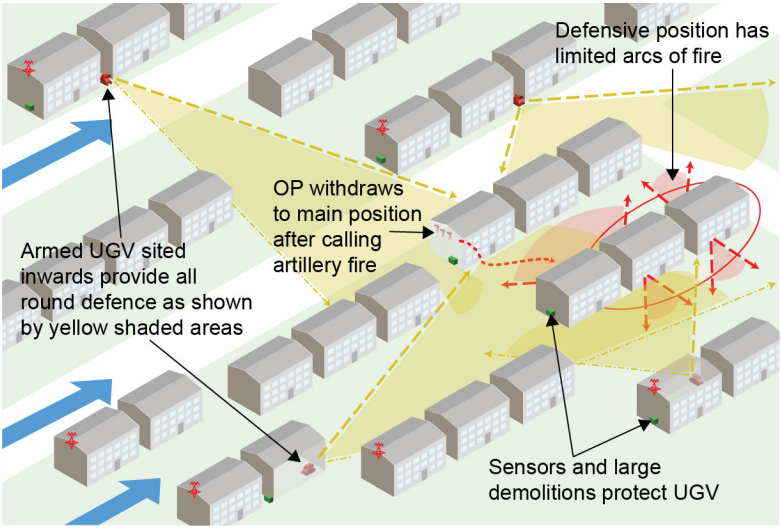
Figure 9.5: Example of a section complex defensive position

9.51 After initiating engagement by artillery systems the section will then fight while still below ground by first using remotely controlled armed UGV. Enemy vehicles or personnel approaching the position are first struck by directional anti-armour or anti-personnel mines. If an enemy assault develops it is engaged by bringing supporting fire onto the position (normally airburst to reduce risk) and then by initiating large demolition charges. The weapon systems may also join the fight at the decisive moment. In contrast to Western practice, the Olvanans do not plan to use their small arms to stop an assault, rather they expect to do this by the means just mentioned, with their sections only emerging from protected shelters once the attacking enemy are in disarray.

Inward sited defences and un-crewed ground vehicle

9.52 Olvanan doctrine emphasises the advantages of an inward sited defence. It includes the psychological advantage of striking and advancing enemy from the flanks or behind as well as siting defensive positions within buildings so that assaulting infantry are secerned. This allows them to be engaged while their comrades cannot see what is occurring nor provide supporting fire. The inward sited defence has become far more feasible with the use of armed UGV well concealed positions looking backwards and inwards over the positions occupied by humans. This is shown at Figure 9.6. Note that the defended position (red ellipse) has only modest external fields of fire, but four UGV provide all-round defence of the approaches towards that defended position.

Figure 9.6: Illustration of inwardly sited un-crewed ground vehicle surrounding a complex defensive position



9.53 As mentioned earlier, artillery and other munitions are used to engage the enemy first, cued by sensors and only then are the UGV employed, typically jockeying between several positions within buildings where they cannot easily be located. Recognising that a determined attacker that cannot locate these UGV will need to assault the buildings they are located in or near, the Olvanans routinely place large demolition charges on likely enemy approaches.

This page intentionally blank

Chapter 10

Planning, organising and conducting the defence

10.1 The notion of secerning is central to how the Olvanans think about what they call the enclosed defence. They emphatically do not consider the city a place to conduct an attritional battle and break the enemy's will. In contrast, it is seen as the optimum environment in which to practice systems warfare. Urban terrain is cellular and will divide and isolate the enemy at every level: district, suburb, block, building and room. Thus, the scope for isolating and attacking selected and crucial elements of the enemy system are unmatched by any other terrain.

10.2 The Olvanan commander seeks to secern the battlefield and deploy system strength against enemy system weakness. They do not resile from the requirement to strike the human part of the enemy system, however, and in contrast to Western doctrine, they consider that another human is usually the least preferable system to initiate that fight. Blast, especially long pulse thermobaric blast, supersonic fragments, flame and unbreathable or disabling gases are the tools. This is true for attack or defence, but in the defence they have greater freedom of action (because they have evacuated non-combatants) and the scope to prepare in detail.

10.3 Olvanan officers are taught to think of defending the enclosed battlefield in two simultaneous ways. It is like a hunting park in which a few small teams of cunning soldiers use their light weapons and dogs (robots) to outwit, wound, and gradually bring down a monster. The monster then finds itself in a literal technological minefield. As it lashes around or tries to progress it receives more wounds and becomes slower and more cautious. Then, and when the monster is no longer able to shield itself, salvos of intelligent munitions.

10.4 When planning therefore, the Olvanans first analyse the battlefield, which they do in three dimensions using Enclosure-world, to determine the best places to concentrate the effects of their systems and obtain protection against those of their enemies.

Secerning is the dominant idea. If the aim is to preserve the force, the question is which ground concurrently maximises kinetic survivability and degrades enemy combat power? If the aim is to delay or destroy, the question is which ground, which the enemy must pass overall secure, offers killing areas where the fight will greatly advantage the defender. If the task is to deny terrain, then the array of killing areas will likely be more extensive, but the principle remains. Manoeuvre and support elements are deployed to enable systems destruction while remaining as well concealed and protected by the terrain as possible. Crucially, killing areas are not envisaged simply as where attacking forces are decisively attacked, rather they are where systems warfare attacks critical enemy components, which degrades the attacker's combat capability rendering it increasingly vulnerable throughout the disruption zone.

10.5 The Olvanan emphasis in defence is on battlefield engineering and indirect firepower, with offensive manoeuvre and direct fire enabled by masking. This is the context in which the three main defensive tactics are situated.

Areas of responsibility, control measures and conduct

10.6 For enclosure operations, Olvanan planners will divide the battlefield in the normal way with initial lines of responsibility and support. However, they distinguish between three different categories of disruption zone. This is illustrated at Figure 10.1:

a. *Deep disruption zone.* The deep disruption is that area, typically beyond the range of the formations fire support assets, where enemy headquarters, and particularly large calibre artillery will deploy to support an urban attack. SPFs are deployed to stay behind positions in that zone or targeting and precision strike tasks.

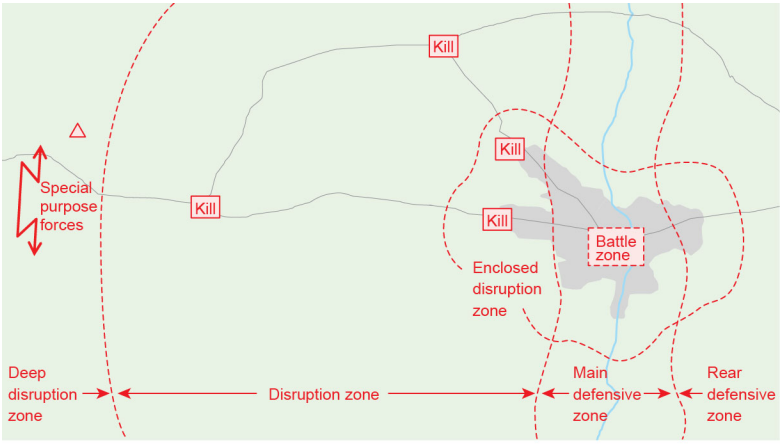
b. *Disruption zone.* From the deep disruption zone back to the approaches to the urban area or adjacent defensive areas, is the conventional disruption zone with nominated killing areas. During retrograde operations, it is likely that forward units will conduct manoeuvre defence back into (or around) they defended urban area. When the relevant shielding force reaches the urban area or a line level with it, responsibility for

imposing delay is handed to the enclosure defence force. There may be a perimeter detachment deployed on the periphery of the urban area in simple battle positions to provide a clean break for the retiring manoeuvre force. This is a task for anti-armour subunits with their indirect fire capable precision weapon fibre-optic guided missiles. Alternatively a degradation force may assume responsibility.

c. *Enclosed disruption zone.* The enclosed disruption zone is drawn to include all possible approaches and extends over the whole of the relevant urban area out to the limits of the weapon engagement range from the perimeter of the main weapons of the degradation force. This last arrangement makes the responsibility for engaging enemy troops approaching the urban area explicit. Enclosed degradation operations are mounted to engage approaching enemy forces from outside the urban area back to the nominated battles. Typically, the disruption zone plan will specify a large number of different killing areas for different targets, weapon systems and contingencies. The automation, support and mission rehearsal capability provided by Enclosure-world makes this level of planning feasible (see paragraph 10.9 to paragraph 10.20).

d. *Battlezone.* If an area defence is conducted, involving dispersed or channelling defence, these will occur in specified battle zones. Again, commanders will seek to secern with the smallest possible battle zones to achieve the planned defensive manoeuvres, leaving maximum flexibility in the disruption zone. For the dispersed defence the battlezone is known as the denial zone.

Figure 10.1: Control measures for enclosed defensive operations



10.7 Kill areas are similar to engagement areas in Western doctrine, and are slightly different from 'Arrays' discussed below. Further control measures within the urban area reflect the subsequent intended operations, but emphasise boundaries between different units and formations operating un-crewed systems.

Types of enclosed defence

10.8 There are three main types of enclosed defence plus the closely associated stability and control operations. These are discussed below with examples, noting that these are simplified for clarity of explanation and do not describe the full suite of lethal, non-lethal and electromagnetic effects that a commander would typically superimpose during any defensive operation:

a. Degradation

b. Dispersed defence

c. Channelled defence

d. Stability and control operations.

Degradation

10.9 This is the Olvanan term for both delay and manoeuvre defence within urban terrain. They describe the effect that the enclosed degradation is intended to exert on an attacker as decomposition: successive engagements that successively degrade combat power generally and target key systems in particular. It exploits the canalising nature and constant ambush opportunities of urban terrain to inflict losses, gain time or even destroy an advancing enemy force. It concedes terrain while presenting a continuous threat and frequent but varied and unpredictable attacks, including local counter-penetrations.

10.10 The Olvanans believe that the primary effect of a successful degradation operation is psychological. If it is possible to instil a sense of caution and apprehension on advancing enemy then in close urban terrain even dismounted forces can achieve a mobility advantage. Degradation is conceptually similar to manoeuvre defence, operated on a smaller scale. Since the environment effectively provides continuous defensive positions, many concealed withdrawal opportunities, the risks to forward elements are less than in manoeuvre defence.

10.11 On each axis there are a series of killing areas and degrading arrays. Killing areas are those where the primary destructive effect is weapon systems beyond the target area, whereas arrays consist of combinations of varied obstacles and means of attack which may be target operated, remotely operated or defended.

10.12 Figure 10.2 shows a degrading array that is designed to allow a small force such as an OP Trishula to both prevent a mounted force from conducting a bounce attack as well as shaping a mechanised force for attack by artillery and UAS. A well concealed OP is sited to have good observation along the likely axis of enemy advance and has a command detonated obstacle across that route. In this case it is a footbridge rigged for demolition. A single armed UGV positioned in defilade to engage leading enemy, while fruit mines are positioned to cover the most likely exits from the axis. The OP controlling this

array might allow one or two vehicles to pass (assuming there are ‘shield’ depth elements to the rear) and then drop the footbridge and strike the lead vehicles. Supporting fires and or loitering munitions are then brought down on the reacting enemy as the OP and the UGV withdraw.

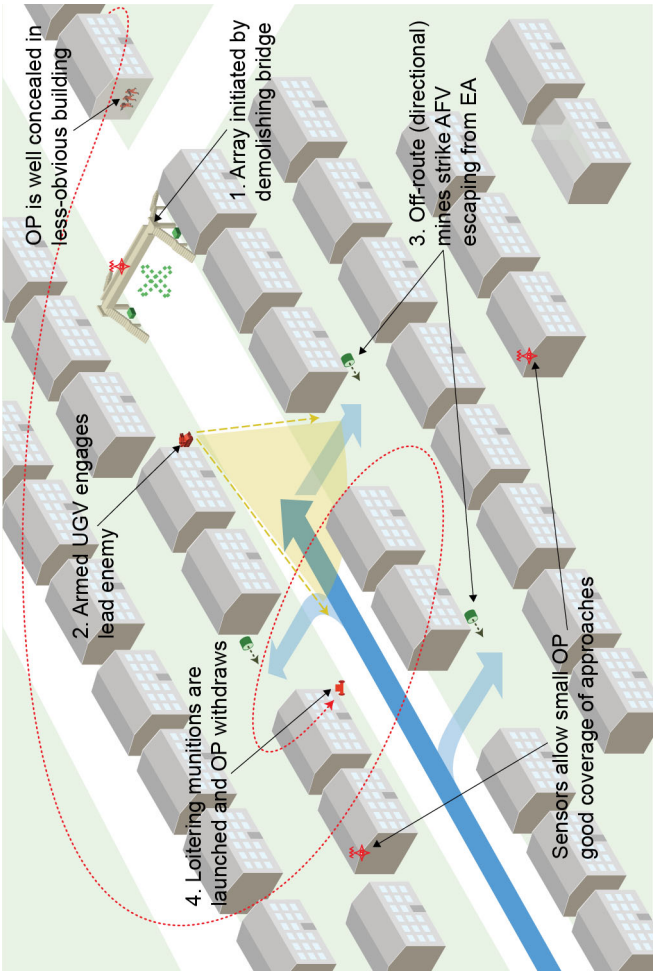


Figure 10.2: A degrading array of sensors, a remotely initiated obstacle, an un-crewed ground vehicle and other munitions

10.13 A unit conducting degradation deploys a contact grouping and a shield grouping on each axis, with other elements in support a bound or more to the rear (see paragraph 10.14 to paragraph 10.19).

Situational degradation

10.14 In circumstances where there is no time for the retiring force to prepare for handover to a separate degradation force a situational degradation is conducted. In this case, without the opportunity to prepare arrays, the degradation is fought across a series of killing areas only. As the withdrawing force enters the urban area, the first grouping to do so (doctrinally the shield force), then breakdown to form degradation groupings on various axes. The retiring contact force then withdraws through these to form one or more reserves.

Example: Mechanised company degradation

10.15 In the example illustrated below at Figure 10.3, a mechanised company reinforced with three teams of combat engineers is conducting a simple degradation operation. It is deployed to decompose anticipated mounted enemy forces approaching on one or all of three major axes, employing a platoon sized grouping on each. Echoing manoeuvre defence, each platoon forms a contact force or grupa forwards and a shielding force or grupa to the rear. However, because they are task organised for the different roles, with engineers in the contact grupa, they retain their relative positions and move by concertina action rather than leapfrog. In-depth, shown to the right of the diagram beyond the water obstacle, a section of self-propelled mortars and section of anti-aircraft cannon is deployed to provide support.

10.16 The diagram shows a degrading array (green blocking arrow within fence) deployed on both the centre and lower axis of approach (typically there are multiple different arrays on any approach). The degrading array is the point at which the Olvanan commander has specified a degree of delay and/or the attack of a particular system or systems. Usually, it will comprise a combination of an obstacle and fire effects, however a degradation element avoids using its own direct fire weapons, especially AFV systems, when it has other systems available. This is not only to avoid unmasking the platform,

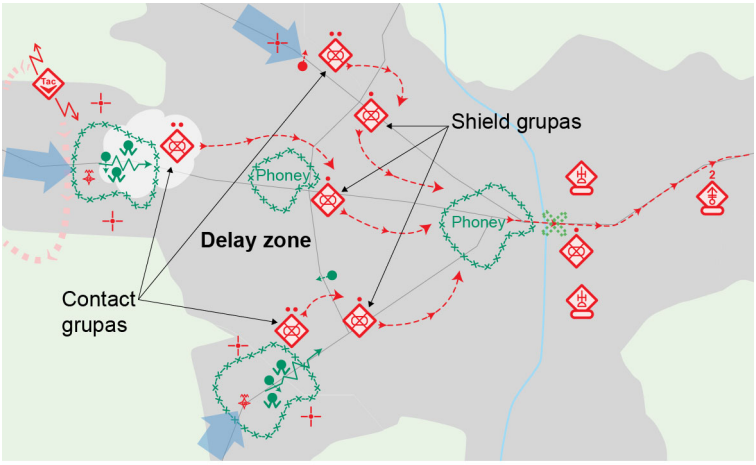
but also because a degradation force will use multiple degrading arrays, some of which will be covered by sensors not humans, and the Olvanans seek to avoid the enemy being able to distinguish between them.

10.17 In this example the degrading array comprises one or more off-route mines and wide area effect mines and a sensor system. Because (in this case) it contains antipersonnel autonomous or self-actuated munitions the obstacle is fenced. The array is covered by a contact force of two sections and a combat engineer team who emplace a series of arrays and then ‘fight’ them in turn, subsequently using sensors to initiate if they must withdraw before contact to conform with flanking elements. This type of degrading array is intended to cause the advancing enemy to halt or displace bypass the obstacle, and in either case is then engaged with indirect munitions. The contact grupa would only plan to engage directly in order to eliminate priority targets (such as counter drone systems) or if the attacking force succeeded in bouncing through the obstacle.

10.18 After the specified delay, or on order, and typically employing thermal opaque obscurant, the contact grupa withdraws back to the level of the shield grupa, whose task is to delay the enemy if the contact grupa is overcome and provide covering effects if the contact grupa is not able to break clean. Again, shield grupa will avoid unmasking their own weapons.

10.19 The example of the centre axis shows the contact grupa moving to the rear past a phony minefield fence. Once attackers have become mine conscious, this technique is also expected to impose delay and diversion and provide opportunities for engagement. Olvanan marking and fencing of minefields is entirely focused on protection of non-combatants from victim activated antipersonnel mines. They therefore still widely lay or scatter anti-armour mines that have discriminate sensors or similar (camera triggered) directional antipersonnel mines. In this illustration, on the axis approaching from the top of the diagram the next obstacle is an unmarked off-route mine.

Figure 10.3: A company conducting a degradation battle



Legend:

Urban area — River — Road — Wide area mine system

Off-route mine — Reserved demolition — Artillery planning target

Phoney — Phoney mine field — Wire fence — TI translucent obscurant

Sensor — Expected enemy approach — Self-propelled mortar

Armed UAS area of search — Mechanised infantry section

Mechanised infantry section with engineer element

Anti-aircraft cannon

10.20 While not shown for simplicity, UGV are the preferred means of direct engagement, while UAS operate beyond the immediate degrading array to detect attempts to bypass and coordinate indirect fire. In the scheme of manoeuvre shown, the three platoons plan to withdraw across the water obstacle, and when they are clear a reserve demolition is fired to allow a clean break.

