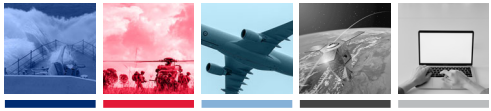
ADF Land Domain Publication



Land Domain Publication

LP 7.2.0 Olvanan Jungle Warfare Tactics at Combined Arms Brigade and Below

Issued by authority of the Chief of Army.

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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**.

Aim

5. LP 7.2.0 *Olvanan Jungle Warfare Tactics at Combined Arms Brigade and Below*, 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 a jungle environment.

6. This publication provides philosophical and application-level doctrine on Olvanan jungle 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 jungle operations, and to assist with operational and tactical joint planning; and to contribute to Defence education and training.

Land publication L-Library

7. 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 ADF Land Power Library and Army Knowledge Online.

8. 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.

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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.

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While the Olvanan People's Army does have a history of operating in the jungle, current force structures do not include a standing element which is trained and ready to operate in this environment. As such, any forces required to operate in the jungle will have to re-roll from their current combined arms brigade to a light infantry role, and undergo significant re-structure and training.

Fighting in the jungle will have a significant impact on the ability of Olvanan Commanders to command and control their troops, and will render many recent technological advancements ineffective. The jungle will impose a 'first principles' approach to warfare, while carrying your world on your back.

Philosophy of Olvanan jungle operations

1.1 In recent years, the Olvanans have renewed a fluctuating interest in jungle warfare, evident in debates in professional journals and the recent publication of new doctrine. The driver is unambiguously the recognition that the Olvanan People's Army (OPA) may be called upon to project into the archipelago bordering the South Olvanan Sea and the jungle terrain there presents particular challenges for the mechanised formations of the OPA.

1.2 Historically, the Olvanans regarded jungle as ideal defensive terrain, exemplified by the Northern Dynasties' planting of extensive forests as barriers. They understand this is to not merely impose physical obstruction but also to present an environment that degrades capability through extreme physical demand on soldiers, disease and the difficulties of sustaining logistics. These factors led to the disaster that was the 1942 Olvanan nationalist army expedition into

Bangansait and the ignominious retreat of the 5th Army. The successor New 6th Army learned from this, recognising the need to train soldiers properly for the physical and psychological challenges. They fared far better, achieving a series of victories by operational level envelopments through the jungle.

1.3 During the proxy wars against Western imperialism the Olvanans once again mastered the art of living and fighting in the jungle. It offered concealment from overhead sensors and western airpower, and the Olvanan's became adept at constructing and exploiting low signature logistics supply lines across very difficult jungle and mountain terrain using bicycles, porters and animals. They also became remarkably good at bringing heavy weapons to unexpected vantage points to bombard Western positions. Olvanan combat elements became noted for their ability to travel and fight light, carrying little more than a handful grenades and magazines for their assault rifles, water bottle and a long thin sack of rice.

1.4 During this period, when conducting offensive operations, the Olvanans preferred to infiltrate on newly reconnoitred constructed routes well away from known enemy positions and concentrate in well concealed assembly areas. From there teams of pairs of soldiers and key commanders conducted careful close reconnaissance. Attacks would typically seek to rush objectives through breaches opened by sapper units.

1.5 Olvanan sappers provided a crucial capability more akin to Western special forces than simply engineers. They were noted for getting very close to enemy positions undetected, remaining in position for an optimum moment to attack and then assaulting with a relay of fighters using Bangalore torpedoes and satchel charges. During defensive jungle operations the sappers developed ingenious booby-traps means of initiating demolitions. All Olvanan dismounted troops learned to carefully excavate deep shelter positions, sometimes connecting well-sited bunkers with interlocking parks along lateral fire lanes, but often also to simply provide opportunities for fighters to move around the battlefield and conduct local counter-attacks from unexpected directions.

1.6 When the Olvanan supported revolutionary armies went on the major offensive with combined arms, they became masters of executing Donovian style ‘blitzkrieg’ assaults, which they described as blooming lotus tactics. This would involve detecting a weak point concentrating area and artillery bombardment there and pushing armoured vehicles through the opening and spreading out beyond to probe multiple different routes, then reinforcing any that were penetrated. In jungle terrain the Olvanans proved willing to take risks and sacrifice forces in order to push armoured vehicles at speed along major routes, enveloping areas of difficult terrain and using the following forces to isolate enemies who had retreated into the jungle. Within the jungle they would conduct pursuit operations aimed at preventing moving enemies from resting and feeding.

1.7 While Olvana has heavily invested in modernising its forces to becoming a peer to the United States, an immutable fact remains that operations throughout the Indo-Pacific will require forces to operate in a jungle environment at some point. While this is not the primary, or even preferred operating environment for the OPA, any archipelagic operations undertaken will inevitably find troops operating in these jungle, or jungle adjacent environments.

Training for jungle operations

1.8 The Olvanan High Command recognizes eight special conditions: hills, mountains, jungles, extreme cold, deserts, urban, swamps, and night-time. Each of these conditions requires modifications and adaptations to baseline operations. Primary considerations include ensuring that troops are properly prepared for the special condition-with cold weather gear or bridging equipment, for example. Units should also train for potential special conditions that may occur in their areas of operations.

1.9 As the OPA has no specifically dedicated jungle forces, it has developed a suite of adaptive close country tactics in order to enable the Combined Arms Brigade (CA-BDE) to quickly reorientate jungle operations should the need arise. The requirement to operate in a jungle environment comes with a significant training burden, with heavy emphasis on navigation, and command and control (C2).

1.10 While the OPA is a technologically advanced Army, the jungle environment reduces the efficacy of this technology, and therefore requires Olvanan soldiers to be re-trained using first principles approach to manoeuvre. This change is a significant cultural shift that requires commanders at all levels to hone skills, which may have degenerated due to their reliance on advanced weaponry and tools.

1.11 As recent Olvanan experience is limited, their doctrine leans heavily on historical precedent, and a number of units have received training from some western jungle training establishments. To that end, while Olvanan jungle doctrine is based almost entirely on their key tactical actions, and groupings, they are learning the same lessons as those Western forces they may face in any future conflict.

1.12 The ethos espoused at Olvanan Jungle Training Facilities is as follows:

Figure 1.1: Olvanan Jungle Training Facility sign

The five limitations

1.13 This ethos is further supported by an emphasis by the Olvanan High Command of answering the 'Five Limitations', which President Wuhan outlined as the key failings of the Olvanan military on its modernisation journey to becoming a global superpower. These are as follows:

a. Unable to assess situations

b. Unable to interpret the intentions of higher authorities

c. Unable to make operational decisions

d. Unable to deploy troops effectively

e. Unable to handle unexpected situations.

1.14 As these five limitations are compounded by the hostile environment that the jungle presents, they are made an unofficial focus of the OHC. As they rotate CA-BDEs through the various jungle-training centres around the world, they rely on the fact that the pressure of operating in the jungle will improve their junior and field grade Commanders' abilities, negating these limitations over future generations of soldiers and officers.

1.15 The OPA conduct jungle training at a number of newly established training centres within Olvana; however, it is also conducted with partners across the Indo-Pacific region such as Bagansait and North Torbia, and at other worldwide centres of excellence. Units are normally trained at the Battalion level with the training focus being at company as the unit of action. Wherever it is undertaken, the focus is split into two key areas. Training the individual, and training the collective.

1.16 As there is nothing new under the sun, and Olvanan training relies heavily on the lessons of other forces, especially those with extensive recent experience in jungle operations. To that end, the Olvanan training regimen leans heavily on the 1982 US publication FM 90-5 *Jungle Operations*, specifically as it coalesced all of the lessons learned from 15 years of large-scale combat operations in Sungzon.

Table 1.1: Key jungle training focus areas

Training the individual	Training the collective
Jungle environment and acclimatisation	Unit movement
Equipment maintenance and supply techniques	Immediate action drills
Living in the jungle	Communications
Field hygiene	Raid
First aid	Attack
Jungle terrain appreciation	Infiltration
Survival, evasion, and escape	Ambush/counter ambush
Enemy order of battle and tactics	Obstacles and barriers
Camouflage and concealment	Scouting, surveillance, patrolling, and tracking
Airmobile techniques	Adjustment and conduct of fires
Tracking	Defensive operations
Operational area orientation	Survivability
Jungle navigation	Air defence
Equipment recognition	Airmobile operations
Demolitions	Waterborne operations
Enemy orientation	River crossing
Field expedient antennas and communications	Road clearing
Physical conditioning	

1.17 While it takes time to become an expert in jungle operations, the level of training delivered, especially from training centres in Bagansait, is comparable to any undertaken by western militaries. Olvanan soldiers leaving these training centres will be able to live and operate in a jungle environment for extended periods; however, will still require further time before they can operate with fluency at the Battalion and CA-BDE levels, this is particularly true of command and control integration.

Olvanan Platoon level restructure for jungle operations

1.18 The Olvanan Platoon will be restructured for jungle operations, and while the overall doctrinal nine man squads will remain, the roles, squad weapon systems and load-outs of those individual soldiers will change. The most notable change will be the removal of the QLZ-87 automatic grenade launcher from the ORBAT. This is not only because of the type of engagements that will be encountered, but also due to the excessive weight of the weapon system.

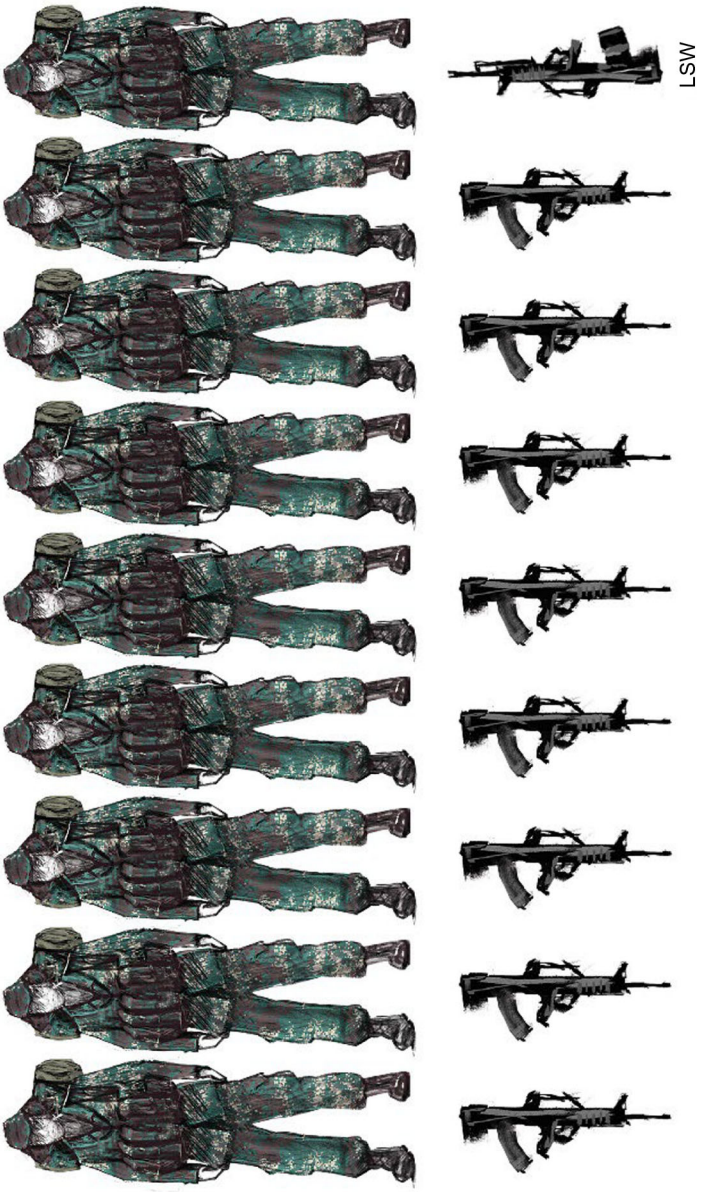

Figure 1.2: Olvanan jungle squad

1.19 Two further changes to the weapons will be the addition of a QLT-89 50mm mortar, and a Type 74 Flamethrower per Platoon. These weapon systems will provide the platoon with their own, if limited, integral fire support, and with the ability to reduce enemy defensive positions with napalm.

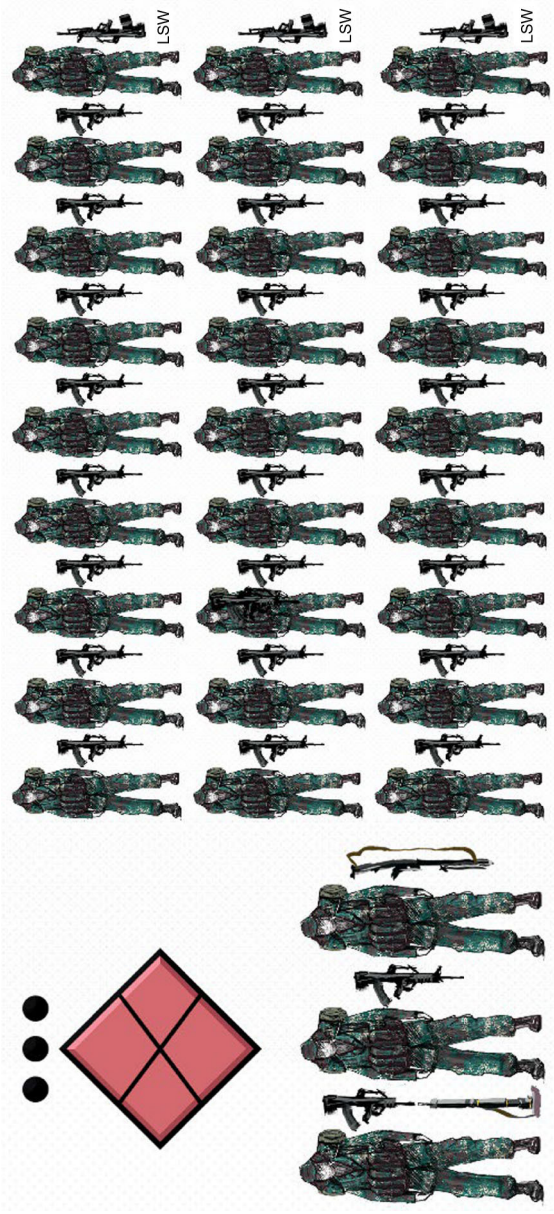

Figure 1.3: Olvanan jungle platoon

1.20 Each soldier in the Platoon will carry a maximum of two mortar rounds in addition to their own first line ammunition requirements.

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Chapter 2

Reconnaissance in jungle operations

Executive summary

Olvanan doctrine places a heavy weight on information collection in order to inform decision making. Commanders in turn place huge emphasis on leveraging technology to deliver ever higher levels of information thus providing decision superiority.

Reconnaissance tasks in the jungle will be heavily constrained by communications, distance, and terrain, and will therefore deliver a much slower information chain than commanders are used to.

Reconnaissance elements will have to be trained to a much higher standard, will have to be increasingly self-sufficient as well as politically reliable, and will ultimately have to rely on first principles in order to deliver information dominance.

Reconnaissance

2.1 The Olvanan method of conducting reconnaissance in the jungle adheres to their overarching doctrinal approach to an informational battlespace, that is to say that it is an all arms occupation, supplemented by significant specialised recon assets organic across the CA-BDE with the ability to call on additional elements from higher formations.

2.2 The key difference is how they employ these elements, and the overall effect that canopy and terrain have on the efficacy of key equipment, specifically equipment that is more normally relied on in other environments to enable an all informed decision making process for motorised, mechanised, or armoured forces.

Deep reconnaissance

2.3 Normally the deep reconnaissance fight is one that starts beyond the range of the CA-BDE's indirect capabilities, however in the case of the jungle; these ranges are generally shorter, which will have an impact on the point at which a higher formation needs to be included in planning. It is unlikely to be an unsurmountable problem for the commanders on the ground, but may also imply a period of friction in the tactical fight while boundaries become well established between chains of command.

Reconnaissance tasks in the Combined Arms Brigade

2.4 Depending on the ability of the deep recon to service the overall collection plan, the first hurdle for the CA-BDE Commander is to efficiently deploy their recon assets to gain information on specific requirements including enemy strength and dispositions, firepower, obstacles, and the enemy C2 system. In the types of terrain these troops are operating in, this is a dilemma, which may, depending on the length of time a unit has been operating in an area of operations (AO), cause them to be deployed on a wide frontage rather than in a more targeted method. The follow on effects of this are the use of a greater number of recon elements as well as an increase in the time required to gather enough information to make decisions on the deployment of the Brigade itself. It is therefore likely that commanders will rely more on the information gained from the deep fight to make decisions.

2.5 There is no change to the overall unit structures employed in this environment, and the recon battalion will still provide the majority of organic resources to the CA-BDE commander. The direct linkages to the artillery battalion remain extant; however, the time between recon element and shooter will be impacted by communications reliability.

2.6 The same can be said about the integration of Un-Crewed Aerial Systems (UAS), into the collection capability, these will remain a key combat multiplier, and will be used as much as physically possible with an array of different sensors, however their ability to

penetrate the canopy may require the recon commanders to rely on first principles methods of reconnaissance rather than by integrating more advanced capabilities.

2.7 The nett effect of this is that Olvanan reconnaissance will be slower, more deliberate, and difficult to synchronise, and as a CA-BDE re-rolls into the jungle environment, the lack of speed may be responsible for friction as commanders transition from having significantly higher levels of information available to them instantaneously, to having to wait for the battlefield picture to slowly appear.

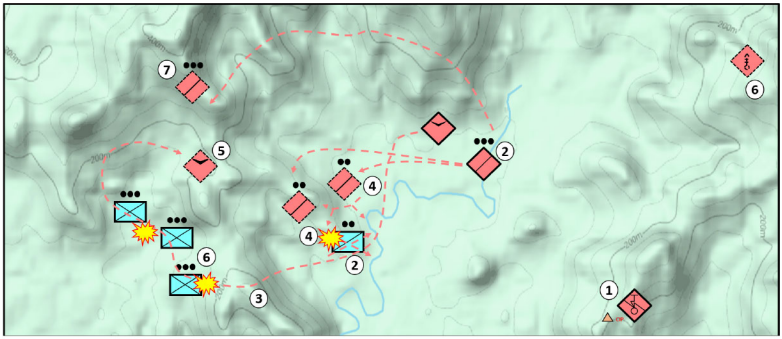
Combat reconnaissance

2.8 The Olvanans will use these type of operations to force the enemy to make a decision for example, whether or not to engage when fired upon which could result in giving away their position, strength, and key weapon systems. Unlike Western recon elements, who will normally observe and report rather than engage an enemy, the first two types of recon action the Olvanans employ are all kinetic in nature. They are not afraid to have their recon elements accept battle with the enemy.

