



**ARMY SCHOOL OF LOGISTIC OPERATIONS**  
**STAFF MILITARY APPRECIATION PROCESS**  
**COMBAT SERVICE SUPPORT PLANNING GUIDE**

**Version 2.1**



**ARMY SCHOOL OF LOGISTIC OPERATIONS  
BATTLESPACE OPERATING SYSTEM  
PLANNING AIDE-MEMOIRE**

1. CSS activity required to develop a Concept of Logistic Support (COLS) for a particular operation needs to be conducted in conjunction with the other cells. While the MAP is the guide that should be followed by the whole staff, specific action needs to occur by the CSS BOS planner that does not necessarily align with the SMAP. CSS planning is often “half a step behind” the S3 MAP resulting in reduced timeframes for CSS consideration and requiring different tools to be used. The following aide-memoire is designed to aid in CSS EFFECTS based planning (that planning that generally occurs at a formation headquarters with subsequent tasking to a CSS unit). It does however retain utility for a CSS unit MAP, where tasks can be substituted for effects.

**Table 8-1: Intelligence Preparation and Monitoring of the Battlespace**

<b>STEP (a)</b>	<b>EXPECTED S2/S3/S5 INPUTS TO S4 (b)</b>	<b>S4 ACTION (c)</b>	<b>S4 OUTPUT (d)</b>
<b>Intelligence Monitoring and Preparation of the Battlespace</b>	1. LofC overlay (from S2 ASCOPE/OCOKA) 2. Infrastructure overlay (from S2 ASCOPE/OCOKA) <sup>1</sup> 3. Stakeholder analysis: - who they are - weapon system - intentions 4. MCOO 5. Battlespace characteristics	1. Analyse environmental effects on CSS <sup>2</sup>	I1. CSS environmental effects matrix <b>(example at Annex A)</b> I1b. CSS time line/analysis which forms the basis of the CSS synch matrix
		2. Review LofC and Infrastructure Overlays <sup>3</sup> and matrix	I2. Modified overlays including: possible CSS nodes locations and AME transit range (examples at <b>Annexes B &amp; C</b> )
		3. Conduct 4D analysis of routes and CSS nodal locations	I3. Enhanced CSS effects overlay
		4. Analyse deep battle / deeper close battle capy as well as other stakeholder issues <sup>4</sup>	I4. CSS Threat Matrix <b>(example at Annex D)</b>

<sup>1</sup> The S2 cell is responsible for producing the LofC and infrastructure overlays. Often, due to time constraints, the compilation of these may fall to the S4 cell.

<sup>2</sup> The environmental impact on CSS will usually examine issues of weather on CSS (extreme cold or heat on pers, eqpt, supplies), tidal issues for LOTS, possible routes (capacities / durability / density), obstacles and choke points for CSS functions, possible CSS node location, etc.

<sup>3</sup> The LofC and infrastructure overlays are a graphical representation of the AO/AI depicting specific detail concerning CSS. The S4 cell needs to be prepared to significantly analyse and modify the overlays to suit their needs.

<sup>4</sup> This can only occur once the S2 cell has completed its analysis of stakeholders. The S4 cell must view it from impact on CSS nodes and LofC in relation to the hostile force deep battle and longer reach close battle capabilities as well as civilians (IMG, IDP, local population sympathies). An output of the threat matrix should be whether a request for a Rear Area Security Force (RASf) is required.

**Table 8-2: Mission Analysis**

STEP (a)	EXPECTED S2/S3/S5 INPUTS TO S4 (b)	S4 ACTION (c)	S4 OUTPUT (d)
1. Mission Analysis <sup>5</sup>	1. Assessment of COMDs intent 1 Up and 2 Up 2. S3 task list 3. COG construct for own 4. S3 FOA 5. DE & Mission 6. Overall operational concept 7. COMD combat effectiveness levels (CE%) for equip and pers	1. Conduct own troops analysis <sup>6</sup>	M1a. Staff calculator with ORBAT M1b. Clear determination of CSSU capacities for EME, Hlth, Sup and Tpt
		2. Conduct CSS tasks analysis on specified CSS tasks and implied CSS tasks from S3 task list and DE analysis <sup>7</sup>	M2a. CSS task analysis matrix (example at Annex E). Critical Logistic Events (CLE)
		3. Conduct CSS FOA analysis	M3. CSS FOA analysis matrix (example at Annex F)
		4. Develop list of IR as necessary	M4. CSS IR list
		5. Analysis own force requirements by manoeuvre element or FE (Rate of Effort Estimate [RofEE]) <sup>8</sup>	M5. RofEE for: a. Veh usage b. Ammo usage c. EMEFIX reqmt d. Pers cas (NBCAS/BCAS)
		6. Conduct CAPABILITY vs REQUIREMENTS ANALYSIS which is a preliminary CSS calculation using RofEE <sup>9</sup>	M6a. A functioning CSS staff calculator M6b. Broad estimate of CSS feasibility of the operation M6c. Estimate of CSS shortfalls
		7. Analyse estimated CSS shortfalls and identify mission specific risk events that may affect CSS operations.	M7a. Estimate of CSS warstoppers <sup>10</sup> M7b. Estimate of the operation's CSS culminating points (by time or location) L4c. Anticipated external CSS support requests

<sup>5</sup> Mission analysis and IPMB will be done concurrently where possible to save time.