Dispersed defence

10.21 The dispersed defence exploits the concealment and protection of urban terrain to protect and preserve combat forces, while integrating them as a distributed sensor and firepower system within the area they occupy. The force is dispersed in the smallest possible elements consistent with maintaining security and it constructs well protected positions, preferably below ground level. These positions deny the enemy freedom of manoeuvre and cannot be secured without a large-scale systematic clearance. If the dispersed defence is attacked, the well protected but dispersed and concealed positions are defended by heavy firepower across own positions, use of large demolition and crucially, provide a framework within which lethal autonomous weapons can be effectively and ethically employed.

Example: Company dispersed defence

10.22 In the example illustrated below at Figure 10.4, in the upper centre of the diagram, a company is adopting dispersed web defence. It is located in a sector of the town which effectively controls the through route without being sited predictably and vulnerability across that route. The occupied area is the denial zone, within which the defensive arrangement consists of individual section positions within buildings, with shelters constructed below ground as shown by the ‘inverted’ hat symbol within a fortification. Dispersed amongst the section fortifications is a section of self-propelled mortars and a section of anti-aircraft cannon. Section vehicles are not shown, but where possible these are also positioned with the sections, concealed and protected within buildings.

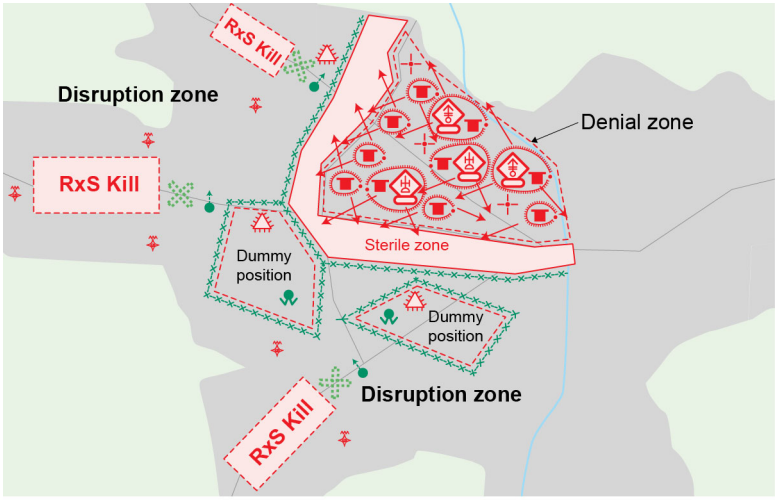
10.23 Depending on threat, time and resources the individual positions employ sensors, remote weapon systems, anti-armour mines and command activated mines outside of the buildings for self-defence. Invariably, positions are constructed to allow internal defence. Additionally, either using remote weapons systems, armoured vehicles concealed within buildings, or firing from very well protected positions with narrow arcs, there is a web of fire lanes across the denial zone that extends down lanes and open spaces. This differs from normal mutual support between antipersonnel weapons on defensive positions. These fire lanes are covered by

weapon systems that can be occupied during overhead bombardment. This is intended to deny an enemy the option of pushing forces through the position during bombardment, whether this be with armoured vehicles or UGV.

10.24 The denial zone is surrounded by a sterile zone and beyond that a warning fence. Identical warning fences surround dummy positions which are occupied only by a patrol in a heavily fortified OP. Non-combatants are evacuated from, as a minimum, all fenced areas, enabling the use of lethal autonomous systems to maintain routine security in the sterile zone. The key to the dispersed web defence is that all defenders are able to retire to well protected positions, enabling not only defensive artillery fire to be called onto the position, but vitally, the employment of lethal autonomous munitions or platforms to ‘hunt’ targets across the denial zone.

10.25 Beyond the denial zone, the distributed defence is organised to engage and disrupt enemy forces with. A network of sensors enables artillery engagement, and in this case, initiation of kill zones covered by one or more armed robotic platform. Additionally, major routes are covered with both off-route mines and large demolition charges. The design for battle provides for disruption of an enemy force approaching at speed on one or more of the three main axes or more slowly between them and systematic employment of robotic warfare.

Figure 10.4: A Company conducting dispersed defence



Channelled defence

10.26 The Olvanans employ channelled defence to decisively engage on urban terrain, where they must deny that terrain or the routes through it. As the name implies, it exploits the channelling nature of Urban terrain to shape an enemy force into trapping arrays where they are engaged at a relative advantage to the defender, principally by remote attack.

10.27 Within killing zones the Olvanans seek to employ demolitions, mines and robotics in lethal autonomous mode to degrade enemy capabilities before employing direct fire weapons and precision munitions together under obscuration against a degraded force. Engagements are multistage, with initiation intended to drive the enemy into cover which is prepared with command demolitions and munitions. The tactic employs relatively small forces dispersed in well protected and concealed complex battle positionsto for the proximity to (via buried and duplicated cables) conduct an initial remote engagement. With the exception of a few well protected OP, the defenders remain in cover until the enemy forces degraded. Then lethal autonomous engagement is pause, and they deploy to prepared positions to engage the degraded enemy force under obscuration.

10.28 The channelled defence is conceived as either the decisive stage of a culminating degradation battle, or where the relative combat power permits, as an ambush. It may be employed to set the conditions for systematic destruction of an enemy force with precision munitions or counter-attacks or be one stage in a continuing retrograde operation.

Example: Company channelled defence

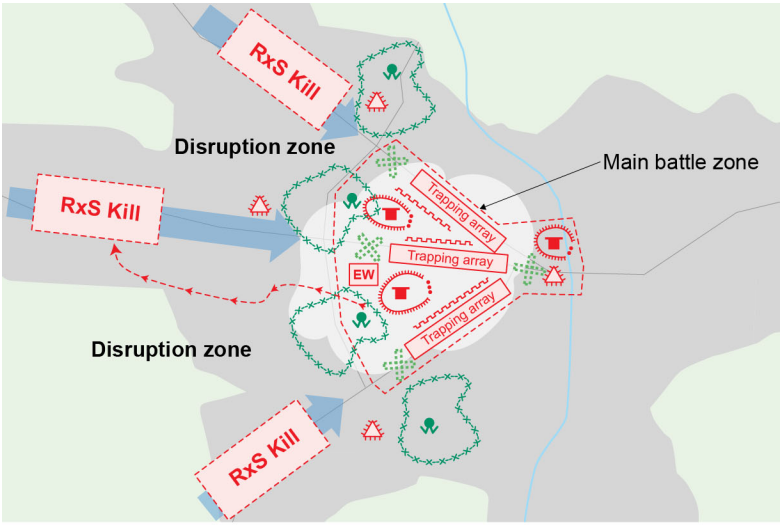
10.29 In the example illustrated below at Figure 10.5 a company is conducting a channelled defence at the node where three major routes meet. This provides for three killing areas in reasonable proximity to each other and caters for an enemy approach on one or more axis. For simplicity the illustration does not portray possible prior delaying action as the enemy approaches.

10.30 The design for battle envisages a small number of defenders in OP with the balance remaining within protected positions. Enemy troops advance until they are obstructed by an obstacle, preferably demolition or other command obstacle. Kill zones are initiated, firing concealed demolitions and incendiary devices as well as operating electro-magnetic warfare systems and robotic platforms operating in autonomous mode. These initial engagements are multistage, principally command attacks supported by indirect fire, particularly

thermobaric bombardment. Other demolitions may be fired to trap enemy forces in kill zones and depth OP's coordinate fire against following enemy elements.

10.31 When the defenders deploy out from their well protected positions, they initially function as additional OPs, and fight with indirect fire or robotic platforms. Direct fire, which risks detection, is limited. Counter penetration is executed by small groupings using demolitions, robotic platforms, grenade and thermobaric launchers to execute stand-off attacks against buildings rather than conduct close assaults.

Figure 10.5: A Company conducting channelled defence



Legend:

Urban area — River — Road — Wide area mine system

Off-route mine — Reserved demolition — Artillery planning target

Wire fence — Fortified observation position — TI translucent obscurant

Platoon fortified position with below ground protection APC/IFV in building

Anti-aircraft cannon — Expected enemy approach

Fortified redeployment routes through building and beneath sheets

EW Electronic warfare attack systems — RxS Kill Robotic kill zone

Sterile zone is fenced to allow autonomous weapon use

Trapping array — Complex of command demolitions, sensor, intelligent mines and armed UGV

10.32 Stability operations are those conducted to control, manage and provide relief to civilian populations and will be conducted in association with the defence. As discussed under offensive operations, a central tenet of fused warfare is to only exert military control over urban terrain when this is vital and only for as long as essential. Ethical and operational considerations will drive Olvanan commanders to evacuate non-combatant populations as early as possible.

10.33 **Evacuation and orange zones.** The Orange Jackets organisation are assigned responsibility for conducting evacuation and coordinating stability operations in areas that are not immediate defensive tasks, supported in the first instance by the OPAP. They will assign ‘open areas’ and safe routes in conjunction with international NGO and IHL entities, who will advise their adversary’s that they will not be deploying deploy OPA elements there. These areas will be selected with caution such that they do not offer great tactical advantage to an enemy who perfidiously exploits them uses them, and where nodes at either entry or exit points to the area can be denied with demolitions. The Olvanans will place reserve demolitions at these points and fire them without hesitation if their adversaries breach the declared zone.

10.34 Control operations are those to maintain security over defined zones. They consist of:

a. Cordon operations, which limit movement in and out of a defined area to control points. Importantly, in Olvanan doctrine, isolation may be imposed by methods include autonomous weapons systems and antipersonnel mine fields, provided these are marked.

b. Contained zones which are monitored to deny access and detect enemy activity.

c. Sterile zones which are evacuated and marked areas from which non-combatants are excluded.

This page intentionally blank

Chapter 11

Conduct of the defensive battle

11.1 This section describes the defensive battle by stages, with an emphasis on planning and the relationship of the different types of defensive manoeuvre.

Preliminary tasks and guidance

11.2 The decision to defend in any particular urban and the question of full or partial evacuation has significant political implications and will have been considered as part of contingency planning at the strategic level. Nominally evacuation is favoured for humanitarian reasons, but in tactically it offers the Olvanans scope to fight a defensive battle with smaller numbers and exploiting its firepower advantages, robotics and precision weapons. A commander tasked to conduct an urban defence will, as part of orders, be given the evacuation and Orange Jackets operations plan which will specify orange areas, orange routes and similar measures. These will be aligned with the type of defence that is ordered.

11.3 The Olvanans recognise that conducting an evacuation and maintaining security in an evacuated area, and rear areas, will prevent a formation from preparing for defence, so will assign other formations this role, under the auspices of the Orange Jackets and the OPAP (expeditionary force). Lower readiness reserves or even militia units are considered suitable. The size of formation allocated to the security task, and therefore the seniority of the security force commander may well be senior to the OPA tactical commander. To provide for this, during preparations for a defensive battle the defending formation commander may be ‘detached’ to the high level formation to which both commanders then report, coordinated by the FOO. At a specified point in the battle, usually the commencement of Perimeter Battle, the OPA tactical commander is given full authority over both forces.

11.4 While the Olvanans consider that urban terrain may be the optimum, or even essential terrain to fight a defensive battle over or around, they do not assume their first line armoured and mechanised formations to necessarily be the optimum forces to execute it. The more exquisite AFV capabilities may be unused in close terrain, and, depending on the type of building construction, cover and concealment for AFV may be limited. Furthermore, mechanised formations have a significantly smaller proportion of dismounts than other types of unit. If a decisive defence is to be conducted and cover for AFV is limited the Olvanan's will consider tasking a motorised or dismounted formation (including marine or airborne) as the primary defenders, typically with attached armour/mechanised unit(s) to conduct the transition battle and degradation.

11.5 The Olvanans consider urban operations an engineer's battle place a very high priority on reinforcing a defending formation with additional engineer units and some professional journal articles have argued that the optimum force is an engineer unit reinforced with high quality infantry and an anti-tank missile unit. As described previously, SPFs and rocket and anti-aircraft cannon reserve/militia units may have a niche role in providing initial security and anti-landing and anti-drone capability.

Security and command, control and communications

11.6 The first principle of defence for the Olvanans is to establish the command system. On urban terrain they are also initially concerned with possible enemy pre-emption or disruption operations. These two things are the priority actions for the commander. If possible, SPFs will be deployed to establish a 'counter-disruption' headquarters, a small number of dominating OP's across the urban area, and the patrols assigned to the deep disruption area. SPF are well-suited for this as have habitual relationships with higher headquarters and the FOO, as well as being trained and equipped to control artillery and aviation fires, giving them capability to be temporarily assigned as a fire control network. Their doctrine prescribes, as a minimum, assigning an indirect tube artillery subunit to the counter disruption task, ideally supplemented by Reserve/militia units with cannon and MBRL obscurant capability.

11.7 Contingency planning will have already identified suitable well protected headquarters locations and advance parties from signals units and the IEF will occupy early while other specialist teams prepare the additional communications and infrastructure connections to support Enclosure-world. Other signals teams will move across the urban area establishing access points to reticulation infrastructure that can be exploited for alternative, lower signature and protected communications channels.

Deep disruption

11.8 If the urban defence is planned in the context of a broader retrograde operation, then the deployment of stay-behind patrols from the SPF into the deep disruption zone where enemy artillery, logistics and other systems will concentrate is considered a potentially high payoff tactic. The feasibility depends upon both suitable terrain and own forces remaining forwards of the intended OP's long enough for their establishment. The SPF regularly practice deployment of clandestine OP in cooperation with logistic units. The positioning of the stores and tools required to construct and maintain OP for a significant period, and possibly the removal of spoil from subterranean construction is disguised within the pattern of combat supply delivery.

Defensive deployment and preparation

11.9 The deployment of defending troops and sequence of preparation is dictated by both the design of the defence and when and whether the defending troops are available for substantial preparations. The allocation of engineer effort is a crucial command decision that also reveals likely main effort of and type of the defence.

Design for battle

11.10 The Olvanans consider there are three major patterns of a defensive urban battle:

a. *Continuous retrograde.* The continuous retrograde describes the undesirable situation where a withdrawing force is not supported by another force but falls back on an urban area to continue its withdrawal. It is expected that the withdrawing force will be conducting manoeuvre defence and therefore

moving in alternating groupings. In this case the shield force that falls back onto the urban perimeter conducts a delaying action there, while the previous contact force withdraws through them and some distance into the urban area to regroup into smaller degradation groupings astride each of the main axes. If the continuous retrograde occurs under such time pressure that arrays cannot be prepared it is considered a situational defence.

b. *Handover.* The handover occurs when a forward force hands over to a prepared and positioned degradation force which takes on responsibility for the defensive battle. In this case the engineer effort is likely to be fully assigned to the degradation force and initially concentrated on the forward degradation positions and gradually moved to the rear.

c. *Handover and defend.* The handover and defend occurs when a forward force hands over to a prepared and positioned degradation force and then moves to the rear to adopt area defence force handover to degradation force and adopt area defence. This would normally take the form of either adopting dispersed defence in preparation for counter-attack or counter penetration, or alternatively adopting channelling defence. A less likely option is for the retiring force to adopt a hasty defence across an obstacle or to protect a key feature.

Transition battle

11.11 Transition describes the commencement of the enclosure battle and the manoeuvre as a forward force moves into the enclosed disruption zone. Importantly, from a command and control perspective, and especially to avoid a withdrawing force closing in or pausing on obvious positions on the defined perimeter of an urban area, the Olvanans define the enclosed disruption zone at the limit of direct fire beyond dense built-up areas. This gives both withdrawing and degrading force commanders clarity and maximum tactical flexibility. During the transition battle the degrading force seeks to impose a delay and get the attacker to reveal the main effort of attack. The main defensive effort is likely to be directed at killing areas on direct routes where the enemy is most likely to attempt a hasty attack.

11.12 Olvanan commanders are cautioned about the vulnerability of forward elements positioned on a distinct perimeter to initial bombardment by artillery or attack by precision munitions. Consequently, they will generally deploy only a series of well concealed OP there. These are tasked to detect infiltration and call fire rather than reveal their positions by engaging. AFV elements in the perimeter zone must back or forwards from any prominent edge, and should be very well concealed, dispersed and with any arcs of fire defiladed. They may have support by fire positions forward, but it is impressed upon crews that these are only to be occupied and used if the enemy attempts a bounce attack or on order. In training the Olvanans insist that a combined arms integrated enemy attack to break-in must be met with an integrated defensive response. It is considered the optimum opportunity for employment of scatterable mine systems and provided effective obscuration of enemy depth systems is technically possible (i.e. the enemy do not have radar weapon sights or equivalent) superimposed, a brief direct fire engagement, ideally against engineering platforms, and swift withdrawal is acceptable. Despite, or indeed because of expected enemy attention on the perimeter it is considered the prime opportunity for deception and duplication activity intended to present the enemy with an impression of defenders forwards and unmask their artillery for longer.

11.13 The transition is also when the Olvanans will try to begin psychological shaping. A standard method is a very large buried/culvert demolition charge on one or more of the main routes into the urban area, to be detonated after several vehicles have passed over it and using the (multispectral) obscuration of the destination as cover for direct fire engagement of the leading vehicles.

Perimeter detachment

11.14 A variation that may apply to any of these three patterns is the deployment of a perimeter detachment. The task of a perimeter detachment is to supplement the effort of the degrading force to cause the advancing enemy to pause and so enable the retiring forward forces to break clean into the urban area. It comprises long-range capabilities, either artillery elements that are briefly brought forward to conduct an ‘artillery raid, especially if the SPF in the deep disruption

zone have identified high-value targets, or alternatively anti-tank guided missile systems that can engage indirectly at longer ranges. The term perimeter detachment is slightly misleading as recognising the vulnerability of doing so, they do not deploy to the perimeter rather stay well within the urban clutter.

Degradation

11.15 The degradation battle begins one bound into the urban area. The Olvanans call this the '(man) hunting battle' and consider this type of fighting to be closely aligned with their military cultural preference for deception, caution and cunning as well as providing an optimal environment to employ their high-tech weaponry. The basis of defeat is systems warfare (ie. systematic erosion of key capabilities, mainly executed at a series of arrays or killing areas). However, the intention is that from the enemy's perspective threat is continuous and engagement nearly so.

11.16 This is considered still feasible with only limited forces for three reasons. Technology allows attack arrays to be effective when covered by small numbers of personnel and even remotely. Urban areas provide elevated OP from which a small number of SPF observers can continuously direct fire onto advancing enemy forces. Small numbers of 'intelligent warfare devices', the contemporary but humanitarian law compliant and agile equivalent of booby-traps, especially if deployed early in the battle, are force multipliers.