Reconnaissance attack

2.9 This is a reconnaissance in force, and a tactic which enables a recon commander to make a decision to change from reconnaissance into a hasty attack should the situation allow. Unlike a raid, the recon element will hold ground to gain intelligence, subsequently deciding whether to press the advantage against a weak enemy, or to withdraw. A similar reconnaissance effect can also be achieved by regular line infantry.

Figure 2.1: Reconnaissance attack

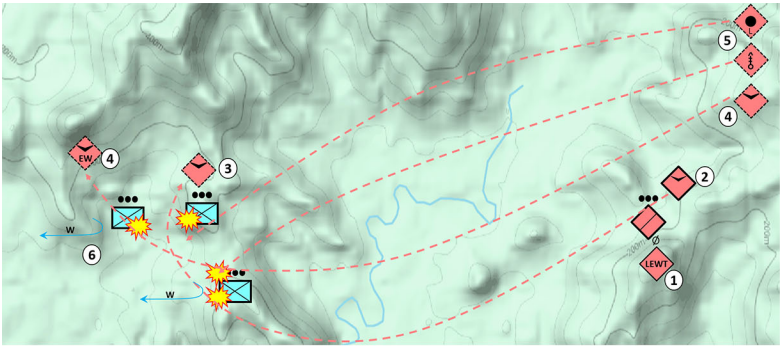


1. An Olvanan forward OP identifies an enemy recon element inspecting a possible crossing point and reports it back on the recon net.
2. The Olvanan recon Platoon moves forward to gain better situational awareness, and launches UAV to confirm the enemy location, size, and disposition.
3. The UAV continues over likely enemy overwatch locations and identifies possible enemy elements to the west in dead ground.
4. The Olvanan recon element decides to conduct an attack, pushing two squads forward, one providing SBF, and the other tasked with destroying the enemy squad.
5. The UAV remains on station in overwatch and as the attack goes in on the enemy section position, mortars are called in and corrected on the depth enemy.
6. Once the enemy recon squad is destroyed, the Olvanan recon Platoon regroups, moving out of contact, and continues on its mission, now focused on the identified depth position.

Reconnaissance by fire

2.10 This is one of Olvana's main methods of gaining information on enemy disposition, strength and possible fire support locations; however, this tactic is much harder to undertake in a jungle due to the lack of ability to observe the fall of shot of artillery, and the subsequent movement of enemy forces. To that end it must be very well synchronised, and will undoubtedly include the employment of additional airborne assets, and EW sensors to make up for a lack of visual confirmation.

Figure 2.2: Reconnaissance by fire



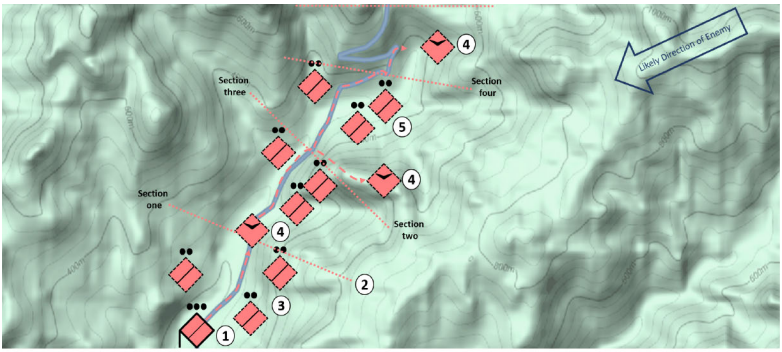
1. The light EW Team (LEWT) attached to the recon Platoon screening an Olvanan Battalion advance picks up emissions from a possible enemy position in the hills overlooking a river crossing.
2. Given their current location the recon Pl Commander decides that it will take too long to reconnoitre and launches his UAV to gain better situational awareness.
3. The information gained from the UAV is inconclusive due to its inability of its sensors to penetrate the canopy, so the Pl Commander request additional support from higher.
4. BDE recon launches an EW capable UAV which confirms the information from the LEWT, and provides a location for the centre of mass of the likely enemy position.
5. Given the importance of the river crossing to the CA-BDE plan, the Bn Commander orders reconnaissance by fire on the likelye nemy position, unmasking both his own mortars and the light howitzers from the CA-BDE.
6. EW intercepts show a significant uptick of communications from the enemy position, and the UAVs orbiting confirm enemy movement to the west, possibly a withdrawal.

Linear search

2.11 Traditionally Olvana prefers using technical means in conjunction with recon elements to conduct liner or route reconnaissance, however as the canopy reduces visibility to the flanks, a different approach is required for the jungle environment. While vehicles may still be used, the flanks require protection, and therefore additional force elements will be deployed out to 100 m from the route to mitigate against ambush, and to identify possible alternates. This all has a cumulative effect of not only slowing down

the process, but also reducing the ability of the commander to service other recon targets. To that end, regular infantry can be used in the screening role.

Figure 2.3: Linear search

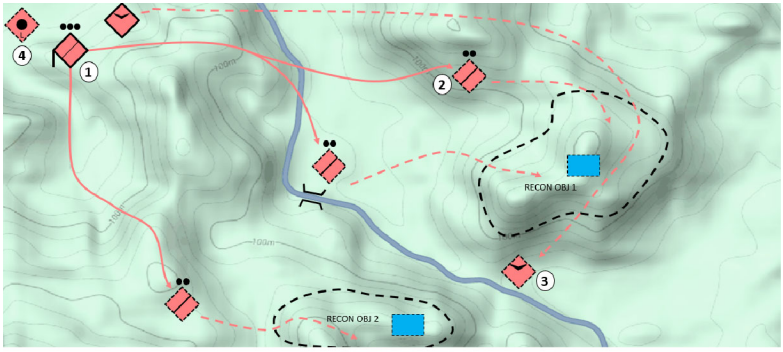


1. An Olvanan reconnaissance Platoon is tasked with conducting a linear search of a key route moving south to North, with the enemy known to be operating somewhere to the North East.
2. Following their map reconnaissance, the commander will break the route into sections, taking into account any likely ambush locations, defiles, and choke-points.
3. The commander then splits his platoon into three squads and deploys them approximately 100 m into the jungle astride the road, weighting two squads on the flank closest to the enemy.
4. The UAV is launched and flies along the road, moving over each section, orbiting vulnerable points, and feeding information back to the Platoon Commander.
5. The Platoon manoeuvres from section to section, slowly clearing the jungle on each side. Should the UAV be unable to visually confirm if a key ambush location or choke-point is clear, a section will be dispatched to manually clear the position, adding additional delay to the process. Given the enemy ability to infiltrate through the jungle, as each section is cleared, any forces utilising the route follow on immediately behind the recon element.

Area search

2.12 This is the most deliberate of search operations undertaken by the CA-BDE, and will be generally allocated to the Recon Battalion. This means that it is only undertaken in support of major operations, and as such, it will have a significant amount of allocated support, including any attached aerial assets, and exquisite sensors. The impact of the jungle remains the differentiating factor, which means that the recon objectives will be closer together, and that co-ordination will be more difficult.

Figure 2.4: Area search

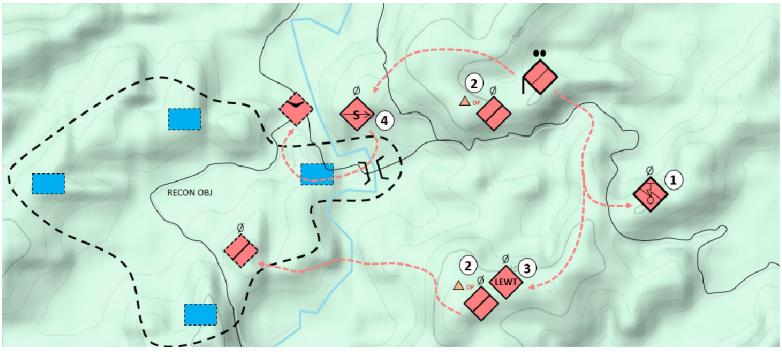


1. In preparation for an advance through a canalised area, the Olvanan Reconnaissance Platoon is tasked with conducting a deliberate area search of two pieces of dominating terrain and a key bridge. The areas to the east are deemed to be the main effort as the terrain would afford the enemy the ability to defend with a much larger force.
2. The commander deploys his three squads forward with two squads focused on the main effort - RECON OBJ 1, and one squad on RECON OBJ 2. These elements move deliberately in order to infiltrate their objectives and to reduce the chances of being engaged.
3. The Platoon UAV will be launched in support of the main effort, and may continue on through to RECON OBJ 2 if possible.
4. As this deliberate area search is in support of a critical part of the CA-BDE's scheme of manoeuvre, to the North West (off map) an artillery element will be in direct support to enable clean break, but also in the event that the operation turns into either a reconnaissance attack, or a reconnaissance by fire.

Target search

2.13 The most passive of all Olvanan recon operations is intended to feed information back to a commander on a specific position or facility. Examples of these can be sniper observation posts (OPs), artillery forward observers, or even surveillance elements. Normally UAS, and other sensors directly support these types of operations; however, the key measure of success in the jungle environment is the level of training in communications that is required to make these viable.

Figure 2.5: Target search



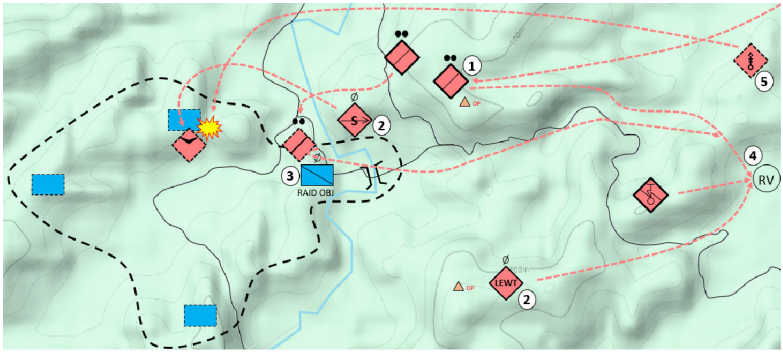
A complex enemy position of unconfirmed size is known to have been established overlooking a number of important tracks, and a key bridge.The Olvanan Reconnaissance Platoon has been tasked with gaining as much information as possible about the enemy size, composition, and mission. A squad is allocated to the task, and is augmented by a Light EW Team, and a sniper pair.

1. As the Squad is operating at the max range of their capacity, the commander establishes a re-trans site to enable communications with higher.
2. Two observation posts are established overlooking both the routes, and the enemy position. They will potentially patrol forward depending on their ability to observe through the canopy.
3. The LEWT is tasked with gathering information on the types of communication coming from the enemy position with the aim of determining their size.
4. The snipers infiltrate to within visual distance of the key bridge, and deploy a micro-UAV in order to gain as much information as possible on the forward most enemy position.

Raid

2.14 This links to a more first principles type of reconnaissance action, and one that is aimed at gaining valuable intelligence on enemy strengths, dispositions, but also intent as the primary aid is to seize prisoners. This type of reconnaissance action also links in with their infiltration tactics and can be a combat indicator for these sorts of follow on action.

Figure 2.6: Raid



During a target search of an enemy position, the element watching two key routes and a bridge is confirmed to be a two person recon det. The three depth positions are assessed as being squad sized enemy infantry elements. This information has been passed back to the Olvanan Reconnaissance Platoon and a decision has been made to conduct a raid to gain information.

1. The Platoon commander pushes a second squad forward to support the established northern OP, with the LEWT and the sniper det maintaining their positions and tasks.
2. The sniper det launches a micro-UAV over the closest enemy position while one of the recon squads moves forward to the objective, with battalion mortars prepared to engage on request.
3. On order the squad rushes the enemy forward position overpowering the two soldiers, taking them prisoner.
4. As the squad withdraws to the east, the other elements prepare to withdraw through a series of pre-designated RV points.
5. The snipers remain in position for an additional period, calling in a fire mission on the Northernmost enemy location to cover their own withdrawal.

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Chapter 3

Offensive operations in the jungle

Executive summary

Given the impacts of terrain, and the limited ability to use vehicles, Olvanan jungle operations will be considerably slower and more deliberate than in other environments.

Commanders will be able to deliver less depth in the advance due to the requirement to move dismounted, with depth assault groups having to remain closer to the frontline in order to be utilise effectively at the time and place of need.

Indirect fires will transition from massed artillery, to organic mortars down to Platoon level, so while the weight is less the ability to provide organic fires increases even at the lowest level.

There will be significant command and control issues, which while not insurmountable, will create gaps and opportunities for Olvana's enemies to exploit.

Offensive operations

3.1 Due to the complexity of jungle operations, and the impact it has on even the most seasoned of militaries, in terms of maintaining command and control, Olvana will rely on relatively simple battle drills for situations and circumstances where command systems do not allow commanders to give direction quickly. These will typically be physically led by a platoon commander or higher. This means that the smallest unit of manoeuver outside of dedicated reconnaissance is the Platoon.

Offensive zones

3.2 As with their overarching doctrinal context, Olvana breaks offensive operations into four separate zones, these include:

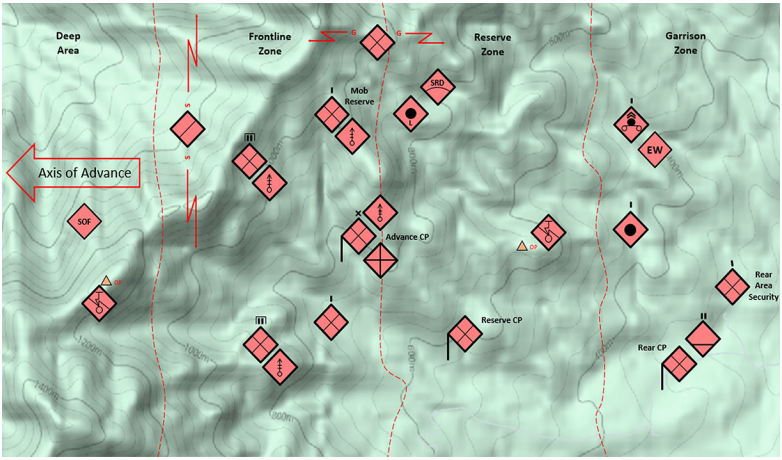
a. **Deep area –** as previously mentioned in the reconnaissance section, this is the area outside of the range of the CA-BDE's organic sensors and fires units. In terms of offensive operations, it is Forward of Forward Edge of the Battlespace Area (FOFEBA), and is the tactical seam between special operations forces and the main body of the Olvanan forces in the Frontline zone.

b. **Frontline zone –** this is the primary area of responsibility for the CA-BDE in which the main offensive actions are going to occur. This is where the majority of forces will be arrayed and will include the forward recon screens, any flank guards, offensive groupings, and forward command nodes. While there are gaps between these groups, they are significantly reduced given the complexity of the terrain. This has an added impact on the amount of forces that are required to cover a specific frontage in the jungle.

c. **Reserve zone –** any reserve offensive grouping is located in this area of the battlespace, along with key reserve command groupings, as well as any close organic fire support elements and forward logistics nodes.

d. **Garrison zone –** this is where the bulk of the logistics and longer range fires elements will reside, as well as any key supporting capabilities like Electronic Warfare, or mustered vehicles if the unit has maintained them as they transition to jungle operations.

Figure 3.1: Jungle offensive zones



Advance to contact

3.3 The jungle is a 5 m fight, and even with the best intelligence capabilities most militaries, when conducting offensive operations will employ the advance to contact as the primary method of engaging with an enemy. Olvana is no different and will utilise all elements of the CA-BDE, as well as any attached capabilities when undertaking this type of tactical action. To that end, this is a deliberate action designed to annihilate an enemy, and one, which is not conducted below Battalion level, due to the requirement for significant reconnaissance, engineering, and fires support during all phases.

Phases

3.4 Olvana stresses the need for an all-informed decision making process, with as much information being fed to Commanders as soon as possible in order to develop tempo. As mentioned in the reconnaissance chapter, this is harder to accomplish in the jungle environment due to rates of movement, visibility, and the reduction in efficacy of key organic ISR assets. While the following phases are the same as the over-arching Olvanan doctrine, the timeframes will draw out significantly, and the frontages will condense due to issues of command, control, and communications. The advance to contact in

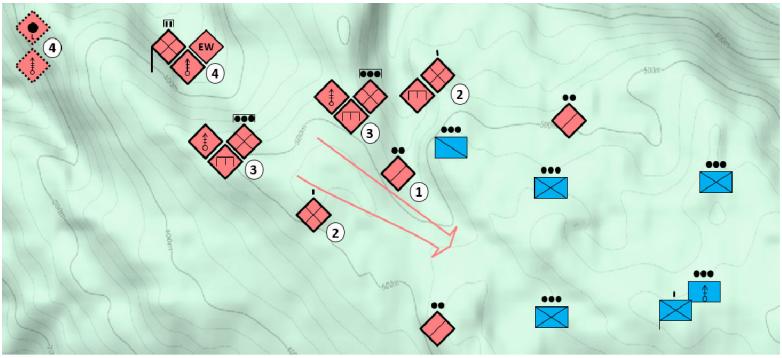
the jungle therefore becomes a much more deliberate action, and one, which is prone to a potential caterpillar type of manoeuvre.

Advance

3.5 This phase normally includes the deployment of reconnaissance elements in an advance guard formation, as well as two frontline attack groups, normally arrayed astride the avenue of advance, with a depth attack group ready to exploit any weaknesses in the enemy defensive line. The key difference in the jungle is that due to the generally dismounted nature of manoeuvre, the CA-BDE will be unable to constitute the doctrinal thrust group, which would normally consist of armour, mechanised engineers, and a rocket battery, enabling the commander to conduct a rapid penetration once the enemy line has been broken. Olvana therefore has to conduct a trade-off. The element established needs to be big enough to have an impact at the point of need in the battlespace, but also needs to be able to get to that point of need as fast as possible. To that end, rather than have a single depth attack group, Olvana will establish two smaller depth groupings, and will augment these with engineers and mortars.

3.6 This trade-off has a significant downside in terms of the finite nature of engineers in the CA-BDE, the reduction in size of the fighting element of the grouping, as well as the spreading the mortar capability from supporting the main attack, into a depth grouping, where they should remain un-engaged until required. Therefore, while they gain the ability to rapidly focus on gaps created in the enemy defensive line, the main attack groups will have less engineering support, and will have to rely on fires from some of the larger, and therefore more tactically attractive to the enemy, fires units in the firepower group. Furthermore, due to the reduced frontages in the jungle, having an additional depth attack grouping so far forward will reduce the Commander's ability to conduct deception and protection operations, and causes an additional C2 headache.

Figure 3.2: Advance



As the CA-BDE's main effort, an Olvanan Battalion has been tasked with conducting an advance towards a known enemy strongpoint. It has been task organised with a BDE EW element, and has the support of the BDE heavy mortars and light howitzers.