11.17 The Olvanans seek to give commanders at every level scope for variation, initiative and ingenuity within scope of the delaying and eroding mission. This will avoid patterns that the enemy can readily exploit. A primary consideration for designing this battle is to identify (those generally parallel to the enemy advance) routes where, variously, soldiers and vehicles can move within buildings and other cover relative to the attacking force. Subterranean systems are particularly favoured. Where covered routes are not available, they seek structures that will allow troops, and AFV, to bound between overhead cover. The ease of moving in and out of buildings, including preparatory breaching, is a major route selection factor.

11.18 In general, the best possibilities for covered movement guide the selection of suitable positions for contact elements' simple battle positions. Almost invariably the degrading force will be relatively small compared to the frontage it must cover, consequently direct fire engagement positions are most likely to be positioned with extended fields of view on fire that are lateral across the enemy line of advance. These will often be combined with concealed and protected OP that can view along the enemy access to initiate remote attack.

11.19 A typical contact force deployment would be to exploit an array at the point where an approach meets a crossroads. An OP operates the array munitions and then withdraws while an AFV in fighting hide displaced along the lateral street engages selected targets such as engineering vehicles or UGV and then displaces. Once arrays and killing areas covered by simple battle positions are chosen, other arrays that are not covered by direct fire are chosen to support the desired effects on the enemy advance. Systems warfare is central and targeting is dictated by the degradation mission. Where the priority is delay, the focus might be enemy mine clearing and engineering systems. For maximum destruction, the focus might be enemy low-level air defence and EW systems to allow the effective employment of swarming munitions. If a subsequent area defence is intended, the focus may be enemy infantry.

11.20 The design of arrays is diverse with engineer commanders given full freedom of action to improvise, always within the constraint of protecting non-combatants. The Olvanans expect methods to constantly evolve and encourage the imaginative use of COTS technology to stay ahead of countermeasures. The guiding principle is to deliver the maximum selective lethal effect from the minimum number of personnel while retaining reliability in a contested electromagnetic environment. This latter consideration will see command cable and narrow beam communications play and important role. Demolitions are also favoured. The Olvanans have developed a suite of standard charges that can predictably and directionally collapse buildings with reliable remote firing and monitoring devices. These are thought to have the logistic and ethical advantage of only needing to be fired in areas where the enemy operate and be effective for attacks against most targets on the battlefield including clearance engineers.

11.21 The balance of engineering preparation, logistic investment and forces from forward to rear is a key command decision. In principle the Olvanans will seek to initially use the minimum force forward to avoid diluting their resources by committing too much of their force or engineering stores where much of it may not lie in the path of an enemy advance and therefore be wasted effort. Consequently, mines munitions and devices that can be rapidly emplaced may be held for deployment later in the battle. Similarly, the commander may accept significant gaps in human observation and rely on sensor systems in order to maintain a reserve or counter penetration force.

11.22 The Olvanan's emphasise the important of offensive spirit, local counter attacks and counter penetrations in the degradation, sometimes expressed as 'three back and one forward'. This does not commend a predictable pattern, rather reminds commanders to make and take opportunities to 'strike behind the neck of the snake'. Such manoeuvres are normally executed with at least one parallel route between the known enemy advances and counter penetrating grouping, as this allows for a supporting element to provide flank protection by covering along the intermediate route. In similar vein to aggressive manoeuvre, the Olvanans believe that striking from the rear has special psychological impact. While SPF sniper teams deployed in dominating buildings would normally only risk compromising their positions by frontal engagement for the very highest value targets, they are may engage those that have passed them by. Depending on enemy small arms fire detection capabilities and the width of enemy advance, they engage from rear quadrants, especially to strike key system elements.

11.23 The advent of capable robotic systems is also considered to be a psychological game changer in the degradation battle with two promising tactics identified. Individual armed devices may be activated in autonomous lethality mode in areas where enemy have gone firm especially amongst logistic and support elements. Similarly, remote operated systems may be deployed from concealed positions that the enemy have passed by and then moved along the enemy advance to attack successively from the rear. Both techniques may be especially effective if conducted under obscuration.

The main defensive battle

11.24 The area defence battle area defence battle takes one of three forms. An enclosure attack, as described in earlier sections, is mounted, or an area defence, channelling or dispersed occurs.

The channelling battle

11.25 The channelling battle is (unless executed as an ambush), the culmination of degradation. It is in effect a number of major arrays that both block and trap a substantial leading element of the advancing enemy force. In common with the degradation it also relies on munitions and remote weapon systems for primary effects and is built around a relatively small force, most of which is deployed to positions that emphasise survivability. The Olvanan design intention is that there should be no sign of difference with previous defensive arrangements and the trapping array is configured for engaging a force deployed for advancing in contact. This may well be quite broad. While method is dictated by terrain, favoured approaches include large demolitions of buildings, prepositioning and command firing thermobaric munitions (or MBRL delivery) incendiary preparation of flanking buildings and less-lethal chemical weapons.

The dispersed battle

11.26 The concept of the dispersed defence is to avoid both decisive engagement and systematic elimination with precision weapons. If it is subject to assault the intention is to withdraw or counter-attack. Its layout designed to defeat two types of threat. An enemy attempting dismounted infiltration will be detected and compromised in the surrounding sterile area and can be engage with indirect fires and, if necessary local counter attacks. An enemy attempting a hasty situational attack to bounce the position will be disrupted as it arrives, can be engaged with fires coordinated from the protected dispersed positions and then further disrupted by the emergence of the dispersed force who conduct a fighting withdrawal of the position, ideally under total obscuration using Enclosure-world navigation.

Planning and control measures

11.27 The planning of enclosure operations, specific additional non-standard control measures including:

a. Orange plan:

(1) Evacuation plan

(2) Declared orange zones

(3) Messaging

(4) Forces and deployment

b. Sensor plan:

(1) Prior placement – reliability and currency update

(2) Joint and strategic update and availability

(3) Formation UAS plan

(4) Remote sensors plan.

Chapter 12

An introduction to Olvanan defensive tactics techniques and procedures

12.1 The TTP used by the Olvanans in defensive operations reflect their history, culture and analysis of trends in contemporary warfare. The legacy of attritional urban defeat in World War II is to resile from the notion of a protracted costly battle. The willingness to yield urban terrain when there is no longer an advantage to be gained aligns with their wider military culture and their emphasis on ‘fighting like water’, flowing around and away from obstacles and pouring into weaknesses. This also shapes their view that relatively low force density ratios can deliver potent effects at low cost, especially if they have specialised mobility and lethality. This requires engineers to play a leading role. The Olvanan preoccupation with avoiding being located, fixed and destroyed has only been reinforced by observing how the imperialist invaders of the Middle East systematically overcame the most determined resistance.

Overhead inferiority

12.2 While the Olvanans propose to use technology and systems warfare to prevail, they have a deep and pragmatic respect for Western and Western-sourced weapons and methods, especially airpower. Their basic assumption is that if and where they are conducting a defence, they will be fighting at a disadvantage in all domains, and this will include enemy superiority in space, aircraft and UAS. Manoeuvre and redeployment may only be feasible during short windows of parity, and its risks will need to be mitigated by deception, the use of obscurants and screening. Furthermore, and notwithstanding Western proclamations otherwise, the Olvanans assume that their enemies will use autonomous lethality and that this will be rapidly cued by a range of sensor systems. ‘Overhead threat’ is likely to drive a defending OPA into urban areas for the cover and concealment of the urban fabric. The default mindset is therefore, that as far as is possible, they should sleep, move and fight within enclosures. This is reflected in their TTP.

Robotics

12.3 The Olvanans notions of systems and intelligent warfare give a central role to robotics, and they anticipate remote operated systems will be particularly valuable in the defence. They do have a very realistic perspective on the problems of these emerging technologies, noting that autonomous systems do not offer necessary reliability, radio link remote control remains very vulnerable to countermeasures and robotic systems generally are not as responsive as human operators. Nevertheless, and in contrast to offensive operations, in defence systems can be operated from known and prepared positions using physical tethers against anticipated target areas. Human machine teaming will be at its best in defensive operations. Consequently, they claim that employed within a combined arms integrated defensive scheme, robotics are decisive physical and psychological force multipliers. The Olvanans particularly draw attention to the scope for deploying armed robotic platforms to engage advancing enemy from the rear.

Fused-masked-secerned warfare

12.4 Olvanan defensive TTP are usefully also explored in terms of their core concept for enclosure warfare, and what this means for what the urban fighting mentality that Olvanans call ‘enclosure-craft’.

Fusing

12.5 Particularly the integration of the three-dimensional detailed virtual map available to every soldier, with the multiple layers of real-time information feeds provides an extraordinary advantage. This exceeds the ‘home turf’ edge that historical defenders have had. It provides a tool to identify in detail the best routes, best cover and best firing positions in relation to known or assumed threats. Higher-level machine learning processing using Olvanan internal security software algorithms are able to turn feeds from a modest number of sensors into high confidence estimations of where enemy troops are moving. Their journal articles have characterised the future urban battle as Olvanan warriors hunting monsters in a labyrinth but with the benefit of a ‘magic map’.

12.6 The knowledge delivered through fusing enables effective secerning. The choice of where and against what targets to exert effort, and in turn the choice of where to do that from. For defensive secerning, they tell their soldiers they will need a mindset which integrates that of the techno-trapper and the sniper. As old-time trappers needed knowledge of their prey to place their limited number of traps efficiently, so must the contemporary warrior have knowledge of their enemies' habits and tactics to best place mines and devices. As an example, they explain that without careful secerning, weapons such as their electronically controlled mines that can fly a hundred metres to top-attack a tank will mostly be wasted, bypassed or expanded on unimportant targets. Similarly, while many armies have employed sharp shooters, the historical great success of snipers has not merely been the capability to shoot accurately unseen but that they secerned their engagement areas: they chose carefully the places where any advance becomes a casualty. Importantly, the Olvanan emphasis on the psychological sniping effect is not confined to infantry soldiers, rather they insist that armoured vehicles, artillery and even sophisticated minelaying should pursue it. In particular, they expect that the most practical near-term counter to robotic platforms will be cannon-type weapons in well concealed positions covering narrow arcs.

Masking

12.7 In the urban environment masking is explicitly a response to Olvanan recognition of the pervasive reconnaissance and surveillance capabilities of their enemies. It demands that soldiers develop a counterintuitive sense for moving and fighting while hidden and protected, exposing themselves rarely and to the minimum extent possible. Olvanan training emphasises the need to develop the confidence to rely on a combination of Enclosure-world automated updates, distant battle controllers and their own local sensors to maintain security. Until the opportune moment for decisive close battle against a disordered enemy has arrived, an Olvanan soldier should fight unseen. Given technologies such as automated optical target detection scanning, and, especially the Olvanan expectation that their enemies will use blinding lasers, for them this means minimising looking with the naked eye. Engagement should as far as possible be initiated remotely, with the target viewed on screen. In the

same vein, they emphasise that systems operated by humans should normally be fired from defiladed positions with narrow arcs of fire. Not just fire positions, but movement, for vehicles as well as soldiers, should whenever possible be within buildings. When it is not possible, then the use of obscurant or other screening may be essential.

12.8 The notion of applied defensive fused-masked-secerned warfare, or enclosure-craft is of small teams of warriors moving hidden within the urban fabric, evading the enemy as guided by Enclosure-world, avoiding presenting a distinct static target and striking unseen and unseeing until the opportunity occurs to strike a decisive counter blow.

Sensors

12.9 The key to conducting an effective defence with limited forces is situational awareness. Enclosure warfare technology provides a rich battle picture to every soldier, but this must operate in a contested electromagnetic environment. Furthermore, the Olvanans believe that with contemporary technology, effective concealment of defensive positions requires that soldiers are routinely physically out of the line of sight of enemy sensors. This means they must themselves observe from behind cover. The ubiquitous shrouded tethered drones that are carried in every section and on every armoured vehicle precede every movement, though often handheld or used on selfie sticks to avoid the distinctive sound. Ivanan troops also have a modular suite of simple low-power surveillance devices that they routinely use to secure their own positions, usually connected via fibre-optic cable with the option of wireless connectivity modules for when cable cannot be laid or as a backup. All have image change detection software as an alert feature. The simple visual spectrum versions are ubiquitous and regarded as disposable stores. More sophisticated models that operate in the infrared spectrum and have supplementary seismic, microwave or other detectors have more limited availability but are regarded as essential stores for the urban fight. The sensors are all compatible with the standard robotic and remote firing systems for command initiation.

Remote attack means

12.10 In the same way that the Olvanans believe that attacking by rushing into enclosed spaces is an extraordinarily foolish way to fight, they also believe that when being attacked, responding by exposing yourself and your weapon in the open is unprofessional. On the modern battlefield there is likely a suite of systems waiting for you to do exactly that. Personal weapons and direct fire should preferably be used against a secerned target that is vulnerable and unsupported as it moves into a defiladed killing area and prior to that, should be struck with other means. Demolition ambush on urban terrain is as natural a tactic to Olvanan infantry as a claymore mine is to Anglophone soldiers. Historically the Olvanan preferred way to strike attackers was by fougasse, buried charges that project rubble or flame. The use of the demolition pole charge plays just as important a part in their defensive combat mythology as the attack, although command cable firing of prepositioned demolition charges is now the preferred method. Notably, like the pole charge, it is considered as much an all arms technique as other armies consider the grenade. Professional journals continue to emphasise that 5 kg demolition charges positioned just inside interior walls of the buildings surrounding a defended position become deadly traps for attackers whether they enter or pass by. In similar vein, engineers regularly practice placement and careful concealment of directional demolitions to collapse buildings across routes, which they anticipate firing on top of enemy.

12.11 Traditional mine warfare remains an engineer task with victim operated antipersonnel mines considered of only limited use. This is partly because the Olvanans tend to use them hesitantly and only in marked areas because of humanitarian concerns, but mainly because their low effectiveness relative to new means. Contemporary wide area and directional antipersonnel mines are readily command operated, but if laid in autonomous sensor operated mode behind marked fences allow two or three hidden munitions to deter entry over a significant area. All Olvanan light portable anti-armour weapons can be laid as mines using tripwire or break-wire kits by non-specialist soldiers. The urban environment is the ideal for their use in unattended ambushes although the risk of incidental triggering means they are less suitable for fighting on a defensive position itself. In

contrast, the Olvanan engineers have both self-aiming self-forging fragment off-route mines and bounding top attack anti-armour mines with a range of over 100 m which have sophisticated multi-mode sensors will reliably only engage specified targets.

12.12 The capabilities to conduct effective remote attack are increasingly finding their way into conventional infantry units, with armed UGV and RWS common in weapons platoons. During exercises the use of top attack loitering munitions in limited numbers is increasingly being practised down to platoon level. While in time remote armed direct fire lethality is expected to become standard within infantry and armoured units, for the moment, armed robots are mainly operated in specialist units and treated as almost as a separate ‘arm’.

12.13 **Arrays.** The Olvanans plan to degrade and destroy enemy by the use of Arrays. They understand these as more than a mix of weapon systems, rather as a practical manifestation of systems warfare. An array is often designed to secern one or more parts of the enemy combat system to subject it to focused attack while minimising the exposure of the Olvanan elements to enemy mutual support. Crucially, they emphasise non-kinetic effects to create vulnerabilities. The most obvious application is their localised use of mixed types of obscurant to create windows on the battlefield where their systems can acquire targets while the enemy are blind. From open-source reporting it is clear that a variety of EW attack systems, including electromagnetic pulse devices and GPS jammers are also employed, with small groupings of defenders relying on proximity to achieve electromagnetic supremacy. While high-tech solutions garner most media attention, Olvanan professional journals focus on encouraging improvisation to secern and junior officers are frequently commended for improvisation such as ingenious inconspicuous Caltrop-type or cable devices that will halt UGV and fine fishing nets strung to obstruct UAS. Since arrays are also intended to deceive and shape the enemy for attack there is similar attention in publications to deceptions such as phony mines or placing demolition charges at locations that offer cover and then initiating a harassing engagement. When planning, arrays are described in terms of intended effect, for example delay, displacing, trapping or by specifying the target systems.

Killing areas and lanes

12.14 Killing areas have their normal meaning and are effected mainly by fires rather than munitions or systems positioned on the battlefield, however killing areas may be overlaid on arrays. The term ‘Lane’ is also used on urban terrain to distinguish a narrow exposed area, typically along a street. This may be called a Killing Lane, or a Detection Lane to specify the task of the overwatching element. Additionally for planning purposes killing areas and lanes may be distinguished as across-axis or down-axis. The former is likely to involve a typical flank engagement from a defiladed file position. In contrast, a down-axis killing lane or area directs the element to accept risk by enfilading the approaching enemy.

Covered routes

12.15 In Olvanan doctrine the term covered routes refers planned or actual routes that pass mostly or entirely through the urban fabric (subterranean routes are distinguished as such). The manoeuvre of not only soldiers but vehicles through buildings is a distinctive Olvanan technique which accepts some risk to gain freedom of manoeuvre and protection. The tactic assumes a high level of engineer effort and relies on either protracted engineering preparation of buildings or, and usually considered more practical, the availability of engineer vehicles for dynamic breaching.

12.16 This last approach has only become feasible with the widespread availability of remotely operated engineering platforms, and was adopted after unexpectedly successful urban breaching trials, themselves inspired by the case of a disaffected soldier taking a tank and destroying virtually the entire ground floor of the barracks in which he was based while no part of the building collapsed, and his peers observed safely from above. While the previously assumed risk of building collapse has rarely occurred during training exercises on industrial demolition sites, there is a major limitation on the tactic because of the height of the new generations of armoured vehicles coming into service. Consequently, the method has mostly been seen used by airborne troops or those from formations with older model AFV.

12.17 For planning purposes, the Olvanans have four categories of covered route: ready, prepared, tested and map-selected. A ready route is fully constructed for vehicles or soldiers and appropriately camouflaged. A prepared route has undergone extensive engineering work to pre-fracture walls or place demolition charges so that once the demolitions are fired, an engineering platform can rapidly clear the route. A tested route has been checked by engineers to confirm that walls are of a kind that can be breached, ceilings are high enough for vehicle clearance and the pavement will support AFV. A map-selected route refers to one selected by analysis of data in Enclosure-world.

Hides and shelters

12.18 The Olvanans emphasise using urban terrain for concealment and protection and distinguish between two main levels of position, regardless of whether they are occupied by humans or vehicles. A hide is an enclosed structure that blocks or disguises visual and electromagnetic line of sight in three dimensions, but the material involved may offer negligible physical protection. A screened hide is an enclosed structure where the walls and ceilings can be expected to provide limited protection by detonating incoming projectiles. A shelter is an enclosed structure that provides a specified degree of ballistic protection, normally protection up to and including multiple medium calibre artillery projectiles that are not delay fused. This implies either a construction within a building or location towards the rear (relative to the enemy firing direction) of a building with multiple concrete floors.

12.19 The term ‘engagement’ is used to indicate intention and preparation to engage outward with direct fire weapons from within the hide or shelter to cover a specified task. This does not imply that the Olvanans do not intend to fight other types of positions: it is fundamental doctrine that they prepare to fight within every position they occupy, and prepare internal, and sometimes external defensive loopholes. However, the minimum position is to construct an internal bunker or bunkers from which they can survive bombardment (including their own) and initially defend externally using remote systems and defensive demolitions, and internally using small arms. Olvanan doctrine specifies that it is usually impossible to cover all the

immediate approaches to a building from within that building without occupying obvious and vulnerable positions. Defensive small arms fire is mainly achieved by mutual support between positions, such that one position fires on a narrow arc from an internal loophole through a window or other gap to cover the approaches to a neighbouring position.

12.20 Engagement hides and shelters for AFV will also seek to use narrow arcs of engagement for concealment and protection. The term ‘porthole’ is used to describe where an AFV within a building engages using one or more holes or gaps in walls along the line of sight. Importantly, the term porthole describes apertures large enough to accommodate the weapon trajectory, the displacement of the sighting system and muzzle overpressure. In contrast, the term blind-fire or keyhole is used to describe a technique where a weapon is fired on a predicted lay and without line of sight. The initial round or rounds breach a pathway for subsequent rounds which may then be adjusted by a displaced observer. This technique is feasible because of the level of resolution that Enclosure-world offers.

12.21 A final important category of position is the ‘jockeying hide’ or ‘jockeying post’ which is a position within a building which is only intended to be briefly occupied for the duration of a short engagement. This is a distinctive Olvanan form of field defence, because to construct it they strip away the rear wall, or that facing the depth of their own defence, of the relevant building. This can be done quickly with one pass of an engineering vehicle and they prepare many buildings in an area in this way. This provides the opportunity for AFV to bound rearwards using positions that provide concealment to the front, but after they have been abandoned, are exposed to fire from the next level back.

Battle positions

12.22 The Olvanans consider most urban defensive fighting will occur from one of two categories of position. Simple battle positions will consist of a number of engagement positions sited to cover specified approaches, killing areas or arrays. Often these will be jockeying positions. Around the engagement positions will be several posts sited to maintain security of the position until it is yielded. Simple battle positions are intended to be occupied only until the engagement effect

has been achieved and not held in the face of decisive engagement. They are likely to be sited with a focus on extensive (even if narrow) fields of fire for the engagement positions, good cover of approaches for the security posts and covered withdrawal routes.

12.23 Complex battle positions distinguish between two purposes: shelter and engagement. The objective is to remain undetected and unscathed, so the focus is on identifying structures can provide shelters that are suitable for concealing the force, these will likely be large buildings if the force is mounted in AFV and will similarly likely need to be well dispersed. The complex battle position, especially if the force is mounted, is not normally sited for a static defence, rather it is designed to be able to maintain its own security, not be vulnerable to a situational attack and to defend itself in the first instance by applying fires, and then manoeuvring to conduct counter attacks or attacks by fire from previously selected positions.

Chapter 13

Enabling enclosure warfare

13.1 The Olvanans have three main lines of effort to prepare for the urban warfare they believe is inevitable.

a. Enhance the conventional army

b. Leverage robotics

c. Develop the Asymmetric Warfare Brigade.

Enhancing the conventional

13.2 The Olvanans first started with a program to raise the basic level of enclosure warfare training across the army which they broadly consider prepares all units to conduct security operations and 'familiarises' them with what is required in war. Second, they have developed and distributed a comprehensive range of simulations for enclosure warfare, with a particular emphasis on games formats. Competitive gaming is strongly encouraged with winners rewarded with travel to competitions.

13.3 The Olvanans also have another training program which they call enclosure preparation, which is focused on high-intensity enclosed combat and involves a significant component of live fire and live explosives training. Only a limited number of units complete this program but it is well-developed with many instructors trained and trainee emission pre-allocated such many units can be put through the training when it becomes necessary. Other aspects of 'preparation' are heavily publicised and well understood, for example standard resource packages for enclosure operations (see Table 13.1).

Table 13.1: Example: Enclosure operations special issue stores packs (infantry company)

Item	Amount
Utility items	
Poles, bamboo 3-4 m with pegs	150
Roll, tape, 10 m adhesive, glass reinforced	150
Rolls, sheeting 5 m mouldable mesh, camo, screen and const.	24
Rolls, fibre-optic tactical cable	24
Devices and ancillaries	
Device, observation and engagement from cover (corner-shot)	12
Probe, fibre-optic, 1.5 m	12
Device, miniature, explosive initiation, fibre-optic and RF	24
Device, remote observation, Throwbot, with control unit	12
Device, remote sensing and observation, optical and seismic	24
Batteries AA, Lithium	240

Item	Amount
Ancillaries	
Loudspeaker, UGV	3
Tool, breaching, hand	12
Saw, hand folding	12
Ladder, folding, with hooks	6
Adaptor, respirator, rebreather unit	120
Canister, rebreather, escape (10 min)	120
Canister, rebreather, mission (60 min)	30
Weapons	
Launcher, twin barrel, FHJ-84	3
Munitions (special natures first line issue pack)	
Grenade, obscuration non-thermal, instant	60
Grenade, projected, 35 mm, reduced fragmentation	120
Grenade, projected, 35 mm, ‘bounce and blow’	60
Grenade concussion/anti-structure (250 g)	60
Charge, concussion/light breaching 250 g with initiator set	60
Charge linear cutting, folding, mouse hole, with initiator set	12
Launcher, DZJ-08, breaching/behind wall effect	12
Launcher, DZJ-08, reduced fragmentation and arming distance	24
Launcher, WPF-89-2 (tandem thermobaric)	36
Rounds 62 mm, FHJ-84, Incendiary (Pyro gel)	36
Rounds 62 mm, FHJ-84, Smoke, phosphorous (W/R)	72

Robotic enclosure warfare

13.4 The Olvanans have long considered that their growing capability to develop and field new technologies in mass would offer them the means to offset other strengths of their imperialist adversaries. They believe they are now realising this promise. They use the term robotics for remote controlled and autonomous systems which were recognised as a particularly promising area and consistent with a highly supervised command culture.

Key policy decisions

13.5 The Olvanans were early adopters of a standardised system of control units modelled on those used in commercial gaming systems, meaning they are intuitive for most trainees. Equally important, they specified standard systems architecture and communication protocols before most of their manufacturers began development, so integration of different systems into C3 has been relatively straightforward. Crucially, and related to this, Olvanans have recognised that rates of development in robotic platforms are significantly faster than procurement cycles that have appropriate governance can operate. Furthermore, they wish to take advantage of innovation and advances that are occurring right across industry and rapidly acquire batches of systems and evaluate them in units. Consequently, the foundational element of Olvanan robotic warfare is their command-and-control systems, whether individual or vehicle mounted. From the outset they accept that their forces will be equipped with not only a wide variety of different systems, but over time, varying models of the same system as products improve. For many of the less sophisticated systems, this enables them to treat them as consumable items in the same way as ammunition is treated. Robotic units may therefore deploy with diverse systems, varying both in terms of what is available within the logistic system and what is assessed as most suitable for the expected missions.

Systems resilience

13.6 The Olvanans have also recognised that the contest for the electromagnetic spectrum will determine future battles and campaigns. This translates not only into significant offensive EW capabilities, but into built-in redundancy and normalising alternative

communication channels, so that technologies such as narrow beam signal or fibre-optic tethering are widely integrated to assure redundancy of communications capability in a contested electromagnetic environment. For this reason, and because of the limits on available bandwidth, especially in complex terrain, there has also been great investment in platform autonomy to allow tactically adequate control with modest signal input.

Classification of robotic systems

13.7 The Olvanans classify their robotic platforms by whether they primarily operate on the ground or in the air and broadly by size with ‘systems’ being smaller more portable units and ‘vehicles’ being larger and self-deployable ones. UGV are able to tactically self-deploy from echelon areas forward and may be optionally crewed. Light UGV are those able to pass through a normal doorway, medium are those readily transported in helicopters and heavy those larger than that. UGVs are those that can be moved by people, and are subdivided into; those that can be thrown, those that can be man packed and ‘liftable’ and those that can be lifted by hand over obstacles, carried at least short distances and are easily transported on other larger vehicles. These are referred to as heavy UGV when they require dedicated racking, trailers or other deployment arrangements. Generally, the air systems operating in the immediate battle area are considered UAS, in contrast to the UAV operated by the air force.

13.8 A very significant part of Olvanan robotic capability is delivered by Optionally Crewed Armoured Vehicles. They argue that this approach, proven in World War II, gives assurance against system failure, avoids many of the very demanding system requirements for safe operation outside of battle area, aids deception by having systems with similar signatures to crewed versions and makes good use of obsolescent platforms. They have developed several standard driver- input systems which can be fitted to most in-service armoured vehicles.

The Asymmetric Warfare Brigade

13.9 The key to Olvanan advances in enclosure operations capability is the asymmetric warfare experimental brigade. Its role is to:

a. deliver tailored and self-contained specialist capability and command elements to OPA formations

b. develop, maintain and showcase world-leading expertise in enclosure operations

c. operationalise the leading-edge of Olvanan technology and science

d. deliver overmatching capability to threatened friendly nations while limiting risk to OPA personnel.

Modular design

13.10 The structure of the brigade is modular (Figure 13.1 on page 13-23). It is a ‘raise, train and sustain’ organisation which is not structured for operational command nor for deployment as an entity. The component specialist battalions are organised so that, contrary to OPA normal practice, individual sub-units may be independently detached to support units or formations, accompanied by appropriate substantial ‘slices’ of technical support and logistics. Because battalions are not required to deploy, span of command limitations do not apply and they are larger than conventional OPA units, with a modest, administration focused HQ.

13.11 Different combinations of specialist sub-units and conventional ones are task organised to form enclosure warfare detachments. In some cases the specialist elements of a battalion will routinely be integrated with combat arms sub-units at company or platoon level (for example the special pioneer battalion) and in these specialist units, the subunit groupings are of four rather than three elements. This reflects both the Olvanan shift to ‘square’ organisations as well as desire to be able to reinforce multiple two-up deployments by supported units or formations. In contrast, units where sub units will operate more independently in a reconnaissance or supporting role retain the older three-part grouping.

13.12 The brigade also provides specialist command teams which may be not only assigned to command specialist detachments, but also to reinforce the Staff of formations tasked with urban operations. The headquarters also holds linguists to be assigned when working with foreign military forces.

Equipment

13.13 The subunits within units of the brigade are equipped with current wheeled and tracked vehicle types to provide tactical compatibility and logistic commonality with supported formations. A conscious and pragmatic choice has been made to use obsolescent AFV as the basis for the optionally crewed fleets. These now reliable and well understood technologies provide significant new capabilities at modest cost and low technical risk.

Staffing

13.14 The brigade is commanded by a Major General, a more senior officer than is usual, reflecting both the importance the OPA put in the development of new capability and the presence of attached and trainee Senior Colonels (Brigadier General) and Colonel level officers within the brigade headquarters. Units of the brigade are substantially overstaffed with officers who occupy shorter term shadow postings on rotation from formations all over Olvana. This is to assist with operational integration and, at any point in time, allow rapid expansion or duplication of units.

Structure

13.15 The brigade has nine specialist battalions and one specialist company, all of which are described below. There are five key enablers of capability at Brigade headquarters.

Specialist enclosure warfare command teams

13.16 The specialist enclosure warfare command (see Figure 13.2 on page 13-24) teams are led by highly rated officers who have completed a tour of service as a brigade commander supported by up to half a dozen mid-level staff officers who are similarly regarded. This is a transitional arrangement for a number of years until enclosure warfare competencies are spread throughout the OPA. The approach provides a small pool of teams to form and command all arms

enclosure warfare detachments, especially those including specialist subunits. They may also be tasked to supplement or (exceptionally) command the headquarters of a brigade level task force committed to enclosure operations. Teams are posted to the HQ of the Asymmetric Warfare Brigade and are tasked with capability development projects during their tour. At the end of their tour they qualify as 'Inspectors of Urban capability'.

Information Effects Fusing Unit

13.17 The Information Effects Fusing Unit (IEFU) (see Figure 13.3 on page 13-25) provides IT capabilities and staff to formation HQ's to fully exploit the Enclosure-world system and other fusing technologies. IEF teams with about 30 military members are deployed to the higher-level headquarters responsible for an overall enclosure operation. Teams may be broken down into IEF Cells which are deployed forward to brigade or detachment headquarters to form FWCE. If time is short they may simply be embedded with brigade or Integrated Fires Command (IFC) CPs. Each cell has two special Enclosure-world CP vehicles equipped for holographic display of enclosed environments.

13.18 Crucially, the IEFU also integrates specialist civilian staff from various ministries into enclosure operations planning. This ensures coordination of OPA operations to support the 'three warfares' waged by other ministries. In order to establish 'whole of government' habitual strong relationships there is a senior liaison officer permanently posted to each of the government ministries. To further reinforce relationships and develop expertise in the work done in these other government ministries, the OPA officers of the IEF teams are posted to, and routinely work at, the FOO of the Strategic Information Department (SID) in the capital. There they work alongside the civilian specialists who plan 'three warfares'.

13.19 The IEFU is responsible for routine administration of the military members of the Information Effect Fusing (IEF) teams who are detached to the FOO. It also provides military familiarisation training for communications, intelligence and other specialists from other government departments before they are assigned to IEF teams. The unit also maintains a pool of linguists and translators as well as drivers and signallers which is drawn onto form admin support

sections for each of the teams when they are deployed on exercise or operations. Additionally, the IEFU has an Enclosure-world support company which provides junior liaison officers, technical support teams and despatch riders to maximise the use of this fusing technology and provide movement of data without external transmission.

International support and public relations teams

13.20 The international support and public relations teams are a hosting organisation for officers from the Orange Jackets, visitors from other government departments and, especially, visitors from overseas militaries who are undergoing training. This provides the mechanism for training and building the personal relationships that ensure that Orange Jackets and OPA operations can be fully integrated despite their separate chains of command and communication.

Industry engagement and exchange office

13.21 The industry engagement and exchange office is similarly a hosting organisation for industry personnel who are visiting or based on the brigade campus. Habitual and deep relationships between the research and development entities of defence companies and units of the brigade are considered to be helpful in shortening development loops, failing early and encouraging new approaches and concepts.

Olvanan Third Higher Technical University research programme

13.22 The Olvanan Third Higher Technical University research programme provides for postgraduate students to spend one year pursuing a nominated applied research project, during which time she or he will spend a number of structured periods with units while they are conducting training. The primary benefit is considered to be that the researchers return to the University familiar with the challenges that army is focused on, but in the longer-term graduates will increasingly be expected to serve in uniform for a period in the specialist brigade and this is being touted as a pathway to an accelerated military career.

Enclosure Remote Reconnaissance Battalion

13.23 The role of the enclosure RRB (see Figure 13.4 on page 13-26) is to exploit robotic systems to enhance the capability of OPA formations to conduct tactical reconnaissance and counter-reconnaissance more than 1km forward of leading main body troops in a physically and electromagnetically complex enclosed environment. The Olvanans consider SPFs battlespace, so the battalion has both conventional and SPF elements. It is organised to provide teams to deploy forwards and control robotic platforms, with three SPFs companies that are paired with three ‘conventional’ control companies as well as three logistic companies that deliver required platforms into the battle space.

13.24 The Special-Purpose Forces Companies deploy forwards to provide most of the ‘in-contact’ control of un-crewed reconnaissance battalion platforms. Their proximity ensures shorter, assured and lower signature control transmissions, which is particularly important for ground systems. The Special-Purpose Forces Companies are mounted in light high mobility vehicles to enable stealthy approach relatively close to urban areas. Each has three OP platoons which can each deploy three OP/control teams of four soldiers in a vehicle towing a trailer with mast mounted directional antenna which they displace from their OP. Depending on degree of platform type, autonomy and lethality, each team has the capacity to concurrently control two to six robotic systems. There is a further EW platoon with three Technical Penetration teams and a counter reconnaissance platoon with three counter UAS gun/missile systems and three anti-radiation loitering munition launching systems. The key systems of the battalion are:

a. 27 SPF robotic systems control OP teams in 8X8 hi-mobility vehicle

b. 9 SPF EW Technical Penetration teams in 8X8 hi-mobility vehicle

c. 9 SPF strike drone teams in 8X8 hi-mobility vehicle

d. 9 SPF counter-UAS missile teams in 6X6 hi-mobility vehicle.

13.25 The three Conventional Control Companies (CCC) provide control of un-crewed platforms from launch/unload areas into the forward zones where engagement is anticipated where routinely the SPF OP's take over (unless the platforms are operating autonomously). The CCC elements can control platforms in contact but in order to reduce the risk of EW compromise will seek to limit this to short periods. They are mounted in different versions of the Dongfeng protected mobility vehicle. The CCC each comprise three platoons of which each one has a command 4x4 vehicle and three control teams in 6x6 vehicles with mast mounted directional antenna. The key systems of the Bn are:

a. 27 Dongfeng 6x6 protected platform control vehicle with removable mast

b. 18 Dongfeng 6X6 UAS launch and control vehicles.

13.26 The Platform Logistic Companies deliver and launch robotic platforms for the control companies. Importantly, in the Olvanan system, a specific ORBAT of types of robotic platforms is not permanently assigned to units, rather a mix of platforms is selected prior to the operation and loaded into the supporting logistic vehicles. This retains the maximum degree of flexibility. In offensive operations UAS typically predominate as they can be employed with a high degree of autonomy, minimising the demand on C2 links, with likely emphasis on the delivery of surveillance sensors using cargo drones. The key transport systems of the Bn with indicative loads are as follows:

a. 27 UAS Transports – Shaanxi 6X6 Med Truck and trailer. Each can carry:

   (1) 8x Med Heli-UAS OR Fixed Wing UAS OR

   (2) 6x Med Logistic Multicopter OR

   (3) 6x Medium armed Multicopter

b. 27 Shaanxi 8X8 Heavy Truck and trailer. Each can carry:

   (1) 3x Medium Tracked UGV OR

   (2) 6x Light tracked UGV OR

(3) 3x 8X8 Wheeled Logistic UGV OR

(4) 6x 6X6/4X4 Wheeled UGV OR

(5) 14x Light tracked UGV.