1. The Reconnaissance Platoon is arrayed in front of the Battalion to identify gaps in the enemy defences, as well as any strong points.
2. Two company sized attack groups are arrayed astride the avenue of approach. The Northern element is the main effort, and is augmented with Engineers.
3. Two depth groupings, task organised with the balance of the Battalions engineers, and a section of mortars each follow on close behind the frontline attack groupings in order to exploit any successful attack. They will aim to remain below the detection threshold to avoid being engaged.
4. A firepower attack group consisting of the attached BDE EW element, Battalion mortars, and supplemented by the BDE's light howitzers and heavy mortars is in support.

3.7 The advance phase finishes when the frontline attack groups establish contact with the enemy.

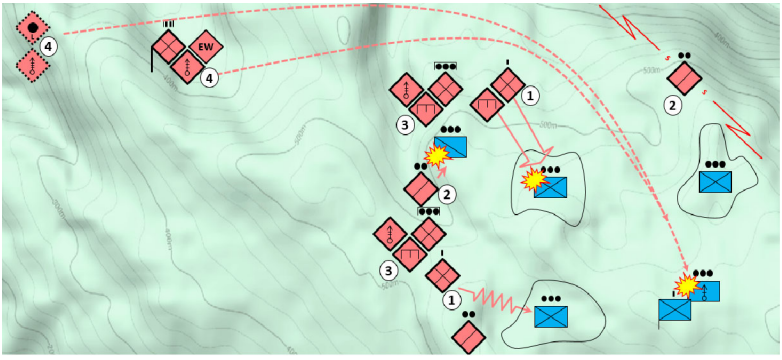
Unfold

3.8 The aim of this phase is set the conditions for annihilation post initial contact of the main body, and to position forces in such a way that it will enable the commander to rapidly exploit any gaps or weaknesses in the enemy defensive line. This phase will see the recon elements fighting for information, and either moving through the enemy line, or more likely moving to the flanks and becoming move of a screen for any enemy counter-attack forces. At this point, one of the

frontline attack groups will attempt to fix the element they are engaging, while the other will conduct a limited attack on the enemy on their own axis.

3.9 The Olvanan commander will use this period to get a better understanding of the overall situation, and make their decision on where the main axis of assault should be, bringing up the depth groups to support the main effort. As this happens, the firepower grouping will engage depth positions and any identified C2 or enemy fires locations, in concert with any available EW assets.

Figure 3.3: Unfold



UNFOLD

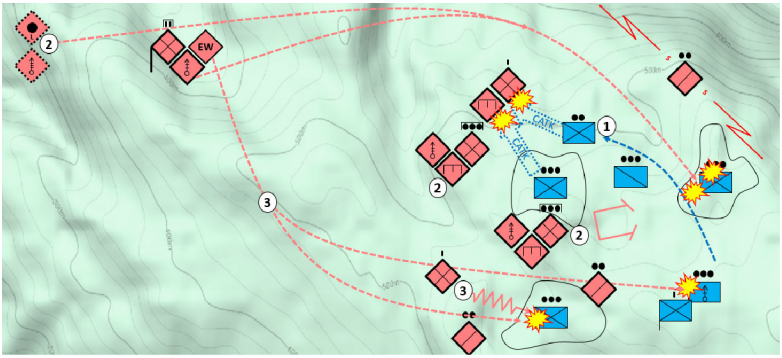
1. The Southern frontline attack group engages the enemy to their front with the aim of fixing them, at the same time the northern group conducts a limited attack on the forward most enemy position. This produces a dilemma for the enemy commander who should be unaware of where the main thrust of the Olvanan assault will be, potentially committing his reserve early.
2. Reconnaissance elements will either further probe the enemy position looking for gaps for the depth groupings to exploit, or move to the flanks to screen for enemy counter-attack forces.
3. The depth groupings, keeping as close as possible to the frontline assault groups, move under cover to their likely attack positions.
4. The firepower attack group, conducts a fire assault on the enemy HQ and mortar platoon locations, this is done in concert with the attached EW element with the aim of deceiving the enemy commander.

Initiate

3.10 This phase will commence with a massive assault by fire, which will see the targeting of C2 nodes, likely enemy reinforcement or counter-attack force locations, as well as counter-battery fire on enemy fires assets. Having gained a better understanding of the enemy disposition, the commander will seize the initiative by committing his depth groups to his main effort. While this may seem like a simple follow on from the unfold phase, it is actually more difficult to co-ordinate given communications and visibility issue. Not only will the commander have to contend with re-positioning of depth groupings, they will need to manoeuvre any elements which may have been involved in deception activities (like the limited assault by the frontline attack groups), while being required to adjust fires for both long range and intimate fire support elements.

3.11 One of the main issues facing the commander will be their ability to mass fires, given that some of the organic mortar support will have been allocated to the depth groupings who, until committed are unlikely to engage given their vulnerability to counter-battery fires. The decision to commit both of these groupings will also provide an element of friction, and may impact their ability to achieve tempo.

Figure 3.4: Initiate



INITIATE

1. The enemy commander commits his reserve to the North, where he assesses the main thrust of the Olvanan attack is coming from, this initiates a retrograde operation by the Northern frontline assault group.
2. The Olvanan Battalion commander, having identified a gap between the forward two positions, deploys one of their depth groupings to breach that gap and focus on the depth defensive position. This is supported by the firepower group which conducts a fire assault against the depth enemy position. The second depth group prepares to follow and assume.
3. The second frontline assault grouping now conducts a more determined assault on the southern most position, fixing it and reducing its ability to impact the manoeuvre of the depth grouping, this is supported by additional EW, aimed at jamming the enemy command net, and creating additional friction for the enemy commander.

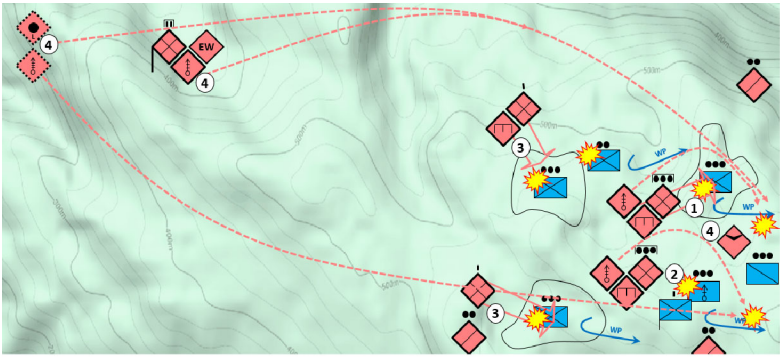
Annihilate

3.12 This is the last kinetic phase of the advance to contact and one, which during normal operations is conducted at speed, following the seizure or fall of the enemy centre of gravity. It relies heavily on the thrust grouping to exploit enemy weaknesses or exposed flanks. However, this action is usually unachievable in the jungle, due to relatively slow speed of movement and the disestablishment of the thrust grouping. However, the establishment of the two depth groupings now provides an advantage to the Olvanan commander as, rather than push deeper to the rear, they can use these groupings to

peel round and focus on the enemy's flanks, or to the rear of the balance of the enemy positions, working in concert with the firepower groupings to fix and destroy enemy elements on the position.

3.13 While the risk of fratricide increases exponentially during this phase of the operation, and it also somewhat limits the use of intimate indirect fire support, the chance to destroy an enemy rather than have to face them again is one which an Olvanan commander will risk any day of the week. The annihilation phase is deemed complete once the enemy is destroyed, routed, or has surrendered.

Figure 3.5: Annihilate



ANNIHILATE

1. The first depth group exploits the gap and conducts the decisive assault on the enemy depth position.
2. The second depth group peels round into the centre, and assaults through to the enemy CP aiming to destroy the C2 node, and any logistics on the position.
3. The two frontline assault groups conduct storming attacks on the two forward positions pushing no further past these in order to reduce the risk of fratricide with the depth groups.
4. Supported by UAS the firepower group conducts strikes to the rear of the positions on likely enemy withdrawal routes, as the risk of providing intimate support to the various assaulting elements is too great.

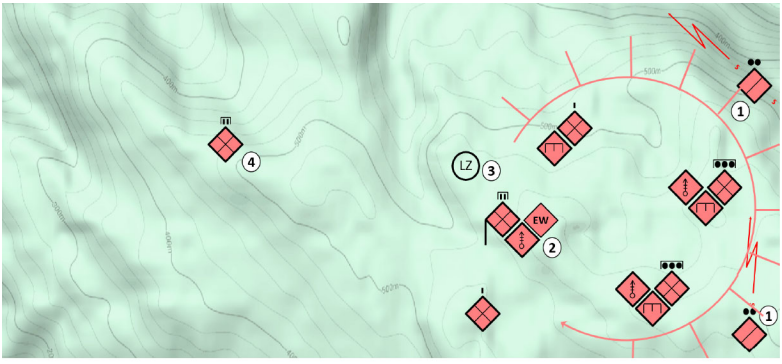
Continuing

3.14 Given the inability to rapidly pursue the enemy, which would be the normal focus of the 'continuing' phase, the only element that will attempt to maintain contact will be the reconnaissance elements to

the rear of the routed enemy, or conducting screening operations to the flanks. These elements will receive priority of fires, however the Olvanan commander will restrict their limit of exploitation in order to avoid dislocating their own forces, or presenting a gap between his recon and forward groups.

3.15 When conducting this phase in the jungle, the Olvanans will be more likely to consider this a consolidation phase, where they will focus on resupply and reorientation. Once forces have been reconstituted, they will push back into their allocated positions in the line of march and standby for further orders. This is the phase when the CA-BDE will most likely conduct a deliberate passage of lines, which will inevitably slow their forward movement down considerably, and will force them to form a defensive perimeter.

Figure 3.6: Continuing



CONTINUING

1. Reconnaissance elements push forward and to the flanks to screen against any enemy counter-attack.
2. Rather than pursue in the jungle, the Battalion consolidates on the position, and conducts a deliberate re-constitution.
3. The priority being an immediate resupply, as well as the evacuation of any casualties to the rear. This will likely be conducted by helicopter, so an LZ will be secured behind the protection of the Battalion position. Any prisoners will also be back-loaded during this phase.
4. It is likely that the CA-BDE will take this opportunity to conduct a forward passage of lines, which will also involve the cross loading of additional supplies from deeper logistics elements.

Attack fortified position

3.16 The main difference between the advance to contact and attacking a fortified position is time. This is the most deliberate form of offensive action that will be undertaken, and will usually have the aim of annihilating the enemy. To that end, there will be a much higher emphasis on pushing reconnaissance forces, or potentially even firepower groupings, deep behind the enemy position, creating a cut-off or almost conducting an envelopment. The key will be that all five phases are fully and deliberately conducted.

3.17 The focus on firepower and deception requires significant synchronisation of assets, which in turn means the burden on the command, control, and communications systems will be much higher. However, regardless of the time spent planning, reconnoitring, and preparing, the attack will be fast and aggressive, and is supported by the heaviest preparatory fires likely to be seen in any Olvanan offensive action.

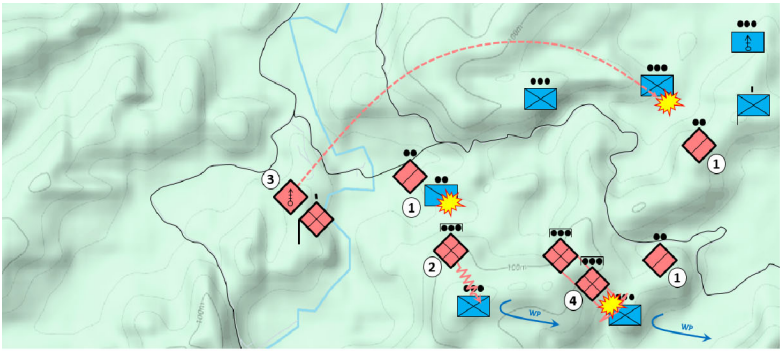
Attack unprepared position

3.18 This is an attack off the line of march; it might be used as a spoiling attack on an enemy counter-attack, or upon uncovering a weakness in the enemy line. The main difference again is the time that taken in preparation. The Olvanan commander may not have had a chance to adequately reconnoitre the enemy's line, so the advance and unfold phases may be significantly reduced in order to use speed and aggression in the initiate and annihilate phases.

3.19 There is unlikely to be time for the commander to deploy comprehensive security elements so may lead to significant vulnerability to counter-attacks or to becoming outflanked. Further, these attacks require significant autonomy at the subordinate commander level, and it will therefore be rare for Olvana to conduct this type of operation above Battalion level, as the higher echelons prefer to conduct operations that are more deliberate in nature, with a larger focus on having a fuller intelligence picture.

3.20 Given the nature of jungle operations, Olvana will more likely conduct attacks against unprepared positions as a drill at the company and battalion levels, providing the lower level commanders with a level of flexibility that they may not have when fighting in other environments.

Figure 3.7: Attack unprepared position



As an Olvanan Company group advances, their recon elements establish that a significant gap exists between two enemy Companies astride a key route. Further, these positions have only recently been occupied, and are not yet mutually supporting. The Olvanan Commander makes the decision to conduct an immediate attack on the Southern most positions, even though they do not necessarily have a numerical advantage.

1. As the forward reconnaissance elements push through the gap to identify possible enemy depth, the rear recon element conducts an assault on the enemy's forward recon position.
2. The forward Platoon conducts a fixing attack on the best sited enemy Platoon, ensuring they are unable to affect the movement of the other Olvanan elements manoeuvring through the gap.
3. The attached mortars fire a harassing mission on the Northern enemy company locations creating confusion regarding the size, shape, and likely direction of the Olvanan attack.
4. The remaining two Olvanan Platoons, having moved through the gap, conduct a storming attack on the depth enemy position, with the aim of destroying them or forcing their withdrawal.

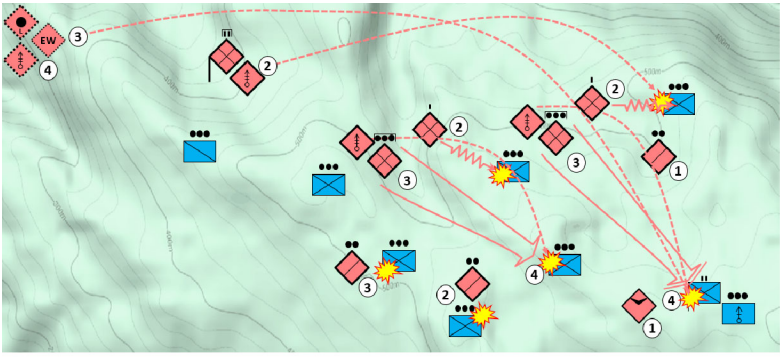
Complex envelopment

3.21 This type of operation is a mainstay of the Olvanan way of war, and is uses deception as much as it uses firepower in order to cause multiple dilemmas for the enemy commander. It requires stealth, as well as speed and bravery, but overall it requires synchronisation and a thorough understanding of the enemy disposition. In the jungle, the lack of thrust grouping will have an effect on the conduct of the battle; however, the ability to form two depth groupings will increase the commander's ability to engage additional front line elements, establish the weak areas of the enemy's line, and ultimately to push additional forces through into the deep areas of the battle space. It is also the most likely type of operation to use an air assault element to cut off withdrawal routes and to isolate forward elements.

3.22 Regardless of how carefully a complex envelopment is planned, it is a very difficult operation to undertake in a jungle environment, specifically due to the reduction in the efficacy of ISR assets, the speed of movement, the difficulty in navigation, the need for stealth and deception, and the significant risk of fratricide due to the use of fires. There are more elements fighting in the line, and the risk of dislocation increases depending on the differing levels of resistance achieved by the enemy. To that end it is unlikely to be conducted below Battalion level.

3.23 When conducted in other environments, the depth groupings for a complex envelopment are based on armoured units, and can therefore exploit the gaps quickly, with relative protection. This is not the case in the jungle, and therefore potentially limits the ability of a commander to achieve a complete envelopment purely due to speed. It is therefore more likely that, given an appropriate level of information on the enemy disposition, a commander will opt to conduct a deliberate attack, or settle for a simple envelopment.

Figure 3.8: Complex envelopment



1. Reconnaissance elements of an Olvanan Battalion supported by CA-BDE fires and EW assets moves through an enemy Battalion sized position operating in Platoon posts. The Olvanan Commander has the element of surprise and with the supporting assets decides to undertake a complex envelopment.
2. The frontline attack groups conduct storming attacks onto the Northern two Platoon positions fixing the enemy, supported by Bn mortars. A forward recon element conducts a limited attack on a depth Platoon position to the South, creating a dilemma for the enemy commander
3. Olvanan EW and fires assets target the likely Battalion HQ and fires locations further disrupting C2, while the depth groupings push through gaps in the enemy lines towards their objectives.
4. The Depth groupings, supported by mortars and Bde fires assault the enemy depth positions and C2 nodes as the frontline attack groupings press their own assaults, with the main effort being the destruction of the enemy C2 and fires nodes.

Simple envelopment

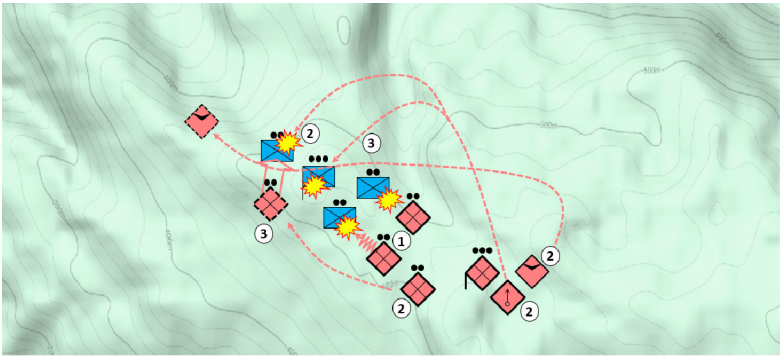
3.24 When a commander is faced with a known enemy position, arrayed across their axis, they have a multitude of options available to them, however the simple envelopment provides them with a middle ground option, which requires a lower level of synchronisation, reduces the issue of command and control, which typifies jungle operations, and maintains a level of tempo. It also does not rely on the commitment of all of their available forces, and allows for the maintenance of a reserve.

3.25 The simple envelopment is essentially a flanking attack on a single flank, with the frontline assault groupings fixing the enemy

while one or more of the depth groupings attacks a specific flank. The frontline assault groups undertake any number of different operations including limited attacks, feints or demonstrations in order to deceive the enemy of their ultimate main effort, while the depth groupings use concealed routes to move into the assault.

3.26 While this tactic requires a good level of reconnaissance, and will include all five phases, it can be conducted relatively quickly and at all levels from Platoon through to CA-BDE. This will almost certainly be the standard drill used for Platoon offensive operations and forms the basis for the Olvanan quick attack.