The Robotic Vanguard Battalion

13.27 The role of the Robotic Vanguard Battalion (see Figure 13.5 on page 13-27) is to provide un-crewed combat capability for enclosure operations forward and to the flanks of Olvanan formations, in a zone extending no more than 1000 m from the control platforms that are with the main body. The battalion is a large unit organised in four Vanguard companies that control the robotic platforms and four platform logistic companies that deliver the platforms. Each company can reinforce another formation with 20 control vehicles and the accompanying transport platoon can deliver many tens of a variety of un-crewed platforms as required for the mission. Crucially, this includes remotely operated versions of the VH17 and other large optionally crewed AFV.

13.28 The Vanguard Companies consist of four control platoons, an overwatch platoon, an EW/Communications platoon and a support and admin platoon. The platoons comprise four heavy IFV based control vehicles and a systems support and power resupply team. Each control vehicle has six operator control stations which can effect control communications directly using an elevating mast but normally remotes its transmissions using its two C3 relay UGV (which are carried on the main vehicle into the operational area but then remotely positioned). As a counter to likely enemy effort to target control platforms and their transmissions, the overwatch platoon provides both air defence, particularly against enemy UAS, and an integral strike drone launch capability. The latter can carry munitions that seek and strike active EW sources. In addition to kinetic countering of enemy EW, to assure control transmissions in a contested electromagnetic spectrum the EW/Communications platoon operates both EW attack/jamming and signal relay UGV, both of which are carried in vehicles to be immediately available. The support and

admin platoon provide more routine rebroadcast/relay capability, power resupply and CASEVAC. The key systems of the Bn are:

a. 72 VH17 HIFV protected platform control veh w. two remote relay UGV

b. 24 4x4 Dongfeng UAS Launch Control vehicles:

(1) 16 Tracked SPAA

(2) 16 4x4 Dongfeng Strike Drone launchers.

13.29 The Platform Logistic Companies of the Bn have the capacity to lift any un-crewed system in Olvanan service. This includes heavy UGV and optionally crewed AFV including the remotely operated version of the VH17. As described above for the Remote reconnaissance Bn, a specific ORBAT of types of robotic platforms is not permanently assigned to units, rather a mix of platforms is selected prior to the operation and loaded into the supporting logistic vehicles. The key transport systems with indicative loads of the Bn are as follows:

a. 24 TAIAN TA4360 Tank Transporters. Each can carry one heavy UGV

b. 27 UAS Transports – Shaanxi 6X6 Med Truck and trailer. Each can carry:

(1) 8x Med Heli-UAS OR Fixed Wing UAS OR

(2) 6x Med Logistic Multicopter OR

(3) 6x Medium armed Multicopter

c. 27 Shaanxi 8X8 Heavy Truck and trailer. Each can carry:

(1) 3x Medium Tracked UGV OR

(2) 6x Light tracked UGV OR

(3) 3x 8X8 Wheeled Logistic UGV OR

(4) 6x 6X6/4X4 Wheeled UGV OR

(5) 14x Light tracked UGV.

The Chemical Manoeuvre Support Battalion

13.30 The role of the Battalion is to enable the mounted manoeuvre of OPA formations on enclosed terrain by delivering multispectral and reduced hazard obscurant and/or deny the enemy use of nominated structures by incendiarism. The unit provides a key capability for Olvanan enclosure operations by providing the option for obscuring selected areas of the battlefield with relatively low hazard munitions for which it supplements other artillery obscurants. In the OPA obscurants are considered a chemical weapon. The unit consists of three manoeuvre support companies and three smoke rocket/motor companies (see Figure 13.6 on page 13-28).

13.31 Each Manoeuvre Support Company consists of four screening and denial platoons and a maintenance and munitions platoon. The screening and denial platoons comprise a heavy IFV based control vehicle and four three-man teams in APCs with multi-barrelled 130 mm rocket launchers. These old model YW306 APC have been upgraded with dozer blades, remote control systems and internal ammunition storage for low-hazard, thermobaric, WP or incendiary rockets. Each team also has a portable 62 mm 7 shot MBRL.

13.32 The Smoke Rocket/Mortar Companies have four platoons each consisting of a command vehicle and four smoke launcher trucks. These were originally developed to deliver an unbroken obscurant screen in the sky for CUAS, but have been improved to deliver different types of obscurant precisely across the battlefield.

13.33 The key systems of the Bn are as follows:

a. 48 x YW306 with 130 mm x 30 short range MBRL, modified for optional crewing

b. 48 x FHJ-02 62 mm Portable MBRL

c. 15 x Remote control station VN17 HIFV

d. 48 x Airburst Obscurant 140 mm x 36 x2 launch vehicle.

Enclosure Path Opening Battalion

13.34 The role of the Battalion is to enable the manoeuvre of OPA formations on enclosed terrain by rapidly mechanically or explosively clearing or opening new routes. Alongside obscuration this is one of

the key novel capabilities that provides the Olvanans alternative manoeuvre options across urban terrain. The battalion consists of four path opening companies, a sap(ping) opening company, a bulldozer platoon (with transporters) and a logistic supply company which not only provides the bulk explosives resupply but also fascines and scaffolding in quantity (see Figure 13.7 on page 13-29).

13.35 Each Path Opening Company has five platoons. The two Explosive Corridor Platoons conduct successive explosive hose breaching to clear IEDs and suppress defenders along urban routes. Each comprises a heavy infantry fighting control vehicle, two optionally crewed explosive mine breaching vehicles, an MBRL APC with a dozer blade as well as a resupply truck. The two Enclosure Tunnelling Platoons provide the means to push routes through buildings. They similarly have a control vehicle but two combat engineer vehicles and one armoured recovery vehicle, again optionally crewed. Similarly, the Gap Platoon, which provides the means for Olvanan forces to avoid predictable defiles has a control vehicle to command the optionally crewed two APCs modified to deliver fascines as well as a bridge layer.

13.36 The SAP Opening Company consists of four mechanical sapping platoons, each in turn has four sections with two interior-wall-breaching engineering platforms which are an adaption of the Olvanan copy of the German Weisel. This provides the capability for rapidly creating covered approaches through buildings.

13.37 The key systems of the Bn are as follows:

a. 20 VH17 HIFV protected platform control vehicle

b. 24 GSL-133 Mine Breaching AFV

c. 24 GCZ-100 Combat Engineer Vehicles

d. 8 t76 Armoured Recovery Vehicles

e. 12 T85 Based AFV (Screening and gap crossing)

f. 48 Sino-Wiesel Interior breach small engineering platform

g. 9 UZV Armoured Bulldozers

h. 9 TAIAN TAS360 Tank Transporters.

Enclosed Terrain Pioneer Battalion

13.38 The role of the Enclosed Pioneer Battalion (see Figure 13.8 on page 13-30) is to provide specialist assault, access, mobility and countermobility support to units operating within buildings and structures. Subunits may be tasked as specialist assault detachments but more typically are assigned to infantry based BEDET for both offensive, defensive and security tasks. The battalion provides a range of capabilities:

a. Conduct reconnaissance, search and assault in subterranean environments

b. Conduct urban close reconnaissance using specialist equipment and remote sensors

c. Provide pathfinding, assault breaching and demolition support

d. Deploy and employ specialist munitions, sensors and devices

e. Provide assault dog and search dog teams.

13.39 **Companies and four Combat Dog Companies.** Each pioneer company is organised in three specialist platoons of four sections, as well as a vertical access and supply section. While soldiers focus on the relevant specialist skills for their platoon, all are fully qualified and able to execute the full range of tasks. The Penetration Platoon focuses on subterranean and deep interior operations, including the use of micro UGV. The Robotics Platoon focuses on operating in inaccessible environments, particularly high and collapsed structures. The Explosives Platoon focuses on attack demolitions, particularly using stand-off methods. A Vertical Access Section provides reach by vehicle mounted mechanical booms and ladders.

13.40 The Combat Dog Company has four war dog platoons and four search dog platoons which each comprise three sections and one search dog section. Both types of section have six handlers with two dogs each.

Enclosed Terrain Fire Support Battalion

13.41 The role of the Battalion is to provide detachments to deliver heavy precision and enhanced blast firepower in order to achieve

destruction level effects in support of OPA formations on enclosed terrain. The Tyulpan 240 mm mortar has a unique capability to fire large, guided munitions that can destroy substantial buildings with a single strike. In similar vein, the TOS-1A flame launcher has the capability of striking an area with a salvo of thermobaric rockets that in the target area is un-survivable unless in substantial closed cover. In the Olvanan view, these systems have an important doctrinal role in avoiding being drawn into assaults of well-defended locations.

13.42 The battalion consists of seven companies (see Figure 13.9 on page 13-31). The three Precision Heavy Mortar Companies are organised to detach their heavy mortar platoons separately to units or formations engaged in enclosure operations. They are configured with a forward observer section of two teams, two mortar sections each with a 240 mm mortar and an admin and munitions section. The wheeled heavy mortar company is similarly configured but with towed mortars and light vehicles. This provides a contingency capability for rapid reinforcement by air insertion.

13.43 The Heavy Flame Company consists of three platoons of three sections, with each of these comprising one tracked launch vehicle and two tracked reloading vehicles. Generally, a whole flame company would be deployed to a formation with a priority urban task. The capability to deliver thermobaric munitions is also provided by other Olvanan rocket artillery. The unique features of this equipment are the level weight of explosive effect that can be delivered and the protection of both launch and resupply vehicles, allowing closing with objectives for direct fire engagement.

13.44 The key systems of the Bn are as follows:

a. 24 x Tyulpan 240 mm SP Mortar

b. 4 x M240 240 mm Mortar (Air deployment option)

c. 27 x 220 mm TOS-1A 220 m Flame Rocket Launchers

d. 54 TZM-T Reload Vehicles.

Robotic Manoeuvre Battalion

13.45 The role of the battalion is to provide un-crewed combat capability for selected enclosure operations and develop combined arms doctrine and capability for the OPA. Operationally, it is configured to provide a remote manoeuvre company to an infantry battalion, especially a dismounted infantry battalion working in dense urban terrain, to provide it with both protected mobility and un-crewed resupply. Routinely, the battalion provides the basis for trials of concepts and tactics, for which it has an allocated infantry trials company. The unit also has the only operational optionally crewed tanks in the OPA which are currently expected only to be used in feints or probes. While the Olvanans do not believe the remote-control technology is yet adequate for tank to tank combat they seek to develop tactics and techniques for when it is. This is the rationale for the tank platoons' presence in the manoeuvre companies.

13.46 Each manoeuvre company consists of five platoons as well as a maintenance and communication section (see Figure 13.10 on page 13-32). All have a control vehicle which is based on a VN17 heavy APC and acts as the platoon headquarters. The tank platoon has three optionally crewed tanks, the two APC platoons have four optionally crewed Type 85's which are fitted with breaching blades to allow them to move troops and stores between the interior of different buildings. The utility UGV platoon has eight medium-sized UGV and the resupply UAS platoon eight multirotor supply UAS.

13.47 The key equipment of the battalion is:

a. 16 VH17 HIFV protected platform control vehicle

b. Optionally Crewed Platforms

c. 16 ZTZ-96 MBT with developmental remote fire control

d. 32 Type 85 Optionally Crewed APC with Breaching Blade

e. Main Un-crewed Platforms (others as required)

f. 32 Medium Class Utility UGV

g. 32 Medium Class Utility Resupply UAS.

Logistics Battalion

13.48 The role of the battalion is to provide logistic support to the Brigade, un-crewed heavy and medium transport for special tasks and support up to three separate deployments. Tasks include the storage and issue of robotic platforms. The logistics battalion is conceived as a multipurpose organisation. Its essential purpose is to provide the specialized logistic backup for detachments from the asymmetric brigade where the host formation is not able to do so. However, because the majority of its vehicles are capable of un-crewed operation, it offers a unique capability for a variety of high-risk missions and elements are regularly deployed in support of Orange Jacket missions.

13.49 The battalion consists of three transport and maintenance companies and a platform storage company (see Figure 13.11 on page 13-33). Each of the transport companies consists of an AFV transport platoon with 12 tank transporters, a heavy robotic transport platoon with 12 optionally crewed 8 x 8 trucks as well as three 4x4 leader control vehicles and a medium transport platoon also with 12 optionally crewed medium trucks. Each company also has a technical maintenance and repair platoon which supports other elements of the brigade when they are co-detached. The platform storage issue and deep maintenance company holds the bulk of the un-crewed platforms in the brigade. Outside of major exercises units are often only an issued with a limited number of any category of platform, to concentrate wear and tear on these training stocks.

13.50 The key equipment of the Bn is as follows:

a. 27 Dongfeng 4x4 Protected vehicles

b. 12 Dongfeng 6x6 Protected vehicles

c. 36 TAIAN TA4360 Tank Transporters

d. 36 Shaanxi 8x8 Heavy Trucks

e. 36 Shaanxi 6x6 Medium Trucks.

Engineer Plant and Construction Battalion

13.51 The role of the battalion is, during enclosure operations, to support construction of large-scale obstacles, field defences or deceptions as well as conduct mechanical breaching and demolitions. This Battalion was created in direct response to analysis of US operations in Iraq and particularly the operational deployment of large-scale barriers during both offensive and defensive operations. While individual construction companies may from time to time be individually deployed to support other formations or Orange Jacket operations, it is envisaged that on operations the unit would deploy as a whole or perhaps as one large and one small detachment to separate formations. It is organised and equipped to work alongside a conventional engineering unit.

13.52 The battalion consists of three pairs of companies as well as barrier Supplies Company (see Figure 13.12 on page 13-34). The two Construction Companies comprises four construction platoons each of four sections. The company also has a stores and supply section and six. The Plant Companies have 13 wheeled machines as well as four tracked excavators and has four tank transporters to be able to move the tracked vehicles. The armoured plant company has four armoured bulldozers and four armoured engineers' vehicles with its own tank transporter vehicles. The Barrier Supplies Company has 12 general-purpose medium trucks and trailers but also 12 dedicated shipping container trucks. The Olvanans not only plan to use shipping containers to deliver bulk stores, they also use shipping containers as a quickly deployed tactical barrier. In that vein, they also hold trailers with prepacked rapid deployment wire obstacles for rapid isolation of secerned zones, whether for offensive containment or fencing minefields and autonomous weapon killing areas.

13.53 The principal systems of the Bn are:

a. 8 armoured engineer vehicles

b. 12 Excavators

c. 12 Tractor Dozers

d. 8 Bulldozers

e. 6 Concrete Mixers

f. 6 Concrete Crushers

g. 24 Tank Transporters

h. 46 Large Trucks.

Special Purpose Forces Enclosure Warfare Experimental Aviation Company

13.54 The role of the SPFs experimental aviation company is to develop capabilities for reconnaissance and insertion within the enclosed environment using light aviation platforms. While gyrocopters have been used by the SPF for some while, the other systems are relatively new to the military. The organisation is a recent creation at the direct behest of the political leadership, seeking to concentrate military expertise and learning in close proximity to industry.

13.55 The experimental aviation company (see Figure 13.13 on page 13-35) is explicitly tasked to push the tactical and conceptual envelope. The gyrocopter technology is relatively mature and the platoon regularly exercises with other formations to test concepts for very light aviation in urban areas. Both the individual hover board and the passenger drone are considered by the Olvanans to have excellent potential and in order to accelerate development, the OPA command have effectively committed the two platoons to provide test pilots for companies making platforms. On several occasions teams from the SPF experimental Aviation Company appear to have taken the opportunity to support Olvanan Peoples Police operations using prototype platforms, so there would seem to be little doubt that given the opportunity to test these technologies on operations, the Olvanans would do so with alacrity.