Figure 3.9: Simple envelopment



An Olvanan Platoon encounters an enemy Platoon during the advance, The Olvanan Commander understands that the enemy Platoon is operating two up, one back and decides to undertake a simple envelopment regardless of the numerical disadvantage, attacking aggressively in order to through the enemy Platoon off balance.

1. The forward two squads engage, with the forward left attempting to fix the enemy section, the forward left conducts a limited assault to confuse the enemy as to the angle of the main attack.

2. The Commander deploys his UAV to increase situational awareness, flying it over the area they expect the remainder of the Platoon to be located. The Platoon mortar, uses this information to engage the depth enemy position as the Commander deploys his depth squad to the left flank.

3. Once in position the depth Olvanan squad assaults the depth enemy section, and the Platoon mortar switches fire to the enemy Platoon HQ location in order to impact C2. Concurrently the forward squads press their own assaults. The entire operation is conducted as a drill employing maximum available firepower, tempo and bravery.

Penetration

3.27 If any tactic typifies jungle operations, it is the penetration. Limited observation and fields of fire, difficulty in maintaining reliable communications, and the overall fatigue that operating in an environment such as this all conspire to allow forces to pass through each other. Throughout the history of jungle warfare, it has used not only as a formidable offensive tactic, but also as a psychological weapon whereby the enemy does not know where the front actually is. Olvana will use the penetration as part of all offensive actions; however, the jungle enables the effects to be amplified significantly.

3.28 Olvana uses five specific types of penetration tactics with the three main variants applicable to jungle operations being the frontal attack, the depth attack, or roadblock technique, and infiltration.

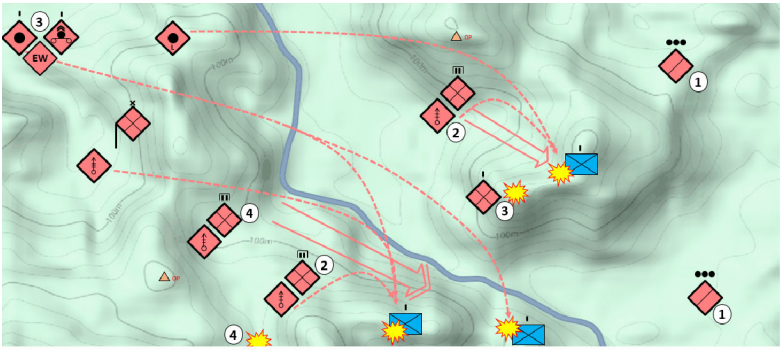
Frontal attack

3.29 This is the attack of last resort given that it is contrary to all Olvanan tactical doctrine that seeks to exploit enemy weaknesses rather than hit their strengths head on. However, in the jungle the opportunities for manoeuvre may not always be in the favour of those on the offensive, and this is one of the options available to a commander, most likely when they are severely restricted by terrain.

3.30 It is generally not done off the line of march, and will be well planned if time allows. The commander will seek to use all available fires in support of his manoeuvre, and they will aim to have a numerical advantage with the frontal attack group who, with overwhelming combat power will conduct synchronised attacks against the enemy positions, rather than merely attempting to fix them in place. The depth group is then used to penetrate the enemy position, thus maintaining forward momentum of the advance.

3.31 This tactic is most likely to be used in the jungle when attempting to utilise a key MSR, which is itself canalised by terrain. There will always reconnaissance and engineering elements looking for appropriate bypass routes, however if bypass is not an option, then the frontal attack will be used.

Figure 3.10: Frontal attack



Canalised due to well defended terrain features straddling a key MSR, the Olvanan CA-BDE commander decides to make a frontal attack against a well entrenched enemy of Battalion size.

1. Reconnaissance elements push through the enemy and also to the flanks to gain information on any depth positions, as well as possible bypass routes.
2. The CA-BDE aims to have an overwhelming numerical advantage, and commits his forward two Battalions to their respective flanks, these get as close as possible to the enemy position before commencing their assault.
3. The assault beings by unleashing all available indirect fires, as well as co-ordinated EW effects on the enemy command and control systems. A company element also conducts a demonstration on the flank of the supporting effort to cause a dilemma for the enemy commander, or force them to commit their reserves early.
4. The depth grouping is then pushed forward to penetrate deep into the enemy position, supported by additional fires to the likely route of an enemy counter-attack force.

Depth attack – roadblock tactic

3.32 The most effective of Olvanan penetration tactics, and one, which has its roots firmly planted in historical precedent. Olvana has looked at the way both its allies and foes have successfully conducted jungle operations, and it has distilled these lessons into what it calls the roadblock tactic.

3.33 The key component of this tactic is for the commander to push one of their frontline attack groupings deep behind an enemy position, forming a hard nut or ‘road block’ on the main withdrawal route, creating a dilemma for the enemy commander on the ground, and an

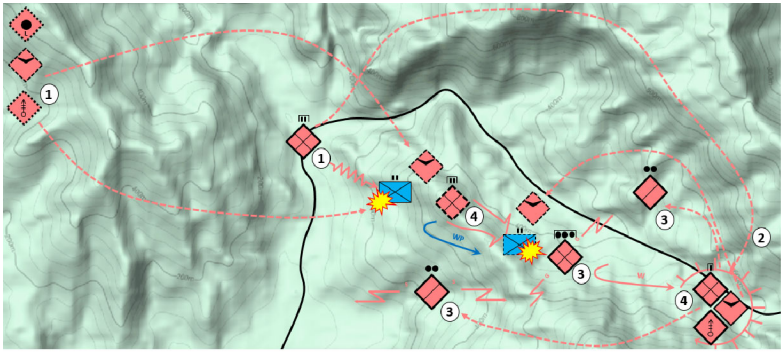
additional opportunity for annihilation of the enemy. It is generally the main effort of an overall scheme of manoeuvre, and given its importance, some of the security functions can be conducted by flanking formations, in order to enable the commander to mass the maximum concentration of firepower at the decisive point in the battle.

3.34 Whether the commander uses one or more routes for the depth attack will depend on the ground, however the heavy use of reconnaissance and engineering elements will provide an understanding of the enemy as well as a clear path or the allocated element to push through without meeting obstacles or an entrenched enemy.

3.35 Once in the rear, the element will not only form the ‘roadblock’, but also will aggressively push elements out to disrupt any depth enemy C2 nodes, or fire support locations. The overall aim of the tactic is to dislocate the enemy, create dilemmas in every direction, and to provide an anvil on which the follow on forces can smash any withdrawing enemy.

3.36 The disadvantages of jungle manoeuvre, visibility, efficacy of ISR, are turned to an advantage for the Olvanan commander that can synchronise this type of manoeuvre. It is therefore incredibly important to have a significant ISR soak prior to investing the time required to undertake it. As this will likely be the main effort, it is probable that the element conducting the operation will have priority call on all ISR assets, as well as on supporting fires.

Figure 3.11: Depth attack – roadblock tactic



1. An Olvanan Battalion encounters a hastily prepared enemy position on a key MSR. The Commander knows that this element must be destroyed, so launches a quick attack to fix them in place, supported by ISR and the CA-BDE firepower attack group.
2. The Commander detaches a Company, augmenting it with additional ISR elements and mortars. The company bypasses the enemy and conducts the Road block on a choke point to their rear.
3. The Roadblock commander then deploys a reconnaissance screen to the flanks and on any bypass routes, deploys a UAV over the main enemy position to maintain situational awareness, and pushes a Platoon sized guard forward on the likely enemy withdrawal route.
4. As the enemy Battalion withdraws under pressure, the Olvanan Battalion Commander maintains contact, aggressively pushing them first onto the Guard, and subsequently onto the Roadblock for subsequent destruction.

Infiltration

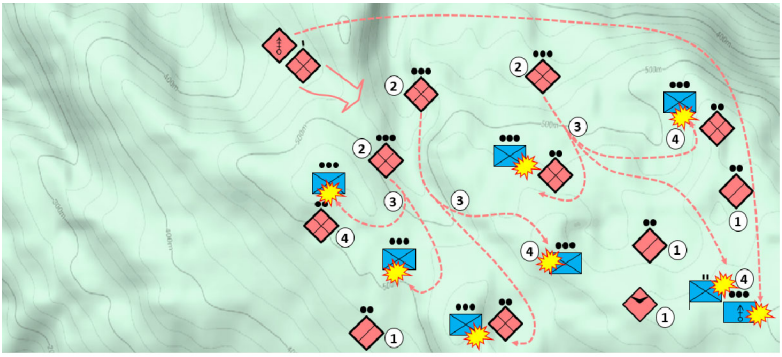
3.37 The last of the preferred Olvanan jungle tactics, and another which has been a mainstay of their operations since the inception of the OPA. This tactic relies less on firepower, and more on stealth in order to achieve its ends, it epitomises the adage of holding on as close as possible to the enemy in order to blunt their offensive capabilities. Generally conducted in low light conditions or under heavy cover of obscurants, it has a huge psychological effect on those it is used against, given that it adds a whole other dimension to the concept of where the front line begins and ends.

3.38 This is one of the only light infantry specific tactics in Olvanan doctrine, and while that makes it much easier to transition into the

jungle environment, it still requires significant skill and initiative from Company and Platoon commanders, the elements that are more likely to perform the task. The ability for these units to move undetected by the enemy is key in both the advance and unfold phases, as if the elements are compromised, the action must quickly transition into a frontal assault, or a simple envelopment.

3.39 The key differences between this type of operation and the depth attack are the role that the element plays once it has infiltrated, in this case remaining largely mobile and hunting down key C2 nodes or depth positions rather than going firm, and the fact that the junior commander is not necessarily tasked with conducting an infiltration, and will take the initiative to do so if the opportunity arises.

Figure 3.12: Infiltration



An enemy unit is in the early stages of developing a defensive position, and an Olvanan Company has been cued onto them by Battalion and Brigade ISR assets. Their approach has been made without detection.

1. Following a significant ISR soak, where reconnaissance assets have been able to identify gaps in the enemy position, the Olvanan Commander decides to attempt an infiltration.
2. The three Platoons move to their forward positions, guided by the attached recon elements, and prepare to infiltrate the enemy positions.
3. As they infiltrate the position, the Platoons split in half, with each Platoon element moving to outflank their respective objectives in order to attack from the rear.
4. Once in position, and acting on their own initiative, the half Platoon groups conduct assaults through the enemy positions. These attacks are not necessarily co-ordinated by time, as the independence of movement adds to the utter confusion of the enemy.

Storming attack

3.40 This is the Olvanan doctrinal approach to the reduction of any remaining enemy hard points or defensive positions following penetration actions. It requires the use of significant amounts of armour, therefore unless this action is being undertaken on the jungle fringes it is unlikely to take doctrinal form in deep jungle.

3.41 Depending on where the enemy position is, and whether there are follow-on forces which will encounter it, it is much more likely is that the Olvanans will bypass these positions, leaving behind a smaller element to the rear while they carry out their planned scheme of manoeuvre. Logistical support is key to the sustainment of jungle operations, and the Olvanan Commander will likely undertake a cost benefit analysis on whether he should waste resources undertaking a storming attack, or merely bypass the element. Other options are still available to them, however the logistical issue cuts both ways and the enemy element will become untenable over time, and will be forced to withdraw unless relieved.

Pursuit

3.42 Another tactic that generally relies on mechanised and armoured forces to achieve its goal of maintaining close contact with a withdrawing enemy is the pursuit. It will be attempted in the jungle, however the risks to the flanks of a strung out pursuing Olvanan force are higher, and thought therefore needs to be given to the deployment of adequate screening forces.

3.43 Rates of movement and the level of fire support that provided to the pursuing element will be the key factors in the Commander's decision to pursue or not. As per the Olvanan primary doctrine, not only infantry can pursue, and artillery will be aggressively used in order to maintain the initiative and to keep the enemy isolated and off balance. This is much more likely to be the case in jungle operations, although some consideration has to be given to unmasking fires assets that do not organically belong to the CA-BDE in question. The pursuit is not conducted on an ad hoc basis by elements below Battalion, given the additional screening resources required to avoid enemy counter-attacks and spoiling attacks.

Ambush

3.44 The ambush is the quintessential jungle tactic and one, which can be, employed in reconnaissance, offensive, defensive and even security operations. It provides flexibility for commanders at almost all levels to take advantage of opportunities as they present themselves, and to make use of both the terrain and the cover of the foliage. While Olvana recognises three distinct types of ambush, the waiting ambush, the decoy ambush, and the forced ambush, with the traditional waiting ambush being the most often used in the jungle. This type establishes a position ahead of time, on a known avenue of approach or track.

3.45 The jungle ambush is taught as a drill, and is conducted in five distinct stages:

a. **The reconnaissance –** once orders are received the commander takes a reconnaissance group to survey the terrain, and determine enemy avenues of approach, engagement areas, and withdrawal routes.

b. **The establishment –** once the plan is in place and orders have been delivered, the ambush is established with the doctrinal groupings taking their positions.

c. **The hammer –** the ambush is sprung with the aim of annihilating either troops or a specific materiel capability.

d. **The exploitation –** any information, materiel, or prisoners are removed from the engagement area.

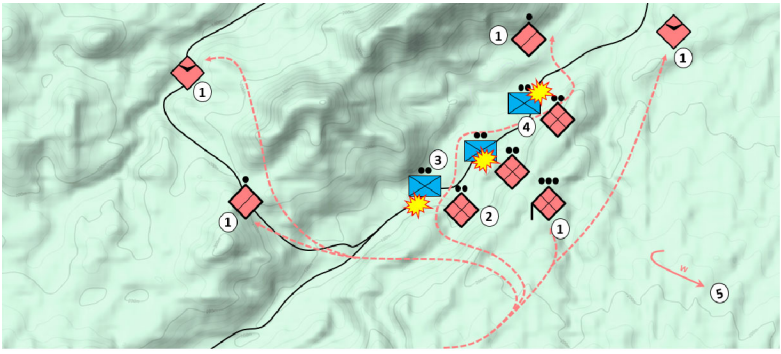
e. **The withdrawal –** the element moves back through a series of RVs to their main position.

3.46 These stages do not differ regardless of the size of the ambush being conducted, and require the commander to have a detailed understanding of both the terrain where the ambush is to be set, and the enemy they are likely to face. The only phase which is at the discretion of the commander is the withdrawal, as this will be dependent on whether the ambush is pre-planned as part of a defensive battle, or is being conducted as a reactive ambush in the offensive.

3.47 Olvana recognises that the length of time an ambush is in place prior to the hammer phase will have a direct impact on the morale and fighting ability of the element undertaking it. This is especially true in the jungle environment; therefore, commanders conducting pre-planned waiting ambushes are given access to additional aerial ISR assets in the run up to the action. This enables them to establish the ambush with the shortest possible lead-time ahead of the enemy arrival.

3.48 Ambushes are generally undertaken by smaller section and platoon sized elements, however they can also be conducted by much larger forces, however these are set-piece activities, and are more likely to take the form of a hasty attack. A combat team commander may well undertake several co-ordinated platoon sized ambushes; however, these cannot really be called a true combat team ambush.

Figure 3.13: Jungle ambush



Once an ambush has been ordered, the Olvanan Commander will undertake the following five phases. They will be supported by additional ISR assets and may have a priority of Battalion mortars.

1. The reconnaissance – once orders are received the commander takes a reconnaissance group to survey the terrain, and determine enemy avenues of approach, engagement areas, possible bypass routes, and their own withdrawal routes.
2. The establishment – once the plan is in place and orders have been delivered, the ambush is established with the doctrinal groupings taking their positions.
3. The hammer – the ambush is sprung with the aim of annihilating either troops or a specific materiel capability.
4. The exploitation – any information, materiel, or prisoners are removed from the engagement area.
5. The withdrawal – the element moves back through a series of RVs to their main position. This will always be a different route from the infiltration to reduce the risk of counter ambush.

3.49 Anti-armour and anti-air ambushes are also regularly undertaken, and will rely even more heavily on terrain and pattern analysis in order to guarantee success. While these types are certainly smaller and may differ in composition, they do not generally vary from the established phases, with the potential exception of the exploitation phase.

Key points on Olvanan offensive operations in the jungle

3.50 Offensive operations are the bread and butter of the Olvanan Combined Arms Brigade; however, they are difficult for even the most professional of armies to undertake in the jungle. The Olvanan military faces the same issues of command and control, communications, navigation, and reliability of ISR assets that any western military will have to contend with. In order to compensate for this, they will turn many of the smaller scale tactics into drills which can then be conducted at the Platoon, Company and Battalion levels. These drills give the junior commanders in the CA-BDE a suite of tactics they can, and will implement quickly and efficiently. However, it will also make their actions relatively predictable with patterns evolving over time. The use of different key materiel and signature equipment will become indicators and warnings, and without the latitude to vary from these drills, opportunities will present themselves for enemy commanders to exploit.

3.51 Having said that, the OPA is a learning enterprise and commanders will adapt their drills to mitigate new and improved enemy tactics. One of the ways they will try and make up for the lack of high-speed manoeuvre is by using more artillery, however there will be a trade-off for them in terms of the logistical burden that this will have on their overall speed of forward movement.

3.52 The psychological impact of changing from a high-speed network enabled mechanised force, supported by the latest technical innovations, to becoming a light infantry force battling the enemy and nature, will be evident in the early periods of any contested jungle operation against the OPA. Much like western forces in the early stages of the Burma campaign, this period of discomfort and inefficiency will not last long, and the Olvanan forces will rapidly adapt to the jungle environment.

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Chapter 4

Defensive operations in the jungle

Executive summary

Olvanan defensive zones will be much closer together in a jungle environment, which enables greater mutual support while reducing overall depth.

Olvanan defensive doctrine relies on the extensive and heavy use of indirect fire support. Given the logistical challenges of operating in the jungle, the release authority for defensive fires will be lower for mortars, but higher for the use of tube artillery and MRLs.

Defensive actions are more likely to see a greater use of independent action aimed at spoiling enemy attack preparations.

Principles of defence

4.1 While Olvanan doctrine states that defence is the fundamentally stronger of the two types of warfare, it also rightly identifies that it is now more difficult to gain advantage when faced with a modern, information dominated multi-domain environment. Jungle operations prove the dichotomy for Olvanan doctrine, in that the environment strips away many of the technological advantages of the adversary, enabling the Olvanan soldier to take advantage of concealment, terrain, depth, while providing more time to make best use of the battlefield. Depth and information reign supreme in the eyes of the Olvanan Commander, and depth should always be achieved in more than a mere two dimensions.