This page intentionally blank

Figure 13.1: Olvanan Asymmetric Warfare Experimental Brigade

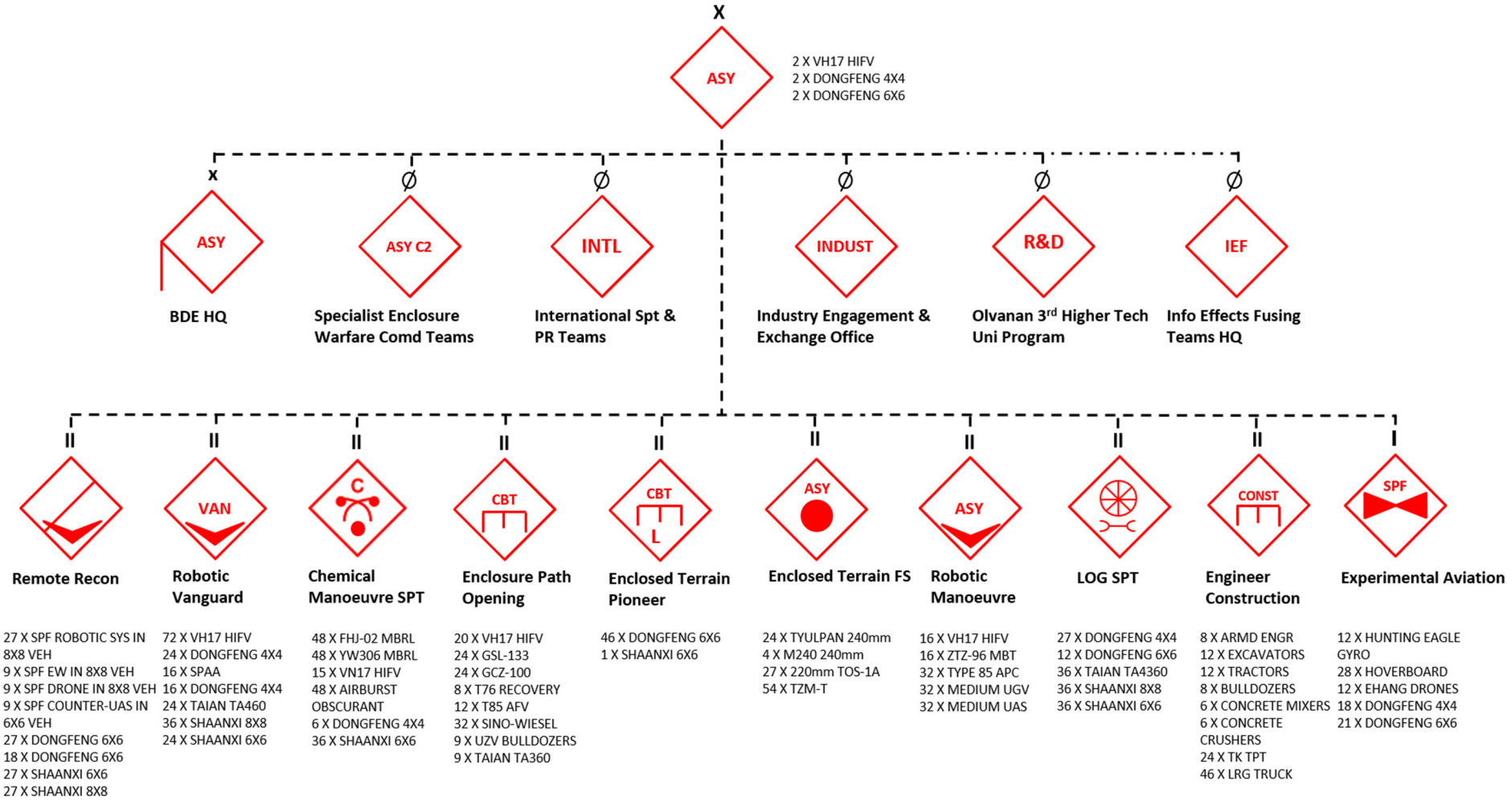


Figure 13.2: Olvanan specialist enclosure warfare command teams

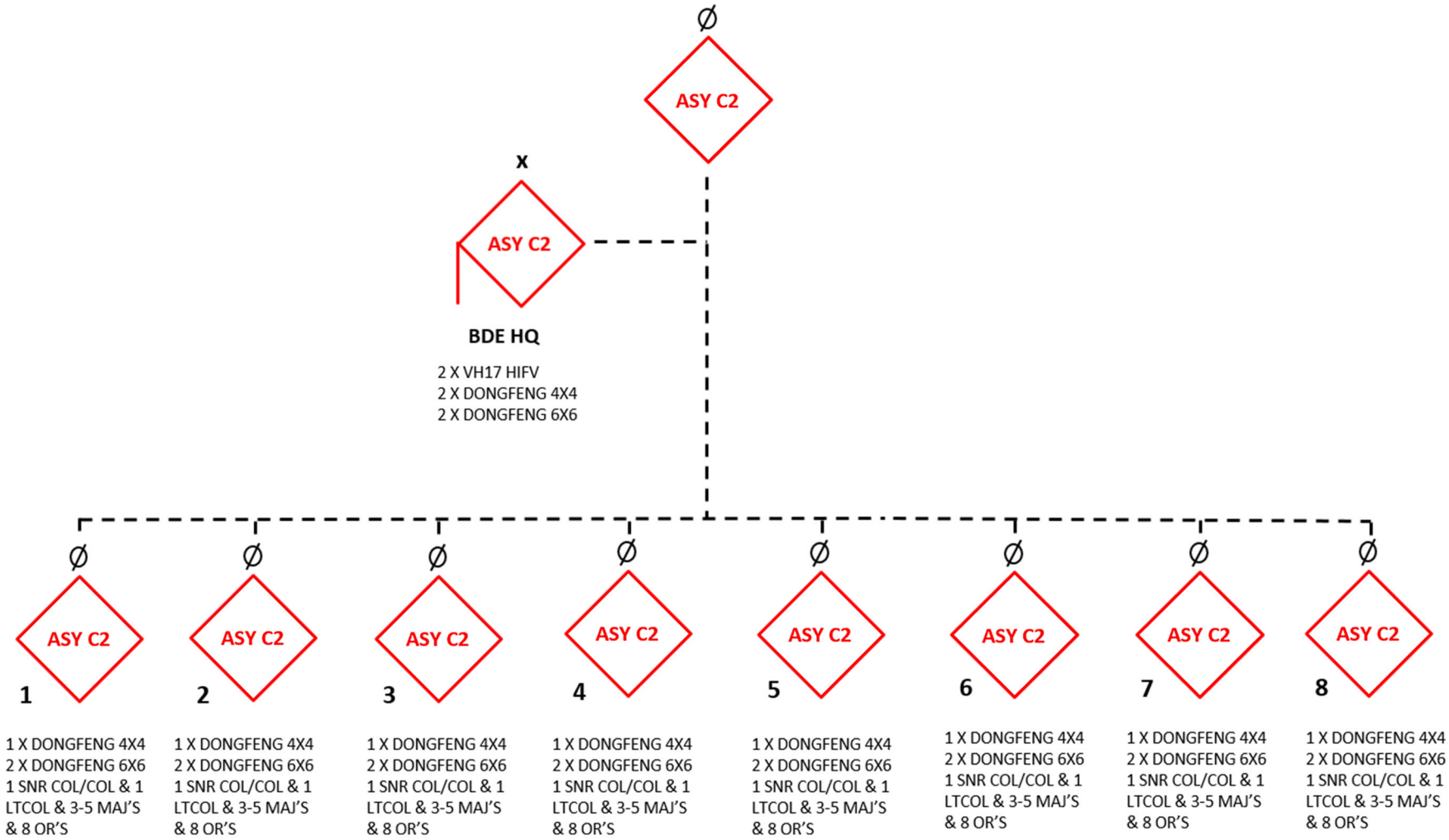


Figure 13.3: Olvanan Information Effects Fusing Unit

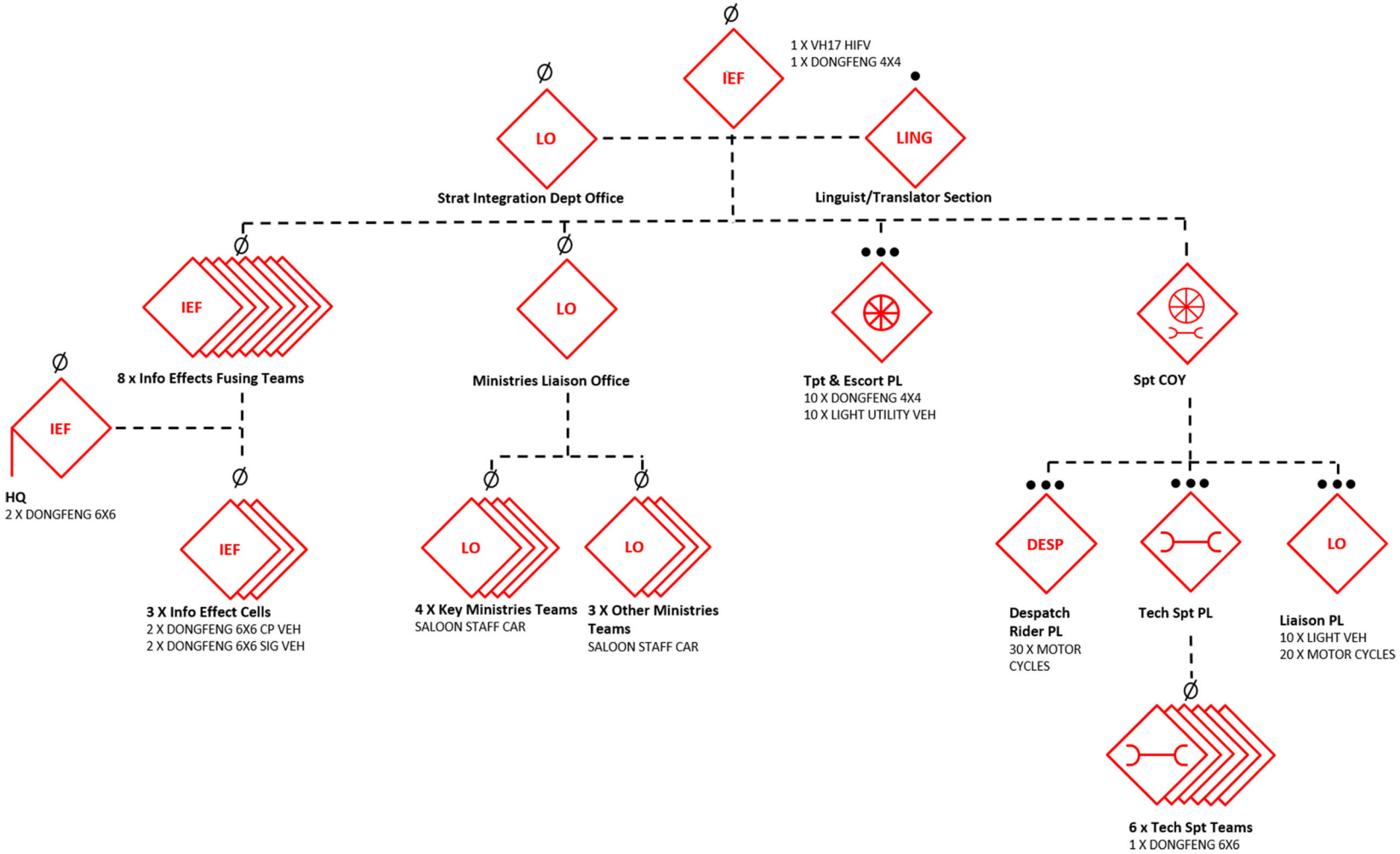


Figure 13.4: Olvanan Remote Reconnaissance Battalion

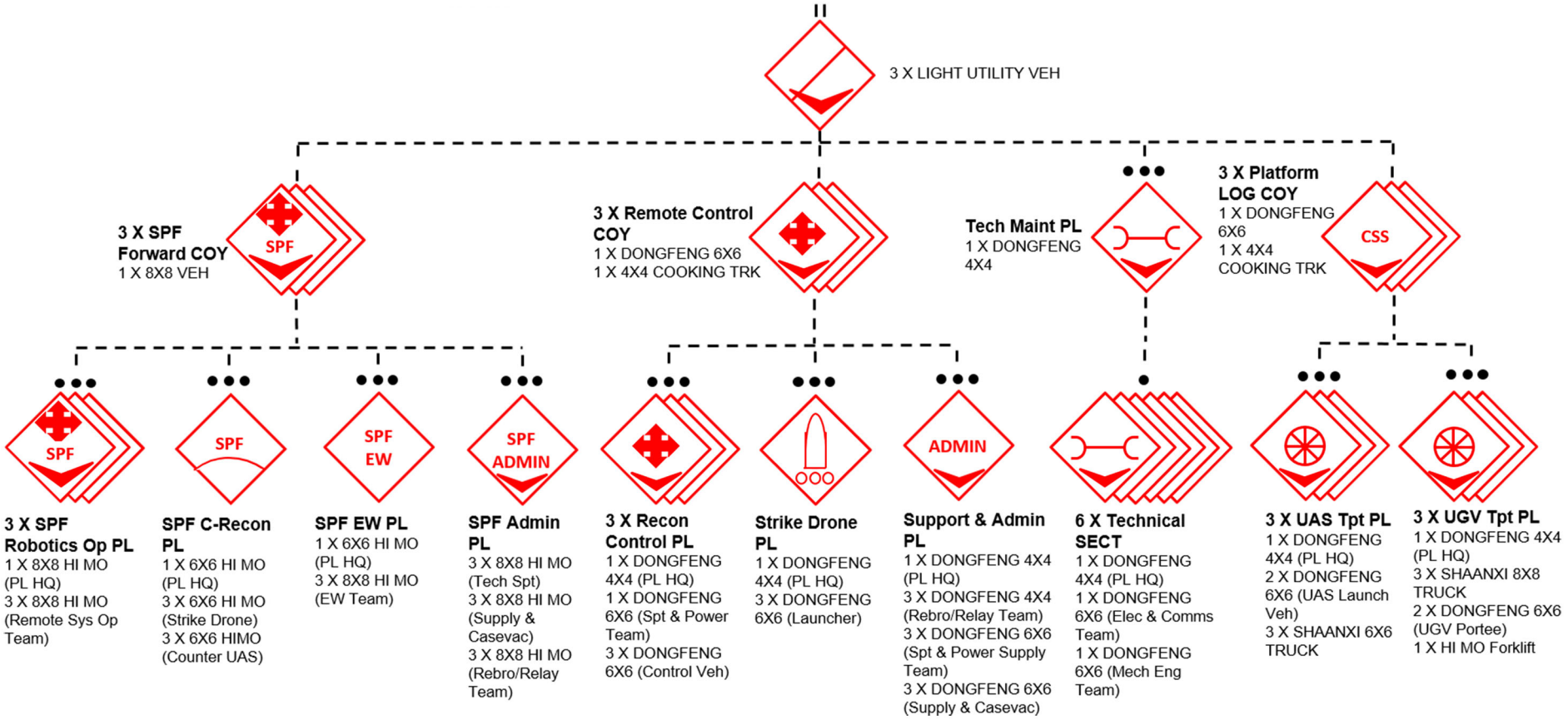


Figure 13.5: Olvanan Robotic Vanguard Battalion

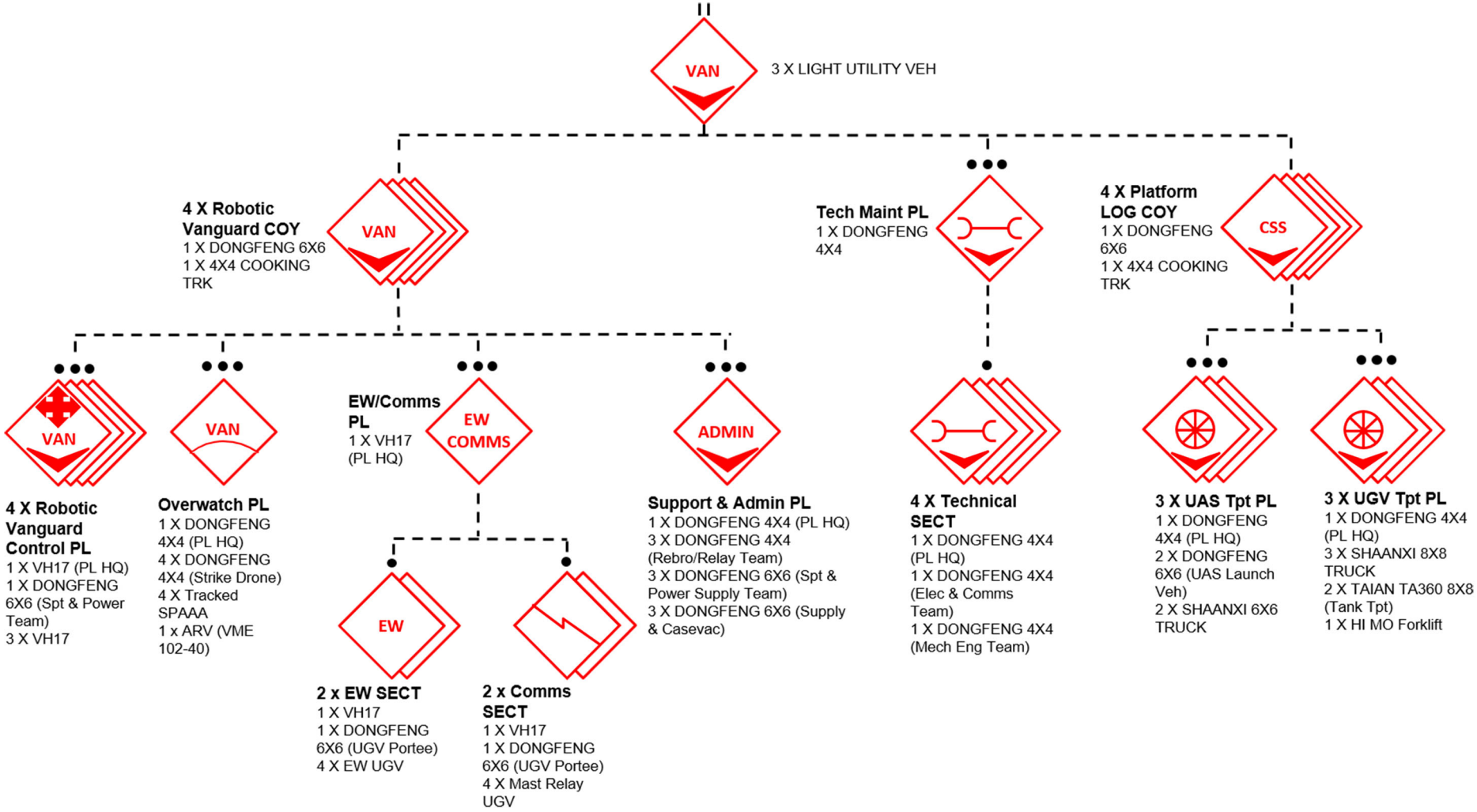


Figure 13.6: Olvanan Chemical Manoeuvre Support Battalion

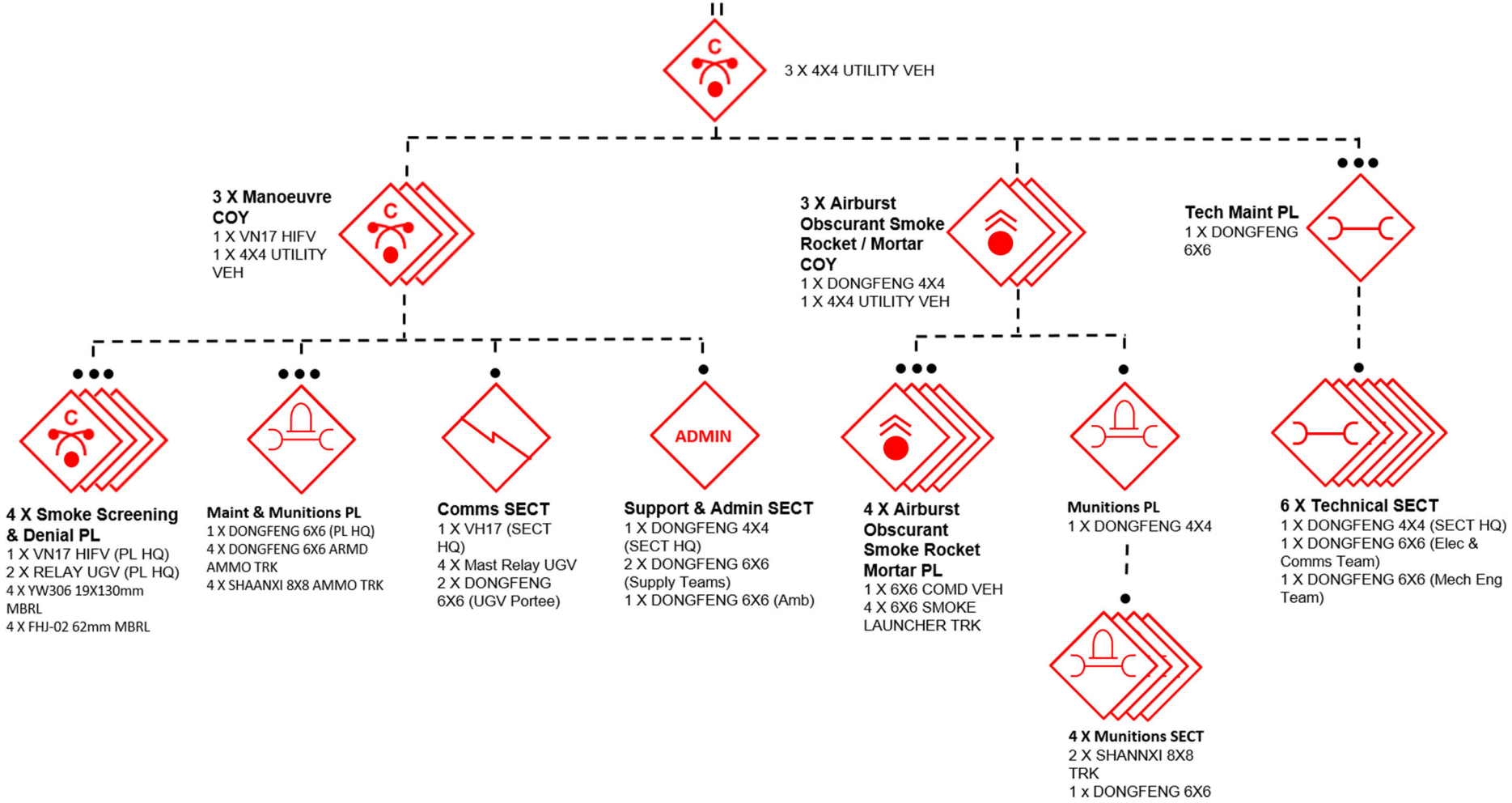


Figure 13.7: Olvanan Enclosure Path Opening Battalion

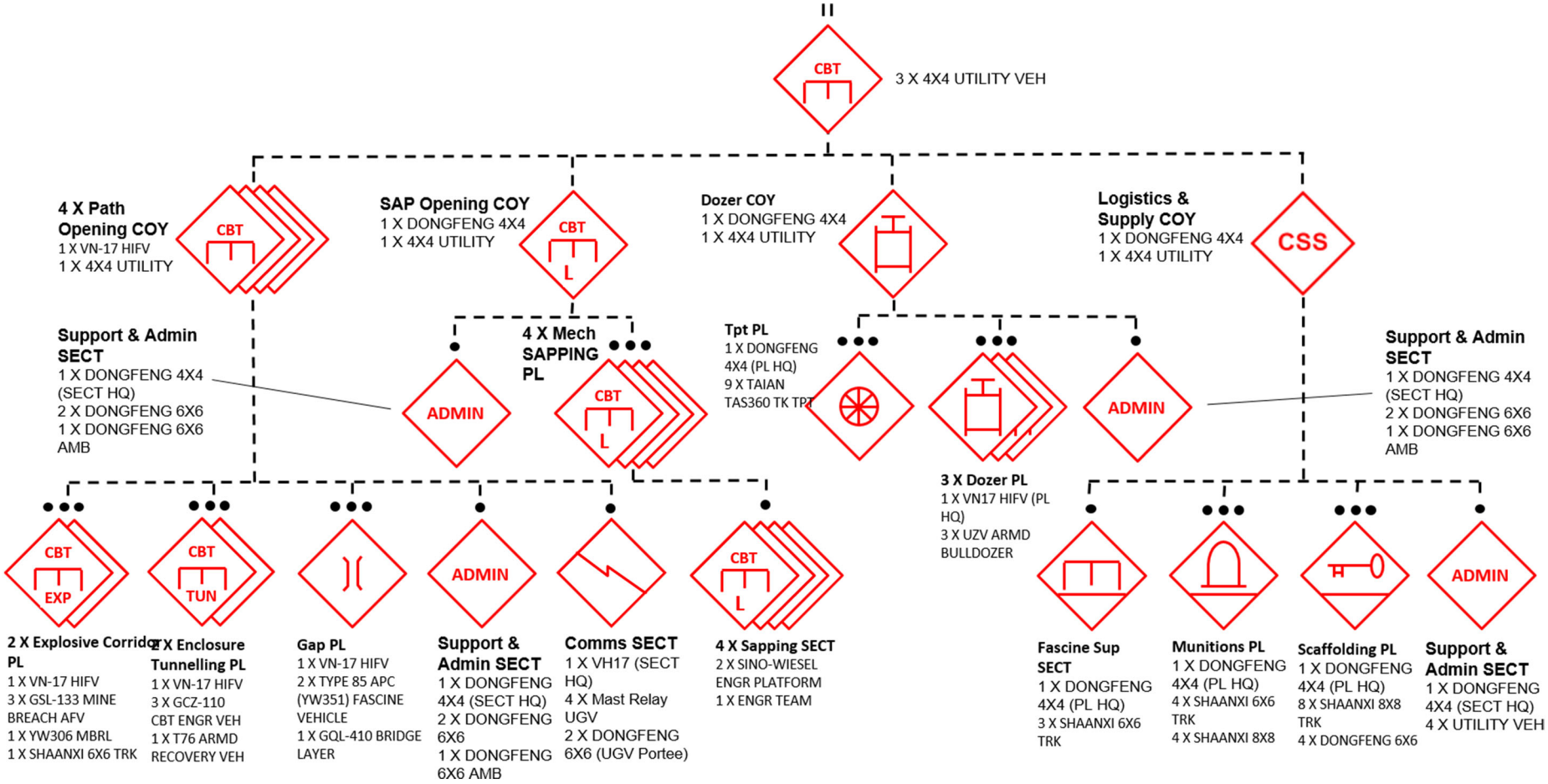


Figure 13.8: Olvanan Enclosed Terrain Pioneer Battalion

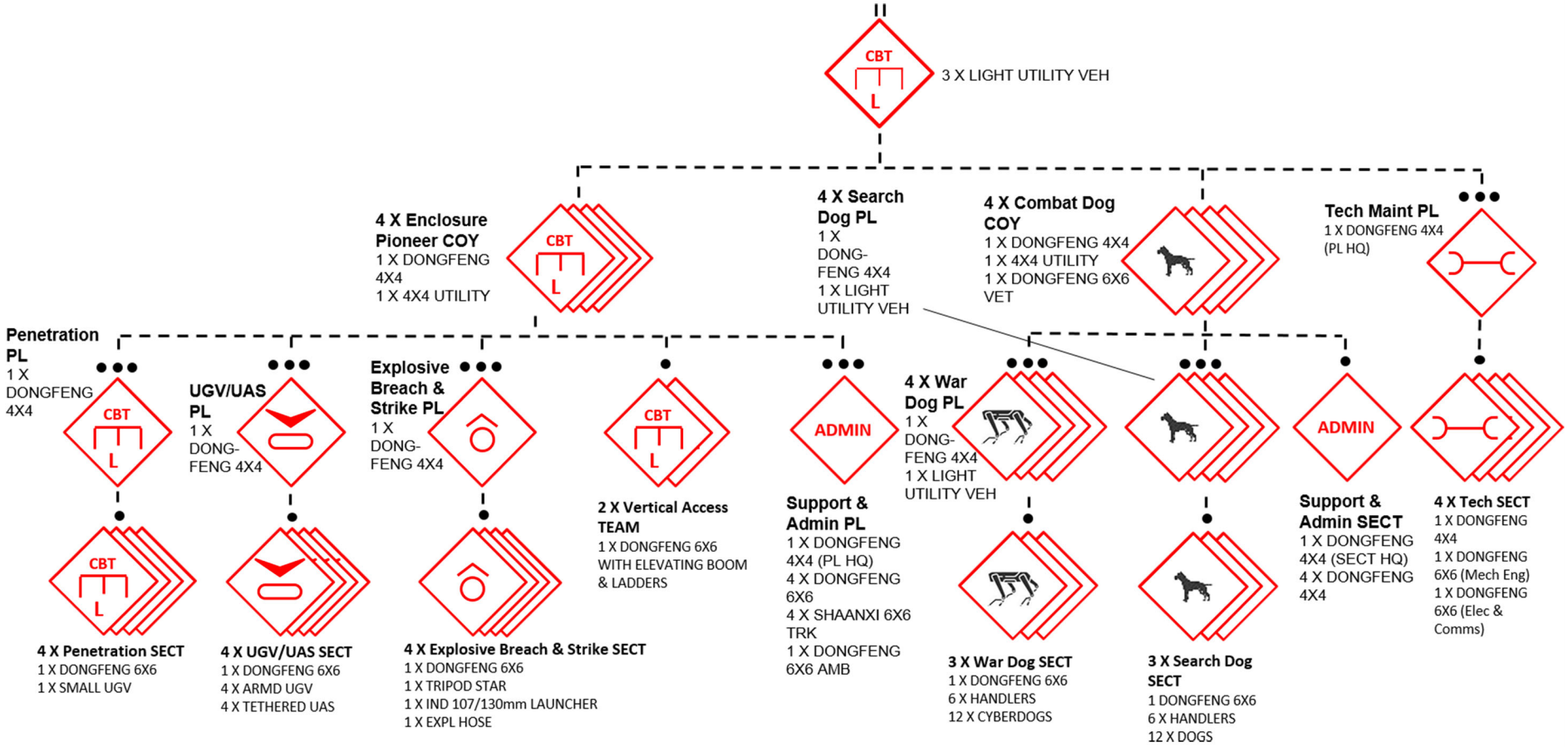


Figure 13.9: Olvanan Enclosed Terrain Fire Support Battalion

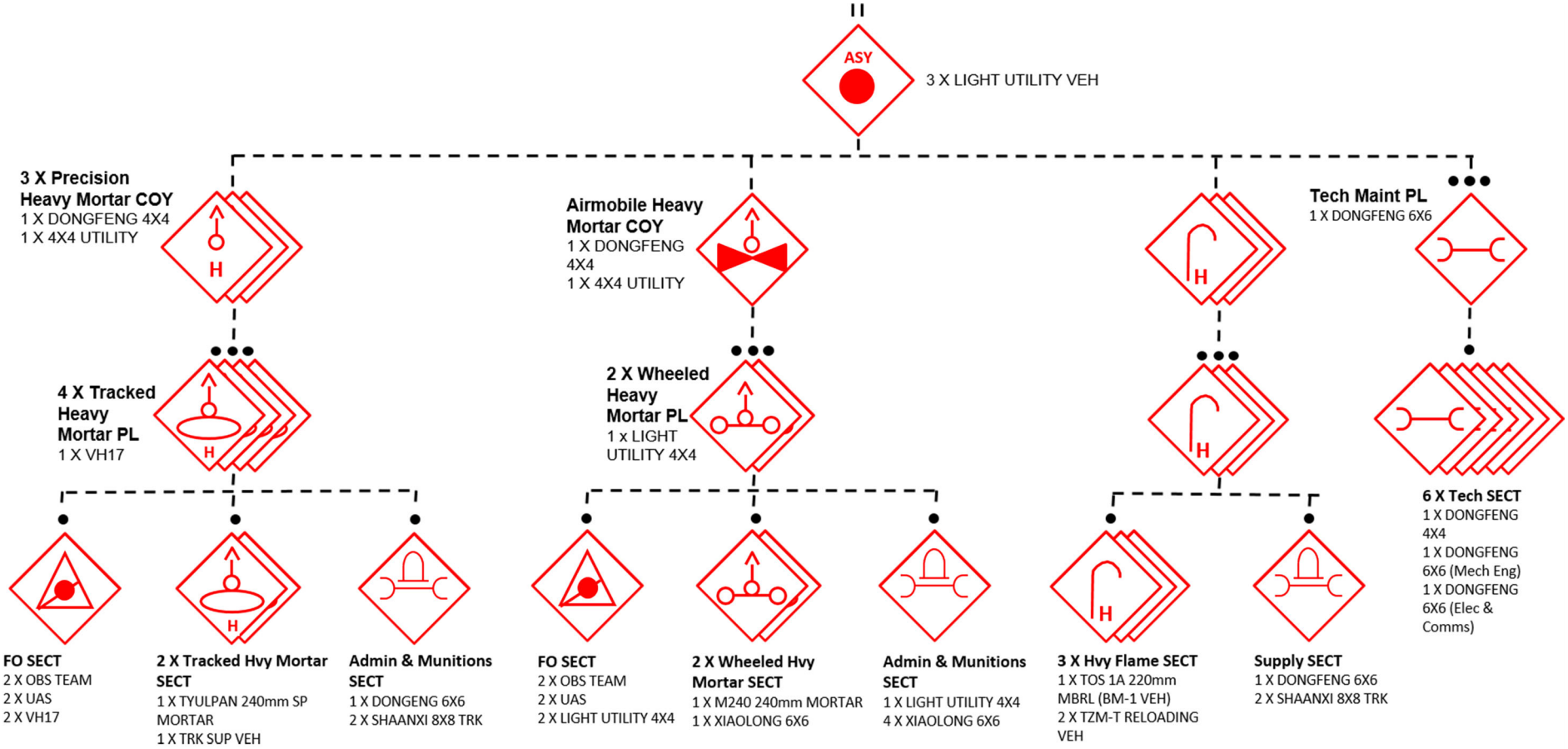


Figure 13.10: Olvanan Robotic Manoeuvre and Platform Trials Battalion

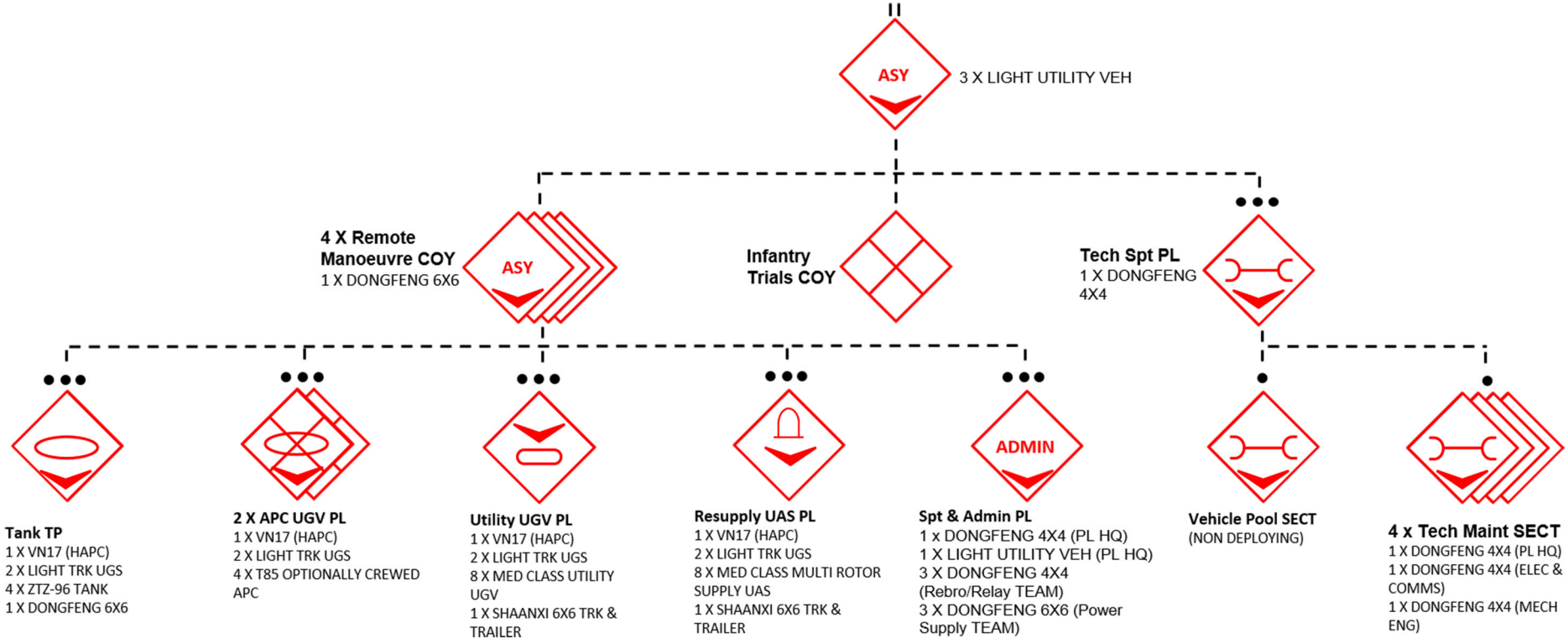


Figure 13.11: Olvanan Logistics Battalion

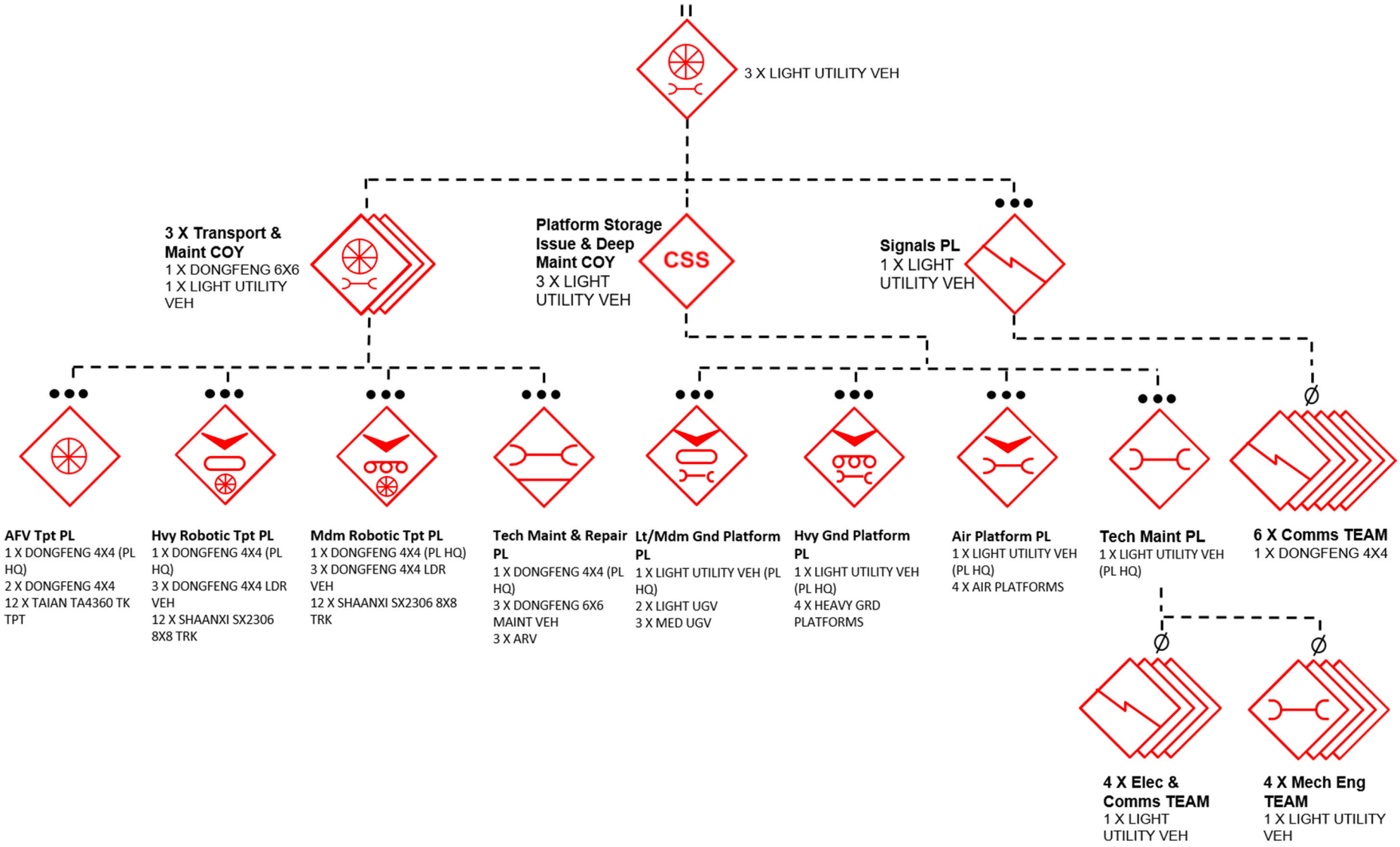


Figure 13.12: Olvanan Engineer Plant and Construction Battalion

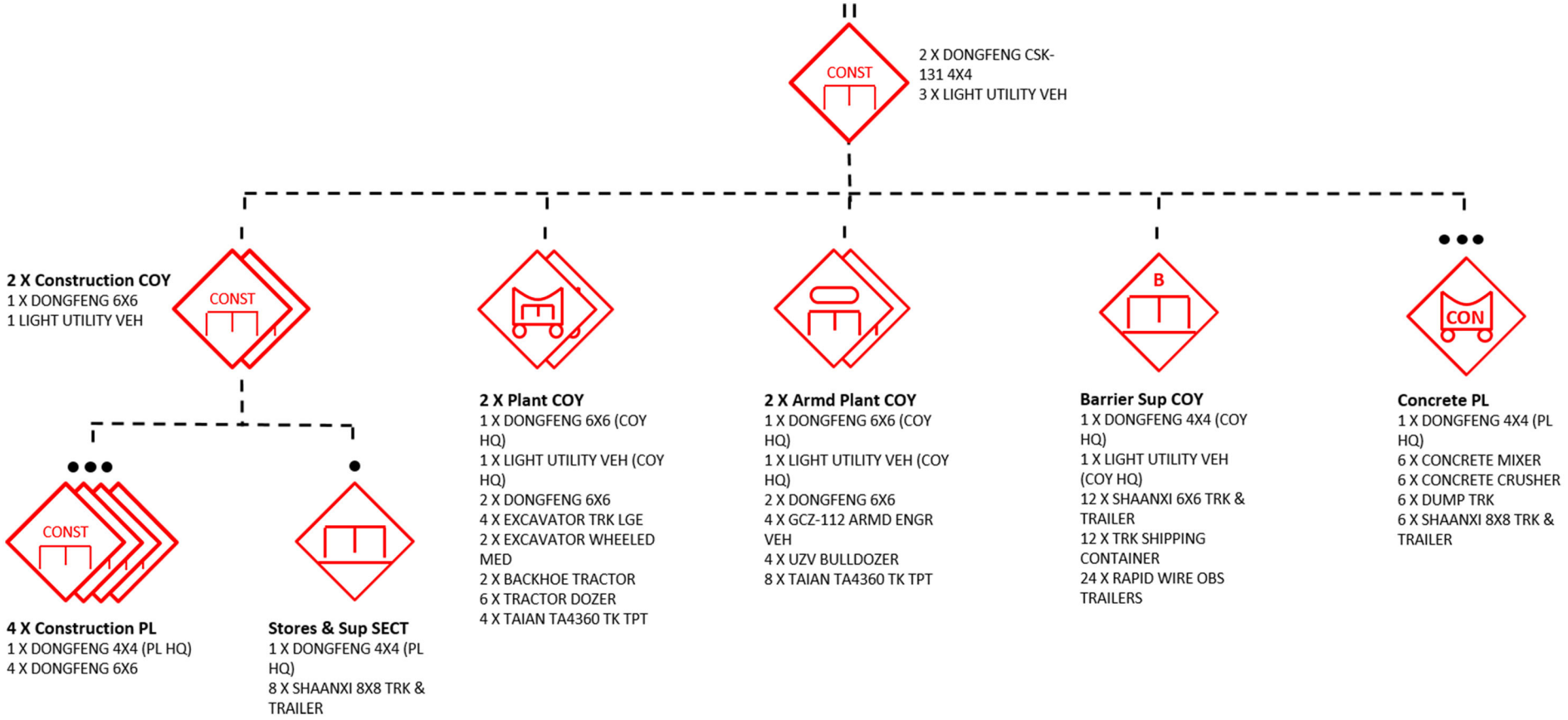
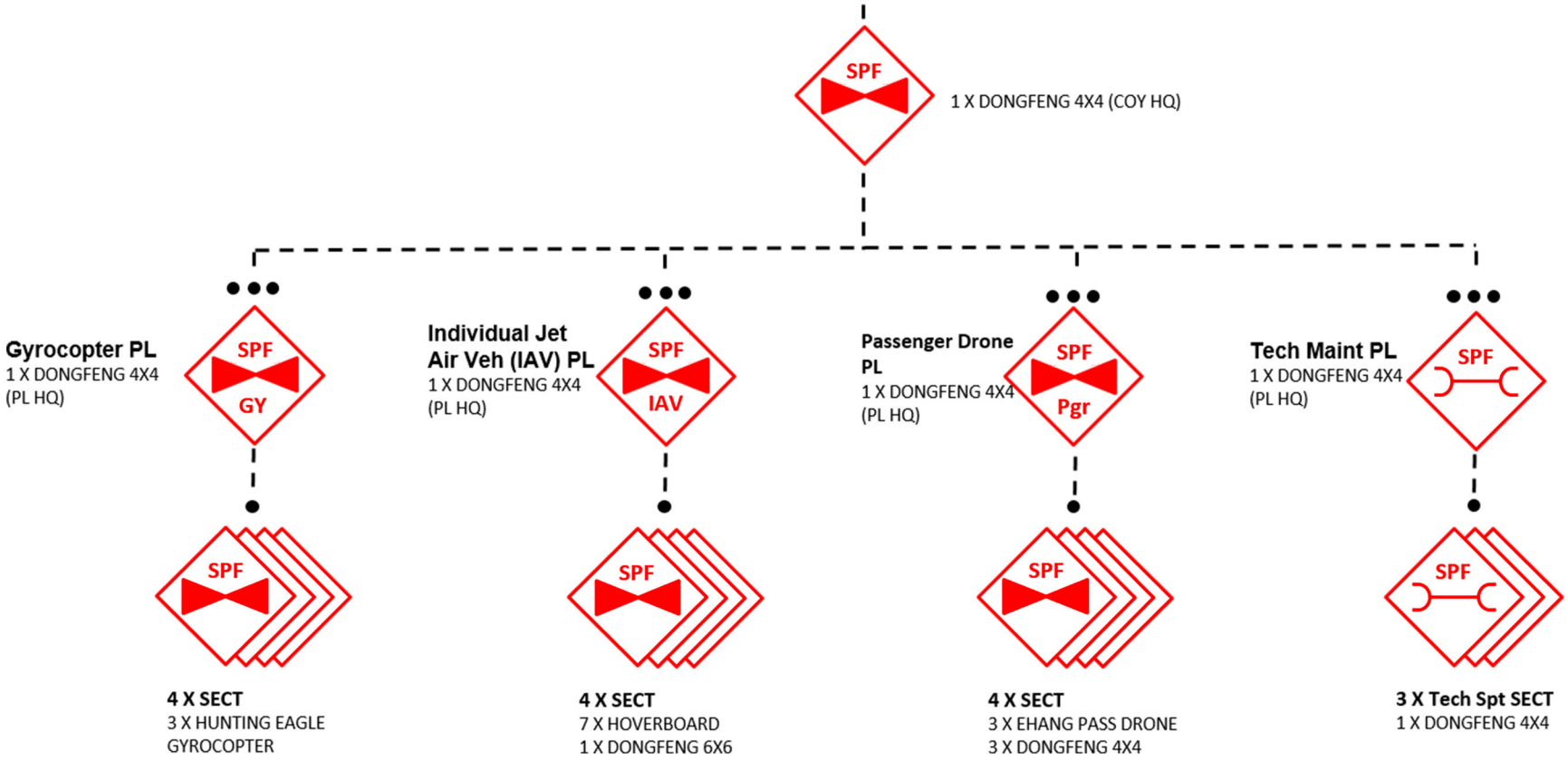


Figure 13.13: Olvanan Special Purpose Forces Enclosure Warfare Experimental Aviation Company



This page intentionally blank

Glossary

The source for approved Defence terms, definitions and abbreviations is the Australian Defence Glossary (ADG), available on the Defence Protected Network at http://adg.dpe.protected.mil.au/.

Opposing Forces (OPFOR) glossary terms are specific to enemy publications and will not be found in the ADG.

alacrity

Brisk and cheerful readiness. It denotes physical quickness coupled with eagerness or enthusiasm.

anglophone

English-speaking.

azimuth

An angular measurement in a spherical coordinate system.

BeiDou Navigation Satellite System

A Chinese satellite navigation system. It consists of two separate satellite constellations. It is an alternative to Global Positioning System. (OPFOR)

belligerents

A nation or person engaged in war or conflict, as recognized by international law.

cognitive

Relating to, being, or involving conscious intellectual activity (such as thinking, reasoning, or remembering).

containment

Security elements, preferably using uncrewed systems, are deployed to dominate the uncleared structures and open spaces around and in between them. (OPFOR)

conurbation

An extended urban area, typically consisting of several towns merging with the suburbs of a central city.

degradation

Olvanan term for both delay and manoeuvre defence within urban terrain. (OPFOR)

desant

A combined arms tactic, where infantry soldiers ride into an attack on tanks, then dismount to fight on foot.

disaggregation

To separate into component parts.

electromagnetic pulse

A transient electromagnetic disturbance (TED), is a brief burst of electromagnetic energy.

enclosure warfare

Olvanan expression/how Olvanans think of urban warfare, also inferring subterranean warfare. (OPFOR)

facias

A board or other flat piece of material covering the ends of rafters or other fittings.

fascines

A fascine is a rough bundle of brushwood or other material used for strengthening an earthen structure, or making a path across uneven or wet terrain.

FHJ-84

An over/under twin-barreled 62 mm incendiary rocket launcher developed by Norinco for the Olvana People's Army. (OPFOR)

fougasse