Defensive zones

4.2 As with offensive operations, the battlefield is broken down into zones, and as these are impacted by both visibility and terrain, the distances will be compressed from what the Olvanan commanders would normally use when the terrain is more favourable to high-speed manoeuvre. The five key defensive zones are as follows:

a. **Deep area –** Reconnoitring and screening enemy movement, any elements deployed in this area will be outside of the CA-BDE's organic fires capabilities, but can be supported by air assets. The forces deployed in this zone are tasked with independent manoeuvre, are fighting for information on the enemy's avenue of approaches, and will attempt to disrupt and slow the enemy's rate of advance.

b. **Frontal blocking zone –** The first zone the enemy is likely to confront a large Olvanan concentration, usually with a screening task on the enemy's assessed main avenue of approach. This is the early warning trigger for the CA-BDE and will be far enough forward of any main defensive positions to enable the commander with time and space. In the jungle, this is likely to be up to 2 km forward and will be commanded by the CA-BDE's most trusted commander.

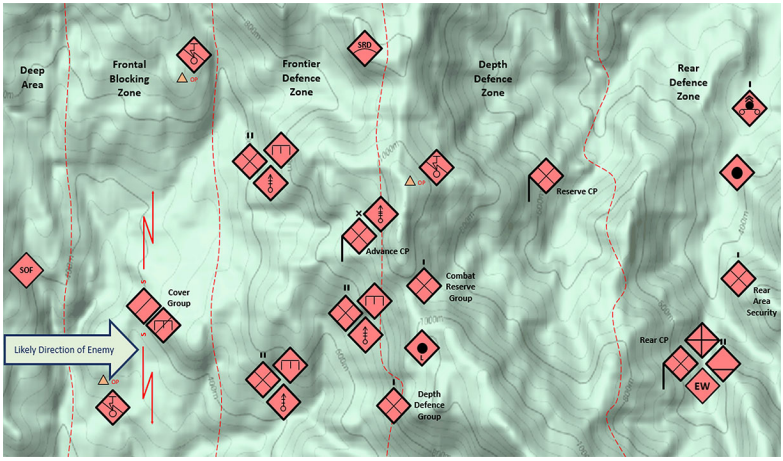
c. **Frontier defence zone –** This is the main effort of any Olvanan defensive position, and the majority of the Key Defence Points (KDP) will be located here. Best advantage will be made of terrain, with significant effort by sappers to build inter-locking obstacle belts as well as fortifications as time allows. This is where the CA-BDE HQ will be located to actively command the defence, and the CA-BDE's main fires units will be deployed in depth, in order to reach as far forward as possible supporting the frontal blocking zone.

d. **Depth defence zone –** The primary counter-attack force as well as additional intimate fire support elements will be deployed in this area, potentially some longer-range fires elements. In the jungle, this zone will be closer, or at least the

counter-attack force will be deployed as far forward as possible in order to move to the appropriate point of need in the battle space as quickly as possible.

e. **Rear defence zone –** Unlike other environments, in the jungle any forces undertaking rear area security will be those non-combat elements of the CA-BDE, and their main mission is to protect any logistics elements, and the rear of the defensive positions from any depth attacks, or raids from SOF or guerrillas. This is likely to be the least well-protected zone in the defensive organisation.

Figure 4.1: Jungle defence zones

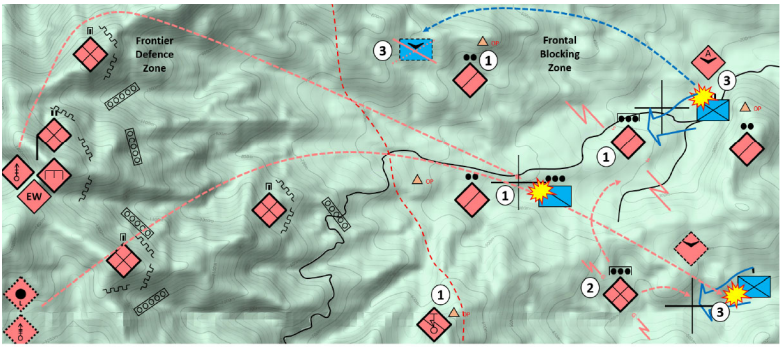


Reconnaissance in the Defence

4.3 The idea of reconnaissance in the defensive battle is one of a 'ground up' understanding of enemy intent as well as how they will use terrain. In jungle operations this will not only take the form of observation posts and patrols, but will also allow for tactical actions against the enemy including reconnaissance attacks, raids, as well as the use of deep fires in order to disrupt the enemy scheme of manoeuvre, gain a better understanding of their intent, and ultimately buy time for the establishment of KDPs. A higher level of independence of action and flexibility is required from the recon

elements during the defensive battle, and there are unlikely to be any reconnaissance or surveillance forces kept in reserve as the commander fights for information.

Figure 4.2: Reconnaissance in the Defence



An Olvanan Battalion is deployed on the seam between the Frontier Defence Zone and the Frontal blocking zone. As the Commander deploys his reconnaissance elements forward they become the cover force for the CA-BDE. Their role is to provide time for the establishment of KDPs, to disrupt the enemy scheme of manoeuvre, and force the enemy to deploy early.

1. The initial deployment is a number of patrols who establish Ops, with the main element of the covering force being a recon Platoon, task organised with engineers. Communications are established, and defensive fires are registered on likely avenues of approach.
2. The second deployment is a task organised guard, this will be positioned on the most likely enemy bypass route, although it should be located close enough to react to other situations. The jungle will add significant restrictions on the speed of movement of this element.
3. The cover group will be operating independently and will utilise anything that can blind, delay, disrupt or dislocate the enemy advance. It will bring to bear all supporting elements of the Battalion and Brigade, in this case including loitering munitions, Company and Battalion Mortars, the CA-BDE firepower attack group, as well as CUAS and EW systems in a counter-reconnaissance role.

Defensive groupings

4.4 Olvanan doctrine specifies four main groupings for a defensive action:

a. **Frontier defence group –** the main force occupying the KDPs

b. **Depth defence group –** the element most likely used for counter attack

c. **Combat reserve group –** kept in depth to support depth defence group

d. **Cover group –** reconnaissance and screening forces as well as forward security elements.

4.5 While the tasks of these groupings do not necessarily change for jungle operations, their make-up and location will, given the general inability to deploy mechanised of armoured forces in support of rapid manoeuvre. It is imperative for the commander to take into consideration the time it will take to deploy his counter-attack force to the point of need. Using the intelligence picture to position these forces in the most tactically advantageous locations, these forces will then be pushed as far forwards in the depth defence zone as physically possible while remaining concealed. This has the effect of reducing the efficacy of the lynchpin of Olvanan defence doctrine - depth!

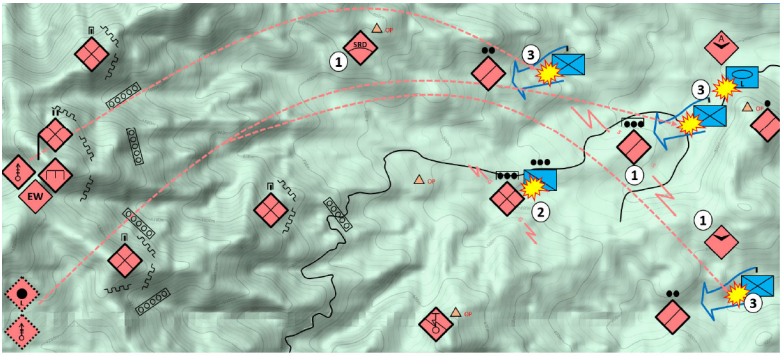
4.6 Where the commander will seek to regain the depth lost in his rear, and as Olvana places huge emphasis on spoiling the enemy's preparations, they will push additional independent forces forward between the cover group and the frontier defence groupings in order to exploit any successes as far forward as possible.

4.7 The elements deployed forward will almost certainly be taken from the combat reserve or depth defence groupings, as the main effort will always be to conduct brave and aggressive resistance in the frontier defence zone, and so the frontier defence zone needs to be prioritised.

4.8 Additionally, firepower assaults using massed artillery will be employed to spoil the enemy's assault preparations as deep into the enemy's offensive line as possible. The synchronisation required for this type of operation is significant, as it will be co-ordinated with infantry efforts to spoil the enemy's scheme of manoeuvre.

4.9 MANPAD and any mobile SHORAD elements will also be deployed to the flanks to cover any possible routes for airmobile coup-de-main forces.

Figure 4.3: Spoil



As the Battalion and Company KDPs are being developed, the enemy is advancing astride their MSR. Their main effort has been identified as being to the North, and a Company sized element is attempting to utilise a bypass route to the south.

1. The cover force has been deployed in depth across the likely avenue of enemy approach, this includes UAV support, as well as a MANPAD team to the north on a likely airmobile route.

2. The guard encounters an enemy reconnaissance element and engages them, conducting a determined attack with the aim of destroying them, and blinding the enemy Commander.

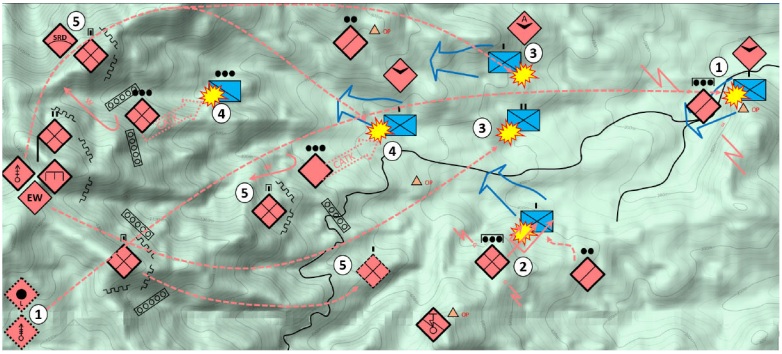
3. As the key enemy manoeuvre groups have been identified by the screen, and as the enemy Commander is supported by an element of light tanks, the Olvanan CA-BDE Commander decides to unmask their firepower attack group and conduct an artillery raid on the massing enemy forces, this includes a series of strikes utilising loitering munitions on the road-bound light armoured element.

Resist

4.10 Resisting an expected enemy assault requires the commander to walk a fine line in terms of conducting blocking and repositioning actions. If an element is blocking then it is at risk of being fixed, enveloped, and destroyed. If a force is moving, it is generally unavailable to fight until it gets to the point of need. These two actions need to be undertaken while prioritising combat power at the key point of the battle in time and space.

4.11 While a defensive operation generally provides a terrain advantage to the defender, with internal lines of communication, it also requires a significant level of synchronisation and active command and control, both of which are reduced in the jungle. To that end, while the resist phase of the defensive operation is the main defensive battle, it is the co-ordination of the counter attack that is seen as decisive.

Figure 4.4: Resist



An enemy Battalion, having been forced to deploy early by the cover force, continues its advance on the Olvanan Battalion KDP, having lost the element of surprise.

1. The recon screen continues to engage depth enemy formations, supported by the CA-BDE firepower attack group, thereby increasing the gap between the enemy Battalion and any follow on forces which could support them.
2. Having forced the early deployment of the enemy Company attempting to use a bypass route, the guard force re-attacks them from a different angle disrupting their ability to support the enemy main effort.
3. The Battalion EW capability targets the enemy Battalion C2 nets, while the Battalion mortars supported by loitering munitions engage the northern most enemy Company.
4. The Olvanan Commander co-ordinates two localised counter-attacks against the vanguard enemy company and recon elements, aiming to canalise them into the most defendable terrain.
5. As this happens all Olvanan KDPs aggressively resist the ongoing enemy onslaught, as a counter-attack force is prepared and commences its move into position.

Jungle counter-attack

4.12 This mobile assault is the culmination of the defensive battle, and is conducted at a point in time where the commander believes that the enemy either is strung out too far, or has culminated against the forces resisting in the frontier defence zone. As mentioned, the jungle prevents rapid movement from depth; therefore, depth needs to be developed through other means. The deployment of heavier independent forces between the cover group and the frontier defence group can account for this, and as they come from the depth defensive grouping, they can be used in the counter-attack as long as they haven't already been decisively engaged or withdrawn.

4.13 Olvanan doctrine calls for the counter attack to be conducted as a 'multi-dimensional penetration' of the enemy where they are weak or exposed, the timing of which is critical. While small tactical counter-attacks, and counter-penetration actions will be happening throughout the defensive battle the main counter-attack is co-ordinated by using one or more of the following four distinct phases:

a. **Concentrating fire –** focused on the enemy's strongest element

b. **Sealing off breakthroughs –** plugging any gaps in the line, which may be exploited by the enemy before the counter-attack starts.

c. **Using a multi-domain or multi-directional assault –** counterintuitively frontal assaults are preferred to flanking attacks due to speed of movement.

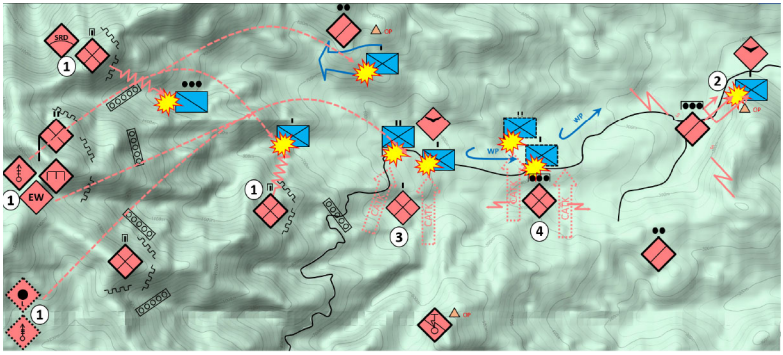
d. **Hold KDPs –** regardless of the success or failure of the counter-attack the KDPs are to be reinforced and held.

4.14 The jungle counter-attack is an action that requires a significant understanding of where the enemy is strongest, and where they are weakest, while also having the same understating of their own forces. The issues of speed of movement, as well as attempting to achieve surprise with an appropriately large force requires confidence in the

abilities of the subordinate commanders to be able to overcome all of the five limitations, all while dealing with the fog of war, reduced visibility, and poor communications.

4.15 To that end, the counter-attack is likely to be the most difficult operation for an Olvanan unit to successfully synchronise in the jungle, and is therefore going to come down to the skill of the unit undertaking the defence, and their commitment to brave and aggressive action.

Figure 4.5: Jungle counter-attack



1. The enemy Battalion, having been canalised, has closed up into assault formation, however the recon Platoon and forward Company have been fixed due to the brave and aggressive defence of the forward two Olvanan Companies.
2. The recon screen continues to disrupt the depth enemy formations, conducting small scale attacks before withdrawing into the canopy.
3. The Main counter-attack force now hurls itself at the flanks of the depth enemy Company, and the Battalion Headquarter, this is supported by the CA-BDE firepower attack group and EW elements attempting to jam enemy C2 systems. The ferocity of the assault, and the weight of indirect fore support forces the enemy to withdraw under pressure.
4. As they withdraw, the Battalion guard once again attacks them from the flank, maintaining the pressure as they withdraw.

Types of defensive operations

4.16 There are many options open to the Olvanan commander when conducting defensive operations in the jungle, however the choice of which to implement will depend heavily on terrain, the enemy

situation, their own mission, and the time available to the prepare. They can be either hasty or deliberate, and the previous sections covered a more deliberate type of operation, however in the jungle environment, they will generally take the form of one of the following three types.

a. **Positional –** static in nature and not designed for the rapid relocation of troops.

b. **Mobile –** more of a layered retrograde than a true mobile defence rather than the more doctrinal mobile defence aimed at halting and isolating attacking elements.

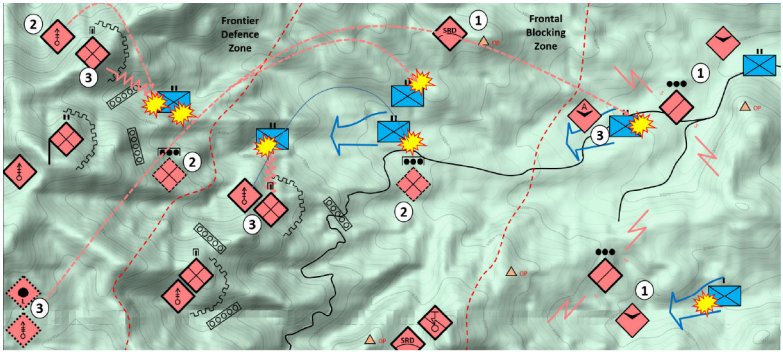
c. **Diversionary –** a hard point deployed deep behind enemy lines.

Positional – anvil defence

4.17 This type of defensive operation is not considered decisive in Olvanan doctrine; however, it is does generally focus on the holding of elements of key terrain. These are well thought out, well-fortified positions with small defensive zones. They will be used to force the enemy to conduct deliberate attacks, and while they will be doggedly held, their main objective is to enable attrition and delay while other forces are used to attack the flanks or enemy depth.

4.18 This is not a standalone type of defensive operation, like the ‘hard nut’ mentioned further on in the document, as it will be utilised in conjunction with other forms of defence on the border between the frontal blocking zone and the frontier defence zone. It is also a layered method, so will be conducted at Platoon level and above.

Figure 4.6: Positional – anvil defence



An Olvanan Battalion is conducting a positional defence on a piece of key terrain overlooking the enemy MSR. The defensive zones are smaller than they would be with a mechanised force, and the phases will take place over a much longer period, due to the impact the jungle has on speed of movement. The Olvanan Commander will attempt to establish depth at every level, and will augment his depth with all available firepower groupings at their disposal.

1. The screening force is pushed as far forward as communications will allow, and will include the use of UAV where practicable. These elements will conduct independent manoeuvre, provide intelligence, correct fires, and will conduct recon attacks when required. MANPADS are deployed to the flanks to protect from enemy air assault.

2. Depth defence groups may be pushed forward into hide locations or kept integrated within the KDPs to enable swift and aggressive flanking assaults or as counter attack forces when required. These will generally be supported by the organic Battalion and Company Mortars, depending on the situation.

3. The KDPs will be aggressively held, and integrated obstacles will be emplaced on likely enemy avenues of approach. These positions will attempt to attrite and exhaust the enemy, reducing their morale and cohesion, employing massed fires from organic and supporting elements. Only when their mission is complete, or when appropriate delay has been achieved will they withdraw.

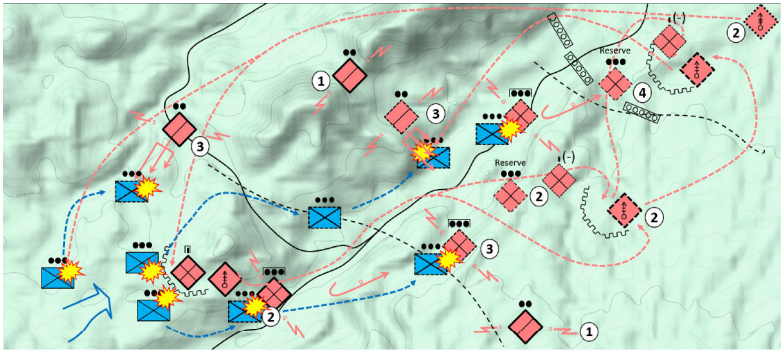
Mobile defence – holding the collar

4.19 In standard Olvanan doctrine, a mobile defence relies on high-speed manoeuvre, is undertaken over a much larger geographical area, and is entirely focused on the offense. Given the challenges outlined numerous times in this document, it is an almost impossible task for any commander to effectively conduct in the jungle, let alone a commander who may have only recently transitioned from a motorised or mechanised role.