An improvised mortar constructed by making a hollow in the ground or rock and filling it with explosives (originally, black powder) and projectiles. (OPFOR)

fusing

The integration and continuation of non-kinetic with conventional kinetic operations. (OPFOR)

GLONASS

A Donovian space-based satellite navigation system operating as part of a radio navigation-satellite service. It provides an alternative to Global Positioning System and is the second navigational system in operation with global coverage and of comparable precision – global navigation satellite system. (OPFOR)

grupa

A main subordinate part of an enclosure detachment which may be a Battalion Enclosure Detachment (BEDET) or a Company Enclosure Detachment (CEDET). It originates with the Donovian word for group but is also a word for group in Hindi. (OPFOR)

intervisibility

The state of being mutually visible.

Kshatriya

Kshatriya is one of the four varna of Hindu society, associated with warrior aristocracy.

Mahābhārata

The Mahābhārata is one of the two major Sanskrit epics of ancient India, the other being the Rāmāyaṇa. It narrates the struggle between two groups of cousins in the Kurukshetra War and the fates of the Kaurava and the Pāṇḍava princes and their successors.

masking

To generate uncertainty and ambiguity and reduce the effect of enemy systems by fighting from behind a ‘mask’. Masking first emphasises concealment and deception using virtual, less lethal or non-lethal effects.

maskirovka

Donovian military deception, a doctrine developed from the start of the 20th century. The doctrine covers a broad range of measures for military deception, from camouflage to denial and deception.

millimetric

Of a magnitude measured in millimetres.

obscurant

Something used to hinder visibility.

occupy

To take control of structures where resistance is not expected. (OPFOR)

Orange Jackets

A discrete humanitarian force used as a non-kinetic tool by the OCP. (OPFOR)

perfidy

The state of being deceitful and untrustworthy. In the context of war, perfidy is a form of deception in which one side promises to act in good faith with the intention of breaking that promise once the unsuspecting enemy is exposed.

prophylactically

Tending to prevent or ward off.

pyrrhic

Victory won at too great a cost to have been worthwhile for the victor.

quiescent

In a state or period of inactivity or dormancy.

Rāmāyana

Cambodian epic poem, based on the Sanskrit's Rāmāyana epic.

reticulation

A pattern or arrangement of interlacing lines resembling a net.

secerning

To discriminate or distinguish in thought.

secular

Not connected with religious or spiritual matters.

snatch attack

The technique normally used for a situational attack, only mounted against a weak or unprepared position. (OPFOR)

storm detachment

Unit level task groupings traditionally assigned to assault an associated set of objective buildings. (OPFOR)

storm-grupa

Storm group. Subunit level groupings that traditionally attacked individual or closely associated objective buildings. (OPFOR)

storming attack

Also sometimes known as ‘blooming lotus’ (the Olvanan term for blitzkrieg). Moving through a small gap and expanding. The emphasis is on rapid penetration in depth before clearance. (OPFOR)

strike attack

Where heavy (larger than 200 mm calibre) munitions or demolition charges are delivered onto an objective as the primary effect. It infers ‘annihilation’ effects (80-90% casualties). (OPFOR)

succour

Assistance and support in times of hardship and distress.

Sun Zhu