4.20 Therefore, in this environment the mobile defence refers to a series of retrograde hasty defensive actions, aimed at blunting the momentum of the attacking enemy, and making best use of inwardly facing screens and guards. Depth is incredibly difficult to maintain, and the action of leapfrogging rearward is likely to denude the force undertaking the action of its effective combat power in a short timeframe.

4.21 Essentially, it becomes a fighting withdrawal, maintaining contact with the enemy at all times, with the goal of inflicting maximum attrition before breaking clean using massed fires. It will usually be conducted back towards a major defensive position in order to give the next defending echelon more time to prepare a deliberate defence. It can therefore be undertaken at all levels up to and including CA-BDE.

Figure 4.7: Mobile defence – holding the collar



An Olvanan Company is operating as the forward security element for a Battalion with orders to conduct a 'holding the collar' mobile defence, supported by Battalion Mortars. It is critical to maintain contact with the enemy in order to delay, enabling time for the development of the KDP.

1. The Company Commander deploys recon elements to the rear to screen possible bypass or infiltration routes, and the Company mortars prepare to pack up and move back to the first hasty position. The rest of the element is split into three groups, a guard (commanded by the political officer), a reserve and a the main body (commanded by the Company Commander).
2. On order, the Battalion mortars engage the forward and depth enemy elements, which enables the Coy mortars to withdraw to the first hasty position and set up to support manoeuvre – they will be unavailable while they move, and will have limited capability due to the amount of ammunition they can carry. At the same time, the guard moves to a flank, fixing the forward most enemy element. Once the guard is engaged, the main body can move, followed closely by the reserve.
3. Once the main body is in the next hasty position the guard can commence its rearward movement holding on to the enemy and causing delay as they do so. The screening forces conduct limited attacks on the enemy flanks as they manoeuvre, disrupting them and reducing their ability to support the main effort.
4. This process is repeated until the main body is in the KDP. At this stage the reserve is positioned at a gap in a protective obstacle belt, ready to either support the guard in breaking clean, or closing the gap and taking up their position in the KDP.

Diversionary – hard nut defence

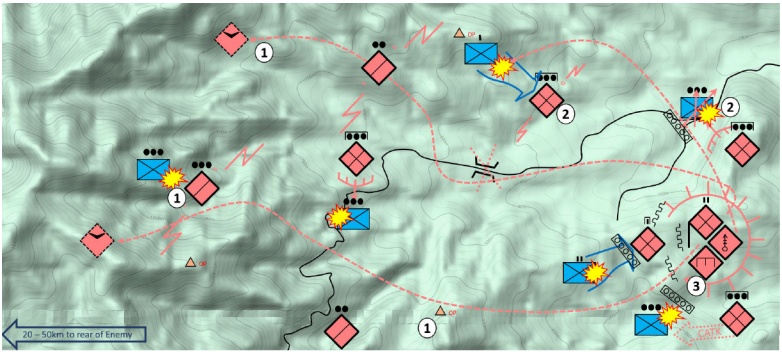
4.22 Another key tactic based on successful historical precedence, the diversionary defence is better suited for the jungle than almost any other environment. Olvanan doctrine dictates that the deeper the penetration of the element undertaking the action, the better the impact on the attacking force.

4.23 Likely conducted at a minimum of battalion strengths, the force conducting the action is task organised with additional engineers and reconnaissance troops, mortar units, MANPAD teams, and will have the principle call on the longest range fires elements available to the one up echelon. It will also be provided with direct support from any air assets operating in the AO.

4.24 The aim of the hard-nut defence is to deploy as deep as possible into the enemy's rear, initially without being detected, and to establish a well-situated and suitably fortified defensive position. Once established, the fight is then taken to the enemy through the conduct of aggressive reconnaissance and counter-reconnaissance, well-resourced fighting patrols, demolitions, nuisance mining, artillery raids, any tactic at its disposal in order to pull ever more resources away from the enemy's main effort.

4.25 The Olvanan forces use the later British Chindit operations in Burma as the basis for this tactic, and will resource them as well as possible in order to achieve an asymmetric offensive outcome during a defensive battle. The Commander will be responsible for creating their own depth, as the unit will be working well outside of mutual support, however just undertaking the hard-nut defence adds an additional element of depth to the higher commander's plan.

Figure 4.8: Hard-nut defence

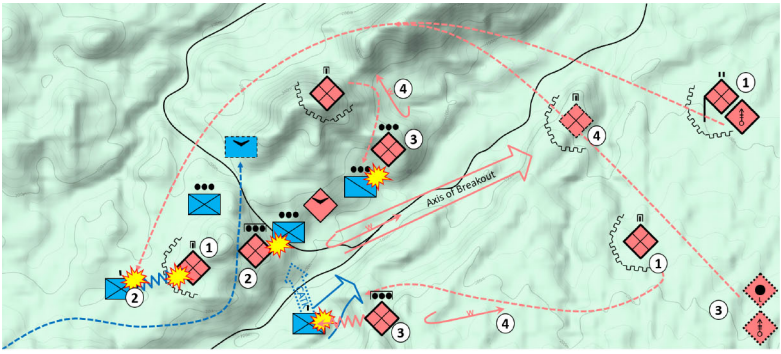


The Olvanan Battalion Commander, given additional mortars, engineers, and ISR assets in order to achieve their mission, moves deep behind enemy lines establishing itself on a piece of key terrain which dominates the enemy's main supply route.

1. The Battalion deploys a reconnaissance screen to the West as well as a number of OPs supported by UAV and additional recon patrols. These elements will provide vital intelligence to the Commander on enemy movement, but will also conduct recon attacks as required. The firepower attack group can also be brought to bear to support these elements.
2. Task organised Platoon groups will push out to conduct ambushes on the MSR, demolitions on key infrastructure, sow nuisance mine fields, as well as forming guards to protect the flanks.
3. The 'hard-nut' itself will be well fortified, and will not only achieve depth with mutually supporting KDPs, but with task organised Counter-attack forces, blunting successively larger enemy assaults on the position. The key to this tactics is to reduce enemy freedom of movement, and draw combat forces away from the frontline.

4.26 The unit tasked with this action will not only be the best trained, but will also the most politically reliable in the formation due to the level of mental fortitude required to deploy on a mission where it is almost certain to become encircled. To that end, one key element that will always be true of this tactic is the requirement for the commander to be able to conduct a breakout.

Figure 4.9: Breakout



An Olvanan Battalion Commander realises that his forward KDP has been encircle by a numerically superior enemy, and orders the Company Commander to conduct a breakout to their alternative defensive position. They also order their Southern most Company to deploy a Platoon forward to aid in the action.

1. The Company Commander splits their team into two elements, the Frontier group which will hold the line in their KDP, and the Assault Group which will conduct the breakout assault. Knowing that they will be under significant enemy ISR, every effort is made to make sure that the assault group's move to their assault position is done covertly.
2. On order from the Battalion Commander, the assault begins with fires co-ordinated from the Bn Mortars as well as with the CA-BDE Firepower group if available. These will be focussed on the enemy elements fixing the Company KDP to try and relieve pressure on the Frontier Group.
3. As the Assault Group forces a gap in the encircling force, the enemy will attempt to counter attack, and close the gap as well as interdict the route that the Olvanan Company may use. To mitigate this, the Platoons from the other forward Companies conduct a fixing attack on the Southern enemy Company, and a hasty assault on the enemy Recon elements to the North.
4. Once the Frontier Group has passed through the gap, the Assault Group follows on, withdrawing back to their alternative KDP. Aided by Battalion UAV assets, additional indirect fire is brought to bear on known or suspected enemy locations in order to harass and delay any pursuing forces.

Withdrawal

4.27 Olvanan doctrine states that there are two types of withdrawal; the active, when a unit moves back to another defensive position, or the compelled, when a unit is unable to continue resisting or when it is unwise to do so. Both are difficult to undertake, as the risk of fratricide and disorder increases exponentially with the ferocity of

enemy assault. The unit's political officer will normally have significant input into the order to withdrawal, and as the 2IC they will take charge of the conduct of this tactical action. Not only does this allow the commander to continue planning the next phases of resistance, but also it helps instil a level of ideological fervour, which is deemed to reduce the likelihood of panic induced rout.

4.28 Because these actions will almost always be undertaken in direct contact with the enemy, the active withdrawal will have been well practiced and drilled prior to being enacted. The synchronisation of direct and indirect fire support will be key to enable the withdrawing element to break clean, with mortars being the most likely element used in support.

4.29 In the jungle, the withdrawal requires a much higher level of synchronisation due to the problems associated with command and control, and signals. If a signal is missed, or if a unit has been fixed and cannot inform the command chain that they cannot meet their timings, the possibility of being cut off or encircled is much higher, as is the dislocation of the overall withdrawal. To that end, Olvana will use alternate analogue methods of communication to co-ordinate movements including signal flares, whistles and bugles to improve the likelihood of success.

4.30 The withdrawal itself is undertaken in the following order:

a. Cover and screening groups withdraw to the rear of the position to establish a new security zone.

b. The rear security and any log elements pass through the screening elements to a new rear area.

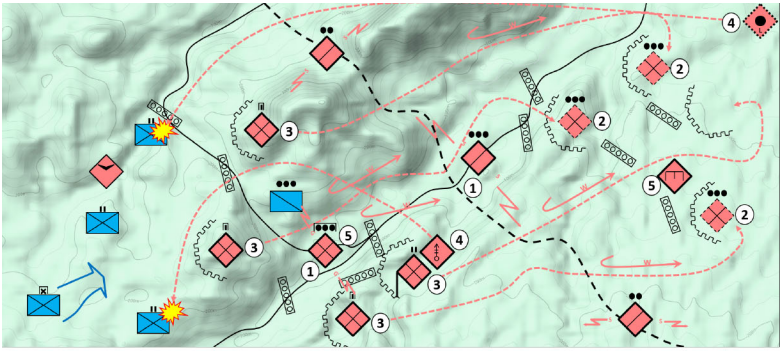
c. The main body withdraws with the commander to the new defensive position. Olvana sees this as the decisive phase of the withdrawal.

d. Fires that have been covering the rear guard move back to pre-constructed depth positions.

e. The rear guard, moves once the fires elements have established themselves and can provide clean break.

4.31 A significant issue with the CA-BDE transitioning to jungle operations is their ability to provide long-range fires due to the majority of assets being of the wheeled variety. To that end, the single largest vulnerability for the withdrawal is the point at which the fires element is required to move. If this is badly synchronised, or if they move to unprepared positions, or if their logistics is in any way compromised, there is a good likelihood that the element providing the rear-guard becomes cut off. The Olvanan commander then must make a decision to unmask any additional or deep fires capabilities in order to provide clean break. This decision will take into consideration not only the size of the element providing the rear-guard, but whether or not the withdrawal is planned or compelled. If fires cannot provide clean break, then the element will be required to conduct a breakout on their own.

Figure 4.10: Withdrawal



An Olvanan Battalion is in danger of encirclement or bypass by a numerically superior enemy force. The CA-BDE KDP is well established, therefore the order is given to conduct an active withdrawal in line with the CA-BDE Commander's delay timeline. The withdrawal has been well planned and the Commander hands the task over to the Political officer to carry out. The order of the withdrawal is as follows

1. Cover and screening groups withdraw to the rear of the position to establish a new security zone, the rear guard is established on the most likely enemy avenue of approach, and is supported by Bn mortars.
2. A Platoon from each Company withdraws along with any logistics and support elements, passing through the screening elements, and occupies their respective positions in the new KDP.
3. The Command element moves first, followed by the main body under the command of the Political Officer. This is seen as the decisive phase of the withdrawal.
4. Once the main body has occupied the KDP, the Battalion mortars withdraw back to their new location. As they are moving the Battalion is supported by the CA-BDE firepower group.
5. The rear guard only moves once the Battalion mortars are in position, and can provide them with clean break if required. Engineers close the gaps on obstacle belts once all elements are in their positions.

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Chapter 5

Security operations

Executive summary

Olvanan commanders will attempt to use screening forces at the lowest level possible in order to aid in the development of depth.

Route security, especially during logistical re-supply, will have an impact on available combat elements. To mitigate this, Olvana will attempt to use as many technical means possible.

Patrolling is key in every phase of Olvanan jungle operations from Platoon to CA-BDE.

5.1 Security operations are undertaken during every type and phase of jungle operations, and take the form of either screens or guards. At the lower levels, sentries and patrols deliver the same sorts of localised effects, all of which are focused on delivering depth, protecting the main body, and providing information to the commander, thus enabling appropriate tactical decision to be made at the point and time of need.

5.2 However, as previously mentioned, and as much as any Olvanan commander would be able to push their screens and guards out as far as possible (in Olvanan mechanised doctrine an advance screen can be deployed up to 5 km ahead of the main body), the jungle restricts their ability to do so. To that end, much like the reconnaissance battle given the issues with command, control, communications and fire support, the distances that these elements are pushed out to the flanks is significantly reduced.

Screening

5.3 Whilst screens do have reconnaissance outcomes, in terms of providing information back to the commander, their primary function is counter-reconnaissance, in that it aims to neutralise or destroy the enemy's situational awareness. In defensive operations it will be deployed forward, however in offensive operations it is generally only deployed to the flanks or rear, in order to maintain tempo for the main force. If feasible a heavy reliance will be made on the use of UAS in tandem with remote sensors to provide additional depth.

5.4 Screens are general deployed two down, e.g. a CA-BDE will employ a Company sized screen, however there is no hard or fast rule in terms of size and shape of these elements, only that they will be augmented with assets from their own higher HQ, as well as possible other echelons above.

5.5 The key difference between a screen and a cover force is that the cover force is self-sufficient and can conduct independent operations. In the jungle environment a screen and cover force are interchangeable given the manner in which the screen is forced to operate, and the level of support it is given by higher, including logistics and fires. If confronted by a large enemy force, the screen will attempt to disrupt or delay the action before withdrawing or bypassing.

Guarding

5.6 The main difference between a screen and a guard is that a guard should be capable of protecting the main body of a force, rather than merely delaying or disrupting enemy movement. They are very much suited to the mechanised role, or in open country. In the jungle the effect of having to push guards out to the front or flanks, while moving is an increase in friction, a reduction in tempo, and an overall issue with co-ordination of effects. Furthermore, the element forming the guard is required to be big enough to be effective. This means that they will drain a significant proportion of the available fighting forces away from the main body.

5.7 Guards are therefore more likely to be used at two key times, in the defensive, for example the hard nut defence, or as a blocking force deployed in the frontal blocking zone, or in order to provide depth to movement on roads.

Security while marching

5.8 Roads and tracks obviously provide a force with the ability to move more quickly than through primary or secondary jungle, especially when pushing logistics or fire support elements forward. However, while they will be used for these critical tasks, they are predictable lines of communication, and are therefore easily targetable. To that end, movement on roads requires the commander to spend significant time planning, and requires the provision of significant resources to provide both protection and depth to the manoeuvring force, a perfect supporting role for UAS assets.

Advance, flank, and rear guards

5.9 When moving on roads and tracks the commander will provide a level of all round defence to the element conducting the move. The issue at hand is that the elements providing this protection will be dismounted, while the element on the road will be in vehicles. This therefore requires some synchronisation of manoeuvre in order to make sure that tempo is maintained.

5.10 Reconnaissance elements are deployed first, followed by the advance guard, a force of at least Platoon size, straddling, but relatively close in to the route. This will be augmented by anti-armour elements and MANPADs as the threat dictates. Following this, the flank guards will deploy to intermediate positions approximately 2-300 m from the track on likely enemy ambush positions. These will have been previously reconnoitred and significant terrain analysis will have been undertaken, to assess the most likely enemy points of route interdiction.

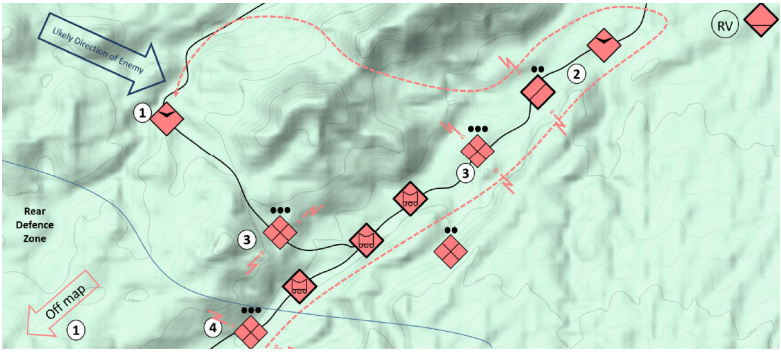
5.11 Behind the main force, the rear guard will take up a similar posture to the advance guard, straddling the route, and once all elements are on their initial positions, the convoy will move off with the pace being set by the advance guard. These convoy moves are therefore likely to be relatively slow, and will tend to caterpillar.

5.12 The flank guards will move from position to position on orders from the convoy commander and will be supported by a significant ISR component including UAS, and EW assets. UAS assets will be pushed forward along the route to identify threats such as mines or IEDs, as well as any natural obstacles like fallen trees or washed out fords etc.

5.13 The rear guard clears the route behind the main body and provides rear security. They will normally be a tactical bound behind, and slightly out of tempo in order to surprise any enemy that may have inserted an ambush for the return of the convoy.

5.14 If the element requires to return to its starting position, the rear guard naturally becomes the advance guard for this return leg. The size of the aforementioned groupings will depend on the size of the convoy, however the advance and rear guards will be similar in size and make up given their similar roles on the way in and out.

Figure 5.1: Route security



An resupply mission for an Olvanan Battalion is conducting a move using a key track system. They will move from the rear logistics area, however must be provided with a guard force as they move through the rear defensive zone to a location in the depth defensive zone where they can unload their stores. A Company has been tasked with guarding the convoy on its move.

1. The Company moves to a pre-arranged RV with the logistics element and co-ordinates the move. A significant pre-movement ISR soak will be conducted to gather information on vulnerable points, likely ambush locations, as well as the condition of the route, bridges, fords, and fallen trees etc.
2. The ISR Screen will move ahead of the guard force, with its UAV scanning ahead of the force, passing live information back on any changes from the previous ISR soak.
3. The guard force deploys astride the road, pushing forces 2-300 m to the flanks to clear the route, and to piquet any possible ambush locations while the convoy moves through. The force will be weighted to the flank most likely to be interdicted by enemy forces, however, all round defence must be achieved.
4. The rear guard follows on behind the convoy, this element is similar in composition to the advance guard, as it will be the advance guard on the return leg.

This process will be slow and laborious, it will move in fits and starts, and will also remove a Company from the line in order to provide adequate security.

5.15 This whole process is incredibly slow and deliberate and will almost certainly have an effect on the overall tempo of manoeuvre for the CA-BDE when conducting an advance, given their requirement for significant logistics support. It is also incredibly labour intensive, as it requires a minimum of a company-sized element to guard a logistics convoy.

Bivouacking

5.16 Each Platoon will conduct their own bivouac routine or harbour procedure when stopped for long periods of time, for example at night, with the layout focused on all round protection. Sentries will be emplaced before last light, however at this level they are generally limited to a single position on the assessed enemy avenue of approach.

5.17 When the Battalion is operating outside of a garrison, or rear area, the jungle bivouac is laid out in order to deliver three-dimensional depth to the main body. The commander will not just halt the Battalion and push out security elements, but rather will use their reconnaissance elements to scout possible positions of dominating terrain, where depth, concealment and protection can be achieved.

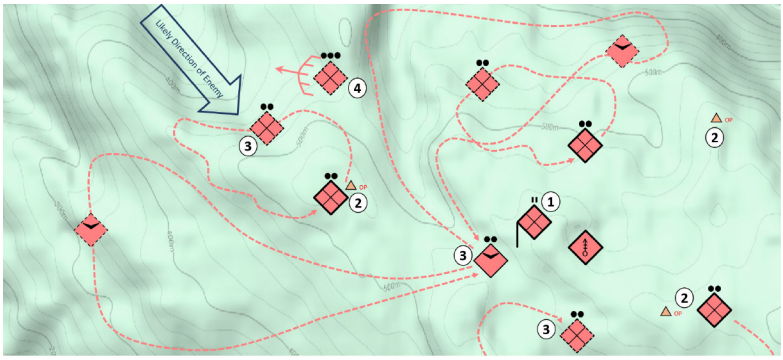
5.18 Once a position has been occupied, a platoon will be deployed on the security mission. This will be augmented by UAS elements, and the BN mortars will be in direct support. The Platoon will split into three elements, one will split into three observation posts to the flanks and rear, one will deploy forward on the assessed enemy avenue of approach to act as a screen, and one will push to the rear and establish rear area security. An element from this Platoon is held as a reserve grouping.

5.19 The distances for these elements will be terrain dependant; however, the Ops will be required to establish direct communications with the Battalion headquarters in order to feed information quickly on any developments on the perimeter. The Platoon deploying these elements will conduct patrols daylight patrols; however, at night will establish individual section standing patrol locations, with a sentry routine. The UAS elements will conduct overflight during the day only, as the recovery of the chances of losing drone systems at night is much higher in this environment.

5.20 Patrols resume at day break, however these are not restricted to the security Platoon, and each company position will send out clearance patrols in their own sectors. There always remains a risk of fratricide at this point, so the Olvanan commanders will again restrict

the limit of exploitation to just past visual distance from the main company positions, and will generally favour the assessed direction of enemy approach.

Figure 5.2: Battalion bivouac



1. Having used their Reconnaissance elements to find a suitable location for the Battalion bivouac with dominating terrain, and where depth, concealment and protection can be achieved, the Olvanan Commander will order his sub unit commanders to occupy their designated positions.
2. A Platoon, augmented with a UAV detachment, and supported by the Battalion mortars will split into three groups, occupying observations posts and patrols.
3. These patrols will be pushed out at dusk, and dawn in order to clear likely enemy avenues of approach, with the UAVs providing additional deeper surveillance in areas of dead ground. At night they will fall back onto pre-sited positions and establish standing patrols, with a staggered sentry rotation.
4. If Intelligence suggests enemy movement by night, then a Platoon ambush may be set on the most likely avenue of enemy approach, however this will be at the discretion of the Commander, however each Company will allocate a Platoon as a reserve or quick reaction element.

Sentry

5.21 Conducting sentry in the jungle is severely impacted by the simple fact of how dark it is under the canopy. Standard night vision devices do not work as well due to the lack of ambient light, therefore, like western forces Olvana tends to restrict the distances sentries are pushed out from the perimeter, and requires that the positions are established prior to nightfall.

5.22 At the Platoon level, a single sentry position established on the likely avenue of enemy approach is manned by two soldiers. Trip flares and Type 66 mines are emplaced, with the command detonation device located at the sentry position. Communications line will also be set up back to the main harbour position in order to stop soldiers getting lost in the jungle.

5.23 Olvanan commanders are aware of the cumulative physical and psychological effects that undertaking sentry operations in the jungle has on the soldiers over time. The political officer is key to the maintenance of ideological fervour, and instilling the fact that sentries achieve depth for the commander, and that the main effort is always the protection of the main body. To that end, punishments for falling asleep on sentry duty are severe.

Patrolling

5.24 Every action in the jungle is linked to reconnaissance in some way or another, and as patrolling is the mainstay of jungle operations, it is inherently linked to the gathering of information. Whether it is a clearance patrol which tells the commander where the enemy is not, to a fighting patrol which is sent out with the specific goal of engaging a possible enemy, the flow of information up the chain will come from these patrols.

5.25 Patrolling is undertaken in every phase of operations, and will be undertaken from the two-person observation posts established during bivouac, to the augmented platoon and company level fighting patrols sent out as flank protection during an advance. They will use the standard Olvanan dismounted patrol formations, but most importantly, any patrol will have the ability to fight.

5.26 Olvanan doctrine dictates that unless a patrol is dispatched with offensive intent, that they should gather information, then use cover and concealment to break contact with the enemy. However, if the enemy is of a similar size, then the patrol should be prepared to destroy the enemy, or force their withdrawal.

5.27 Given the challenges of jungle operations, the Olvanan commanders from platoon through to CA-BDE will set specific limits of exploitation to their subordinate patrol commanders, who will work inside their zones of action (depending on the type of operations

being conducted). They will be provided with detailed actions on, and outside of these they will strictly adhere to the drills they have learned in training.

5.28 Those limits are based on four key elements, terrain, communications, individual logistic support, and the ability to provide intimate fires support. Therefore, long range patrols will only be conducted by special operations forces, reconnaissance, or by larger force elements, who may be afforded organic fire support. It is therefore unlikely that a Platoon fighting patrol, for instance, will be deployed for longer than 24 hrs, and likely no further than 1-2 km from the main body, even when conducting a wait ambush.

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Chapter 6

Fire support in the jungle

Executive summary

High-trajectory, low velocity is better when it comes to jungle operations, which is why Olvana will integrate mortars at every level from Platoon to Brigade.

While long range guns and rocket launchers will be maintained in the CA-BDE, these will be kept well back due to their reliance on roads and tracks, and the predictability of their movement.

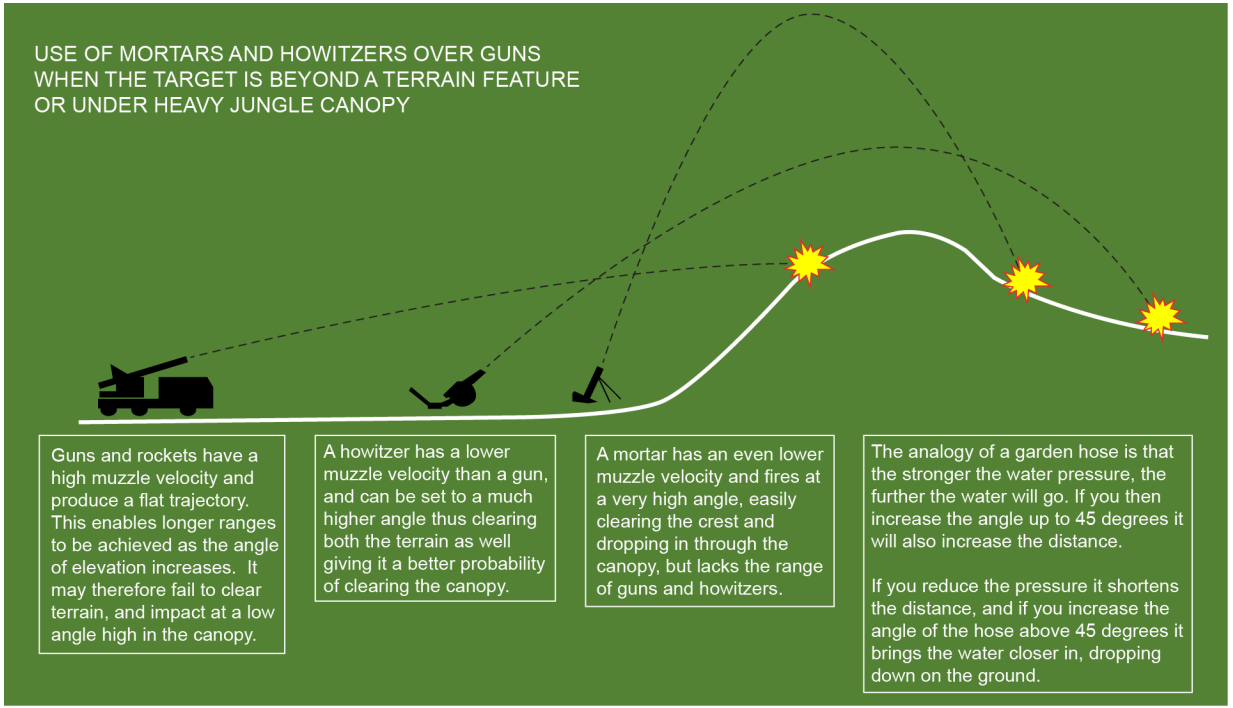
Ammunition needs to be moved by hand and therefore rates of fire in the jungle will be reduced. Having said that when the Olvanan CA-BDE is re-rolled for jungle operations it has a significant number of additional personnel it can allocate this task to.

6.1 Artillery is one of the most important organic capabilities that a CA-BDE commander has at hand to employ, and Olvanan doctrine is incredibly reliant on the use of massed indirect fire to enable manoeuvre. In almost every phase of warfare, regardless of whether the unit is conducting offensive or defensive operations, artillery support will be one of the commander's prime considerations, and is also one of the key focuses of their logistics tail.

6.2 As the OPA is a learning organisation that uses lessons from previous conflicts to inform its own doctrine, it knows that there are solutions for the use of artillery in the jungle that have been successfully employed in the past, and it will therefore adapt accordingly. However, there are a number of key difficulties, which still require to be overcome.

6.3 Indirect fire weapons with a flat trajectory are impacted by terrain shielding, as well as the density of the canopy, therefore the higher the angle, the better the ability to penetrate the canopy. However, the higher the angle, the lower the overall range of the weapon system. The ability to get rounds on target, as well as observing the fall of shot requires a total rethink on the employment of forward observers, and the integration of drones and other aerial assets is therefore more likely to be used in support of this capability.

Figure 6.1: Flat versus high trajectory indirect fires



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6.4 Changes in artillery direction finding and improvements in counter battery radars, combined with the ubiquity of precision and loitering munitions reduces the efficacy of the tried and tested firebase solution, which worked so well in Vietnam. A commander is therefore more likely to try to mask their key weapon systems until the last safe moment rather than have them all positioned in the open in clearings on the tops of hills for subsequent targeting by the enemy.

6.5 The issue of artillery logistics is ubiquitous to any military operating in the jungle, but more so for Olvanan given their reliance on fires in their way of warfare. There is therefore a trade-off that needs to be taken into account, and it is not a simple one.

a. Olvanan doctrine requires a heavy weight of artillery fire support for all types of operation, therefore needs to push a significant amount of ammunition forward with these weapon systems.

b. Artillery ammunition is heavy and bulky to move at the best of times, and the CA-BDE will need to use a mix of road, air, and humans to move it to the required location.

    (1) If roads are used they are predictable and vulnerable to enemy fires.

    (2) If air is used needs to be kept outside of range of enemy weapon systems, and the ammunition will therefore still need to be moved cross-country from the LZ to the gun position by hand.

    (3) When people are being used to move ammunition across country, they are not available to fight.

c. Given the need for higher angle of trajectory, and therefore a shorter overall ranges the weapon systems themselves need to be pushed as far forward as possible.

d. Stockpiling ammunition increases the likelihood of losing it if the gun position is required to displace quickly.

e. With a reliance on man-packed weapon systems, the ability to move quickly and to take advantage of opportunities as they present themselves will be impacted by the speed at which these systems can get within range.

6.6 What this all means for the Olvanan commander is that it is unlikely that they will be able to attain anywhere near the levels of fire support they could normally rely on in other environments, and they will almost certainly face an ongoing ammunition shortage during most phases of operations. This will ultimately result in an overall reduction in their capability to use fires not only as a key enabler, but also as a method of achieving depth. Furthermore, it has also meant that the battalions have started to rely more and more on their own organic fires capabilities, and there will therefore be a proliferation of mortars in the battlespace.

Table 6.1: Artillery systems of the jungle Combined Arms Brigade

Type 90B		
	Type	Wheeled MRL
	Calibre	122 mm
	Max elevation	55 deg
	Crew	5
	Max range	40 000 m
	Projectile weight	74 kg
	System weight	23 000 kg
	Rate of fire	40 rd/min

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PCL 90		
	Type	Wheeled Howitzer
	Calibre	122 mm
	Max elevation	70 deg
	Crew	5
	Max range	27 000 m
	Projectile weight	22 kg
	System weight	16 500 kg
	Rate of fire	6-8 rd/min

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AH4		
	Type	Towed Howitzer
	Calibre	155 mm
	Max elevation	72 deg
	Crew	7
	Max range	25 000 m
	Projectile weight	46.7 kg
	System weight	4500 kg
	Rate of fire	4 rd/min

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Type 83		
	Type	Towed Howitzer
	Calibre	122 mm
	Max elevation	70 deg
	Crew	5
	Max range	21 900 m
	Projectile weight	22 kg
	System weight	3200 kg
	Rate of fire	4 rd/min

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Mortars versus guns

6.7 One of the effects of the modernisation of the OPA has been the movement away from towed artillery to an almost universal reliance on self-propelled and wheeled artillery and mortar systems. The standard artillery systems available to an Olvanan motorised CA-BDE are; in the Field Artillery Battalion - the Type 90B MRL, and the PCL09 wheeled artillery gun, and at the Battalion level - the PCP001 wheeled mortar.

6.8 While these systems enable integrated fire support to high-speed manoeuvre in open country, the fact that they are wheeled has a significant impact on the ability of the field artillery battalion to intimately support their forces in a jungle environment, anywhere too far off a road.

Table 6.2: Mortar systems of the jungle Combined Arms Brigade

Type 55		
	Type	Heavy Mortar
	Calibre	120 mm
	Max elevation	80 deg
	Crew	6
	Max range	5700 m
	Projectile weight	16 kg
	System weight	275 kg
	Rate of fire	9 rd/min

PP87		
	Type	Medium Mortar
	Calibre	82 mm
	Max elevation	85 deg
	Crew	3
	Max range	5600 m
	Projectile weight	46.7 kg
	System weight	39.7 kg
	Rate of fire	20 rd/min

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PP89		
	Type	Light Mortar
	Calibre	60 mm
	Max elevation	82 deg
	Crew	2
	Max range	2672 m
	Projectile weight	1.3 kg
	System weight	14.3 kg
	Rate of fire	6-8 rd/min

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QLT89		
	Type	Light Mortar
	Calibre	50 mm
	Max elevation	85 deg
	Crew	1
	Max range	800 m
	Projectile weight	0.7 kg
	System weight	3.8 kg
	Rate of fire	8 rd/min

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6.9 In order to find the types of howitzers and mortars needed for this environment, Olvana has had to reach into its militia Brigades, where the Type 83 howitzer and the Type 53 mortar are still in service. Bringing these capabilities back into the CA-BDE has had a number of impacts in terms of both training and integration, as well as logistic support due to the need to facilitate not only the different calibres and natures of ammunition, but also the spares and maintenance functions.

6.10 While Olvana still employs other large towed systems such as the PI96, and the PLL01 with certain units, their applicability to this environment is potentially limited, given their size. They may well be employed in the deeper fight, as will the organic MRL and wheeled artillery systems of the CA-BDE, however these will have to be kept well to the rear, and be well protected due to the relatively predictable requirements of their positions.

6.11 As has been shown in the majority of jungle campaigns, the ability to dismantle and man-pack artillery and mortar systems has been crucial to effective offensive and defensive operations.

Applicability of rocket artillery

6.12 Each CA-BDE has combination of tubed artillery and multi-rockets launchers in their field artillery battalion, with the Type 90B being the mainstay of MRL equipment. A Battery of six of these excellent systems has the ability to deliver 240 rockets in thirty seconds up to a range of 40 km. Regardless of whether these rockets can all penetrate the canopy, the fact that nearly 4500 kg of explosives is landing on a beaten zone is going to have an enormous effect on the enemy position.

6.13 To that end, it is likely that the Olvanan commander will maintain these critical elements in their ORBAT, but will have them mustered well to the rear, thus blunting some of their offensive capacity due to them operating at the limits of their range.

Loitering munitions

6.14 The Olvanan CA-BDE will have a number of short to medium endurance UAVs in its arsenal, which will include loitering munitions. While the dense jungle canopy definitely effects the efficacy of

drones, it is unlikely that this critical capability will be discarded as a unit transitions to the jungle role.

6.15 There is significant scope for these types of loitering munitions to be used in the deep battle against enemy logistics and fires locations, in support of reconnaissance missions, and in conjunction with route clearance and route security operations.

6.16 While there are constant changes and evolutions of this type of weapons technology, one of the likely mainstays of the CA-BDE will be a weapon system similar to the XS101, which itself is a clone of the Switchblade 300.

6.17 With a range of approximately 30 km these are highly portable systems, which can deliver excellent accuracy, and while they are unlikely to be able to have a significant effect on armour, they will be an excellent tool to use on light-skinned vehicles and other key equipment.

Figure 6.2: XS101 loitering munition at launch

6.18 Olvana remains a world leader in the integration of drones, and they have implemented them at the lowest level in all of their combat formations. Therefore, if a commander can find a way to incorporate loitering munitions to fill a gap where long range precision fires might be missing, then they no doubt will.

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Chapter 7

Sappers in the jungle

Executive summary

Engineers remain a combat multiplier regardless which environment they are employed, however in the jungle they will be limited by what they can carry.

The Olvanan CA-BDE will establish two Jungle Mobility Support Detachments to enable combined arms manoeuvre.