Sun Tzu was an Olvanan general, military strategist, writer, and philosopher who lived in the Eastern Zhou period of ancient Olvana. Sun Tzu is traditionally credited as the author of The Art of War, an influential work of military strategy that has affected both Western and East Asian philosophy and military thinking. (OPFOR)

transition battle

The commencement of the enclosure battle and the manoeuvre as a forward force moves into the enclosed disruption zone. (OPFOR)

Trishula

A trident. The name originates in the Hindu word for Trident and echoes the Donovian use of Troika. When used in context within Olvanan doctrine, it relates to the grouping of force elements into three groups (as small as a three man group), like the prongs of the Trishula to achieve tactical objectives.

Trishula storm

Storm trident. A grouping of three or more soldiers performing offensive tactical actions. (OPFOR)

ubiquitous

Present, appearing, or found everywhere.

ubiquity

Appearing everywhere or being very common.

WPF-89-2

A rocket with a tandem warhead with high explosive antitank (HEAT) and thermobaric effects. (OPFOR)

Abbreviations

The source for approved Defence terms, definitions and abbreviations is the Australian Defence Glossary (ADG), available on the Defence Protected Network at http://adg.dpe.protected.mil.au/.

Opposing Forces (OPFOR) abbreviations are specific to enemy publications and will not be found in the ADG.

AFV	armoured fighting vehicle
AI	artificial intelligence
APC	armoured personnel carrier
BDET	battalion detachment (OPFOR)
BDS	BeiDou Navigation Satellite System (OPFOR)
BEDET	Battalion Enclosure Detachment (OPFOR)
BTG/BDETG	Battalion Tactical Group (OPFOR)
C-UGV	counter unmanned ground vehicle (OPFOR)
CCC	Conventional Control Companies (OPFOR)
CCIR	commander's critical information requirement
CEDET	Company Enclosure Detachment (OPFOR)
COTS	commercial-off-the-shelf
CP	command post
CUAS	counter uncrewed aerial system
DZJ-08	A portable, disposable, unguided, shoulder-launched, multipurpose recoilless weapon (OPFOR)
EMP	electromagnetic pulse
EW	electronic warfare
FIFC-CP	Fused Integrated Fires Command CP (OPFOR)
FOO	Fused Operations Office (OPFOR)
FWC	Fused Warfare Control (OPFOR)
FWCE	Fused Warfare Control Elements (OPFOR)
GLONASS	Global Navigation Satellite System
GPS	Global Positioning System
HE	high explosive
HUMINT	human intelligence
ICRC	International Committee of the Red Cross
IED	improvised explosive device
IEF	information-effect fusing (OPFOR)

IEF-CP	information-effect fusing - command post (OPFOR)
IEFU	information-effect fusing unit (OPFOR)
IFC	integrated fire control
IFC-CP	integrated fire control - command post (OPFOR)
IFV	infantry fighting vehicle
IHL	international humanitarian law
IS	Islamic State (OPFOR)
ISR	intelligence, surveillance and reconnaissance
LiDAR	light detection and ranging
MBRL	multi-barrel rocket launcher (OPFOR)
NC	Nationalist Coalition (OPFOR)
NGO	non-government organisation
OCP	Olvanan Communist Party (OPFOR)
OP	observation post
OPA	Olvanan People's Army (OPFOR)
OPAP	Olvanan People's Armed Police (OPFOR)
PEDET	Platoon Enclosure Detachment (OPFOR)
PSYWAR	psychological warfare
RPG	rocket propelled grenade
RRB	Remote Reconnaissance Battalion (OPFOR)
RRC	Remote Reconnaissance Company (OPFOR)
RVC	Remote Vanguard Company (OPFOR)
RWS	remote weapons station
SID	Strategic Integration Department/Strategic Information Department (OPFOR)
SPF	special purpose force
TI	thermal imagery
TTP	tactics, techniques, and procedures
UAS	un-crewed aerial system
UGV	un-crewed ground vehicle
WP	white phosphorus

This page intentionally blank