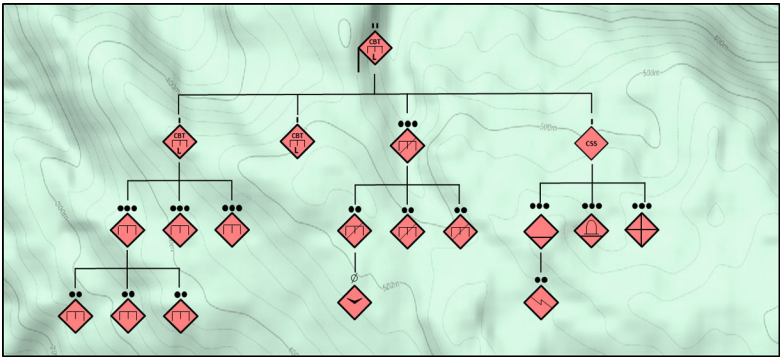
All of the larger engineering capabilities will be withdrawn to the deep rear, and will only be brought forward by exception.

Mines will be a key component of Olvanan jungle warfare in both offensive and defensive operations.

7.1 The Olvanan CA-BDE has an organic Engineer Battalion, and when in the motorized or mechanised role these 700 engineers are capable of undertaking a wide variety of combat and support engineering tasks. This will not be the case when a CA-BDE is re-rolled for the jungle, with the major capabilities being passed over to the higher echelon command, and brigaded in the rear as force troops. This will include all vehicles and heavy equipment, as well as any bridging and ferry capabilities.

7.2 The CA-BDE will therefore field a much lighter engineer capability called a Jungle Mobility Support Detachment (JMSD), made up of two company-sized elements of combat engineers. These elements will be task organised with the infantry battalions and will provide an intimate assault pioneer capability focusing on demolitions, mobility, and counter-mobility tasks.

Figure 7.1: Jungle Mobility Support Detachment Order of Battle



7.3 Each JMSD will field an Engineer Reconnaissance Platoon, broken down into three patrols squad sized elements. These can be further task organised with reconnaissance elements to provide engineer intelligence on routes, bridges, fording locations, water sources etc. In the defence, they can co-ordinate the planning of defensive fortifications, obstacles and the allocation of force engineer troops for construction.

Individual sapper equipment

7.4 Due to the requirement to fight attached to light infantry, the jungle sappers will generally deploy with a mixture of explosives, as well as an assortment of anti-pers mines, light tools, and mine detectors. Any heavier equipment will be co-ordinated through the logistic chain as required; therefore, there will be a reliance on hand-tools for the development of defensive positions, or for the emplacement of any obstacles.

Figure 7.2: Jungle sapper equipment layout

Mobility and counter-mobility

7.5 During the theatre induction package, Olvanan jungle sappers train in clearing and emplacing obstacles, as well as the development and disarming of booby-traps. The development of defensive positions is a duty for all soldiers in the unit, with the sappers tasked with establishing obstacles on likely avenues of approach. They will aim to strengthen existing natural obstacles and can emplace both explosively actuated and manual booby traps.

7.6 However, given the light support role, the likelihood of being able to deliver traditional engineer effects is limited, but anything that can reduce the rate of movement of the enemy will provide breathing space for the commander.

Mines in the jungle

7.7 Movement in the jungle is slow and deliberate at the best of times, and with a wily enemy who knows how to best employ anti-personnel mines, it can slow movement down to a crawl. Mines in the jungle are the Infantry's worst nightmare, and Olvana has learned from history, and as such the mines their sappers employ are aimed at maiming rather than killing the enemy. Olvana understands that western militaries have become more and more casualty averse, and therefore a wounded enemy will take at least two more troops from the battlefield, and require immediate medivac to the rear.

7.8 The light scales required for jungle operations reduce their ability to carry significant amounts of mines, however they have enough to sew nuisance minefields, as well as to have more directed effects on key terrain features, for example likely river crossing points.

7.9 Olvanan doctrine stresses the need for offensive action in all phases of war, so while their engineers can call on scatterable mines like the GLD112 or GLD115, they tend to avoid using these in their own area of operations. These are more likely to be used in the deep fight, targeting enemy logistics areas, or to aid in the cut-off of withdrawing enemy. This can also be seen in the break-contact drill of Olvanan infantry units who will drop anti-personnel mines as they themselves withdraw in order to disrupt a pursuing enemy

7.10 Anti-tank mines may be used from time to time, but these will be used on road and track systems, and are therefore likely to be brought in and issued for specific operations. Olvanan jungle sappers can produce anti-vehicle effects using IEDs.

7.11 Smart mines like the SAPM are available; however, their efficacy in the jungle is reduced due to the requirement of the rounds to penetrate the canopy. These can be set by hand, however they are expensive, heavy, and have a limited life span. It is therefore likely that these will be deployed in the deep battle, in areas, which are less covered by jungle canopy, and where there is a short-term requirement to deny.

Table 7.1: Typically used Olvanan mines

Type 66		
	Type	Anti-personnel – HE-Frag
	Weight	Approx. 1.5 kg
	Explosive content	700 g
	Construction	Plastic with steel feet
	Type of initiation	Command initiated or mechanical fuse
	Recommended method of removal	Manual/remote
	Anti-handing capability	No

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Type 69		
	Type	Bounding A-pers – HE-Frag
	Weight	Approx. 1.35 kg
	Explosive content	110 g
	Construction	Metal
	Type of initiation	Trip-wire pull fuse
	Recommended method of removal	Remote pull
	Anti-handing capability	No

OFFICIAL

Type 72		
	Type	Anti-personnel – HE-Blast
	Weight	Approx. 100 g
	Explosive content	50 g
	Construction	Plastic and rubber
	Type of initiation	Pressure operated
	Recommended method of removal	Remote or mechanical
	Anti-handing capability	Yes

OFFICIAL

Type 58		
	Type	Anti-personnel–HE-Blast
	Weight	Approx. 300 g
	Explosive content	230 g
	Construction	Plastic and rubber
	Type of initiation	Pressure operated
	Recommended method of removal	Remote or mechanical
	Anti-handing capability	Yes

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Type 59		
	Type	Anti-personnel – HE-Frag
	Weight	Approx. 2.3 kg
	Explosive content	75 g
	Construction	Metal and wood
	Type of initiation	Trip-wire pull fuse
	Recommended method of removal	Manual/remote
	Anti-handing capability	Yes

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Number 4. Mine		
	Type	Anti-Vehicle – HE-Blast
	Weight	Approx. 8 kg
	Explosive content	5 kg
	Construction	Metal and plastic
	Type of initiation	Pressure or trip-wire
	Recommended method of removal	Manual/remote
	Anti-handing capability	Yes

OFFICIAL

Chapter 8

Jungle logistics

Executive summary

The Olvanan CA-BDE is used to being vehicle mounted and will struggle initially with the requirement to operate as a light infantry force carrying all of the required equipment.

The Olvanan CA-BDE will be required to fight independently without re-supply for three days.

Porters and the use of animals will rapidly become the norm the longer a force is required to fight in the jungle.

Roads, tracks, and paths are predictable and therefore targetable.

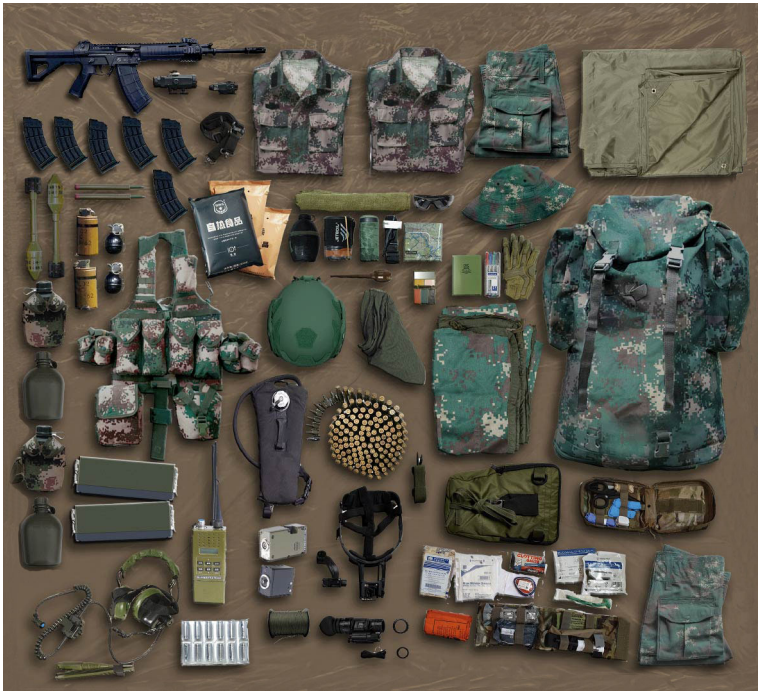
Individual support

8.1 There is no two ways about it, the Olvanan soldier is used to operating out of a vehicle, and will take time to adapt to the light infantry role. The jungle is alien territory to most humans, and therefore the idea that a CA-BDE with limited hunting or survival training could live off the land or forage for anything over the most basic of items is nonsense, and the OHC recognises this. Therefore, when operating in the jungle the individual soldier is required to carry everything they will need to fight and survive for three days of independent manoeuvre prior to resupply, which means food, water and plenty of ammunition.

8.2 Figure 8.1 shows just some of the basic fighting equipment that they will carry, with a focus on sharing of the ammunition load across the Platoon. Much like urban operations, weapon systems burn through ammunition at a much higher rate in the jungle, and additional ammunition is therefore carried by each soldier. This includes ammunition for the Platoon mortar, and section weapon systems.

8.3 Carrying this much equipment has an immediate impact on speed and stamina. The average Olvanan soldier is approximately 170 cm (5' 7"), and between 55 and 75 kg (121 – 165 lbs). This means that a soldier operating in this environment is going to be carrying a minimum of 40-50% of their body weight, and while Olvanan doctrine is predicated on speed of movement, it is clear that there are significant changes required in terms of the planning and execution of operations.

Figure 8.1: Individual jungle equipment layout



Simplified Combined Arms Brigade logistics model

8.4 The CA-BDE logistics model does not work in the jungle as it would in other theatres or environments. There is a requirement for dismounted support, and the Bde will use a combination of pull logistics, as well as some tactically located forward dumps, most of which will be locate just off roads and tracks.

8.5 The CA-BDE's material support Battalion will be the central hub for all classes of supply, with the focus being on food and ammunition. The maintenance battalion will be brigaded further back at higher echelon. Battalion logistics will brigade their vehicles in the BDE logistics area, and these will be used to support their parent unit, as required.

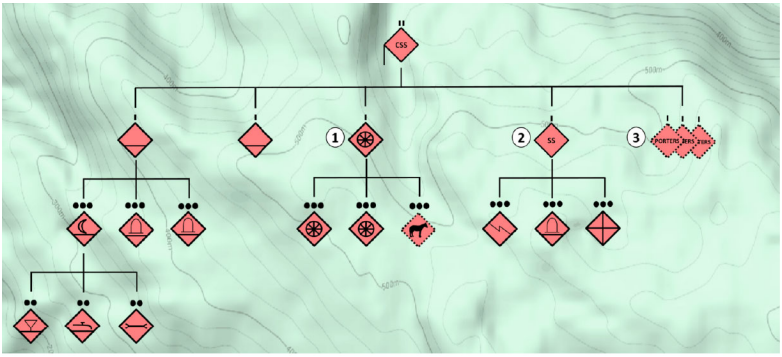
8.6 As mentioned in the security when marching section, a significant element is required to provide the advance, flank, and rear guards for the movement of logistics. For movement from higher echelon forward, these will be provided by force troops, however, the CA-BDE will provide its own security element for movement forward to their subordinate call-signs. Given the three-day rule on independent manoeuvre, unless the commander dedicates a unit to conduct this role, it will become a constant drain on combat assets.

8.7 Some re-rolling of troops from the Engineer battalion, maintenance elements, and potentially even from the light tank battalion may occur, however the use of non-infantry soldiers to conduct guard tasks is sub-optimal.

8.8 While the logistics chain is complicated, it is not impossible, and some work has been done by the Olvanan military to mitigate the issues associated with operating in the jungle. One of the key elements to bear in mind is that there will be a significant number of troops in the rear that can be re-rolled as porters, something that Olvana has done successfully in past conflicts.

8.9 Pack animals are an obvious choice to alleviate the issue of using porters to move supplies in the jungle, and have proven to be force multipliers in many previous conflicts. Muleteers take time to become proficient in their role, and these troops will have to be trained from scratch. This is not an unsurmountable task however, and will definitely be incorporated by Olvana over time.

Figure 8.2: Simplified Jungle Logistics Battalion Order of Battle



The Olvanan CA-BDE logistics element is drastically cut down for jungle operations, with a heavy focus on the supply of ammunition, food, and water.

1. It is possible that some of the CA-BDE's transports elements will be transitioned to mules or other pack animals, though this is a long-term solution, and not one that can be implemented quickly.
2. The service support company will hold a Commander's reserve of ammunition for the Brigade.
3. It is likely that a significant number of the troops that would normally be employed as drivers, maintainers, or in other elements that are not required in the jungle, will be re-rolled as porters and manual labourers. This will reduce the requirement for combat elements to be used to facilitate resupply.

Medical support and evacuation

8.10 Each BN in the CA-BDE has a medical Platoon, and the CA-BDE has a medical company. This in and of itself is an adequate capability for the first line treatment of casualties, and to support the rearward evacuation of troops to more capable facilities in the rear.

8.11 The medical company of combat units is normally deployed in the form of a brigade rescue station in the rear area, far from the main mission area, and focuses primarily on working with battalion medical platoons in evacuating troops to the rear instead of providing more flexible medical support near the front. This will include co-ordination of both ground and helicopter MEDEVAC.

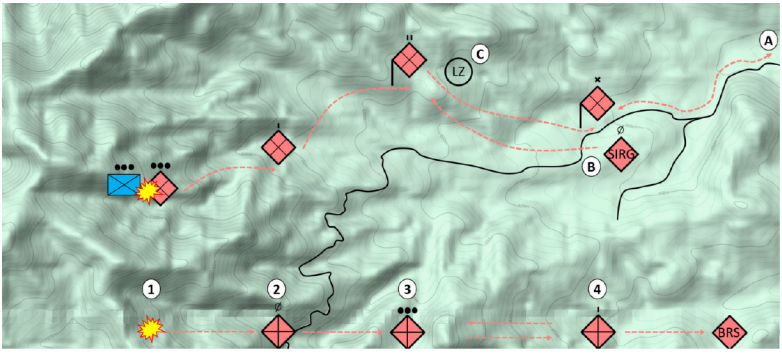
8.12 The impact of operating dismounted is that each Battalion will have four emergency medical squads with one held at Battalion HQ,

and the other three split across the companies. These will likely kept at the company HQ level as a company aid post.

8.13 The CA-BDE will maintain a small triage element at the HQ level, and will co-ordinate the rearward movement of casualties from Battalion through to the medical company location, where the majority of their organic medical support is located. All medical vehicles will be co-located in the rear, and brought as far forward as possible when required.

8.14 Aeromedical evacuation will be conducted dependant on the severity of the casualty, the availability of helicopter support, and the tactical situation.

Figure 8.3: Medical evacuation chain



The Olvanan medical treatment chain in jungle operations is significantly hindered by the speed at which an injured soldier can be removed to the rear, and by the medical training at levels lower than Battalion.

1. At point of injury a soldier is given first aid at the level of training they have received during their jungle training.
2. The Platoon will evacuate rearwards to the Company for triage, which may have a medical detachment from the Battalion Medical Platoon.
3. The Battalion Medical Platoon is shared across all of the sub-units, therefore this medical element is likely to be more akin to a Company aid post in size. Here a decision will be made on whether to continue rearward evacuation of the casualty, to pull forward the Serious Injury Rescue Group from Brigade HQ, or to request a helicopter MEDEVAC.
4. Casualties evacuated by air will be taken through to a higher formation field hospital, however all other rearward evacuations will be processed through the Brigade Rescue Station in the rear.

Airborne logistics

8.15 A number of conflicts since world war two proved that the use of helicopters in the jungle was not only a good way of deploying troops deep into the enemy's rear, but also enabled rapid resupply and evacuation of casualties. These lessons have been well learned by the Olvanan military, and airborne logistics form a cornerstone of their support to jungle operations.

8.16 These operations are not without their risks, however if they are planned and conducted appropriately they are relatively straightforward to conduct, down to Platoon level.

8.17 The element being resupplied will first move to and secure an area of sufficient size to establish the LZ. Generally, these only need to be out of small arms range, preferably with some sort of terrain feature separating them from the likely avenue of enemy approach.

8.18 Patrols are then sent out and ISR drones will reconnoitre possible enemy anti-air ambush locations. Two options are available, roping down/dropping supplies, or the actual clearance of an LZ itself. The former is preferred as the latter takes additional time and effort to undertake. Riverbeds, especially wider bends in rivers can be used, as well as existing jungle clearings.

Air dropped logistics

8.19 Air dropped logistics are nothing new, and can be an excellent way of providing significant volumes of stores to a force operating behind enemy lines, for example in the 'hard nut defence' tactic. There are two main issues with the use of air dropped logistics in support of normal offensive and defensive operations. They are subject to interdiction and loss at a much higher level than using helicopters, and the preparation of a drop zone requires significant amounts of territory to be secured, or for an existing large clearing to be utilised. This in and of itself, means that the enemy may have already identified it as a possible drop zone, and it may well be under observation.

8.20 However, in co-ordination with the Olvanan Peoples Air force, an air-dropped resupply can be achieved, and will indeed provide a significantly larger delivery of stores in one drop, than through helicopter resupply. To that end, it is more likely that this sort of operation will be undertaken at the Battalion or CA-BDE level and not lower.

8.21 The more likely option for air-dropped logistics in modern jungle warfare is the incorporation of drone delivered logistics. Using drones reduces the impost of pre-preparation of landing or drop zones, and the human cost in losing helicopters, planes and their crews. The trade-off will be the limited carrying capacity, however, as Olvana is a leading nation in the development and delivery of drone technology, this is something where quantity has a quality of its own.

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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/.

2IC	Second in Command
ADF	Australian Defence Force
AO	Area of operations
APC	Armoured personnel carrier
BN	Battalion
CA-BDE	Combined Arms Brigade
CDET	Company detachment
CDF	Chief of the Defence Force
COA	Course of action
C2	Command and control
DZ	Drop Zone
ECM	Electronic countermeasures
EW	Electronic Warfare
HQ	Headquarters
IED	Improvised explosive device
IFV	Infantry fighting vehicle
ISR	Intelligence, surveillance, and reconnaissance
JMSD	Jungle Mobility Support Detachment
KDP	Key Defence Point
LZ	Landing Zone
MANPAD	Man Portable Air Defence
MEDEVAC	Medical Evacuation
MSR	Main supply route
NCO	Non-commissioned officer
OCP	Olvanan Communist Party
OHC	Olvanan High Command
OPA	Olvanan People's Army
ORBAT	Order of Battle
PL	Platoon
SAPM	Scatterable Anti-Personnel Fragmentation Mine
SUAS	Small un-crewed aerial systems
SHORAD	Short range air defence

UAS	Un-Crewed Aerial System
UAV	Un-Crewed Aerial Vehicle