<sup>6</sup> The Own Troops Analysis essentially provides the starting data for the CSS Capability versus Dependency Requirements analysis later in the MA. It needs to specify (in a staff calculator of some sort) the ORBAT of the entire dependency, preferably broken down into sub-unit level, as well as specifying the CSS capability (ie: capacity or throughput) in terms of sup, tpt, hlth and maint.

<sup>7</sup> Some CSS action for Mission Analysis/IPMB cannot be completed until the S3 cell has completed its own action (S3 tasks, COMD CE%, Overall op concept, and en deep COA) and passed the information to the S4 cell.

<sup>8</sup> RofEE is the fundamental aspect to good CSS planning. While the actual S3 scheme of manoeuvre has not been developed, it is important to give the COMD a feel for whether or not the mission concept is feasible from a CSS perspective. The RofEE must not just apply "blanket" figures to the whole force but address individual capabilities within the force/formation on its anticipated RofE.

<sup>9</sup> The analysis is the CSS Capability versus Dependency Requirements analysis. This analysis forms the basis of how CSS **CAN** be provided to the dependency.

<sup>10</sup> When estimating if a warstopper exists, the S4 cell should also provide possible solutions to overcoming the problem. Warstoppers should be used to influence the S3 COA development.

			An example Risk Profile template is at Annex H
--	--	--	--

**Table 8-3: Course of Action Development**

STEP (a)	EXPECTED S2/S3/S5 INPUTS TO S4 (b)	S4 ACTION (c)	S4 OUTPUT (d)
2. Course of Action Development	1. S3 COA incl - COA sketch - COA statement - COA synch matrix <sup>11</sup>	1. Develop CSS options for the individual components of CSS: - By sub class of supply - Distribution methods - Distribution cycle frequency - Repair - Recovery - Pers casualty treatment - Pers casualty evacuation methods - CSS node locations - MSR/SSR options	D1. CSS options matrix <sup>12</sup> <b>(example at Annex G)</b>
		2. Eliminate those options that cannot work for the operation	D2. Modified CSS Options Matrix
		3. Analyse each S3 COA in order to gain a more accurate ROE <sup>13</sup>	D3a. Updated CSS staff calculator (refined ROE) D3b. Accurate estimate of feasibility of each COA D3c. Refined estimate of shortfalls and CSS risks
		4. Analyse estimated CSS shortfalls	D4a. Confirm any support requirements for CSS D4b. Confirm CSS culminating points (by time or location)
		5. Prepare graphical depiction of CSS capability vs Dependency Requirements for: - <b>Sup:</b> Water, Dieso, Ammo - <b>Tpt:</b> Distr of Water, Dieso, Ammo - <b>EME:</b> Attrition of high priority equipment in relation to Combat Effectiveness levels - <b>Health:</b> Attrition of pers in relation to CE% levels, pers requiring surgery in relation to Level 3 capability, and pers requiring holding in relation to holding capacities	D5. Graphs for each CSS component as a minimum for inclusion in the brief to the COMD
		6. Confirm any approved additional assets from prior external support	D6a. Update troops to task in CSS options matrix

<sup>11</sup> The S3 cell is unlikely to provide the COA until later in the available staff time for COA Dev. Therefore the concurrent activity by the S4 cell needs to focus on developing likely support options to deal with most possible COA.

<sup>12</sup> The CSS Options Matrix can be as detailed as possible. It is important that it addresses the manner in which a particular element of the logistic continuum can be delivered (ie: distr of CRP via auto replen on a 1 day freq or 2 day freq or 3 day freq or demand replen with daily collection or collection every 2<sup>nd</sup> day).

<sup>13</sup> When the S3 COA are provided, each COA must be carefully analysed to determine an accurate ROE. Again, a “blanket” application of an ROE across the entire organisation is not likely to be realistic and therefore, detailed analysis by unit (or even sub-unit) is required.

		requests	D6b. Update CSS capability
		7. Comparative analysis of the remaining “live” options in the CSS options matrix <sup>14</sup>	D7. A single option in each line which becomes the “plan” for that sub-CSS element and contributes to the COLS
		8. Construct draft COLS	D8a. Draft COLS statement D8b. Draft COLS sketch by sub-CSS BOS D8c. Draft COLS synch matrix

---

<sup>14</sup> This MAP step commences with a number of S3 COA. They must each have a CSS options matrix and if they are phased, each phase should have its own matrix. The comparative analysis can be conducted in a number of ways but it must consider the inter-relationships between the various competing CSS priorities. This action essentially eliminates all but one option in each matrix line.

**Table 8-4: Course of Action Analysis**

<b>STEP (a)</b>	<b>EXPECTED S2/S3/S5 INPUTS TO S4 (b)</b>	<b>S4 ACTION (c)</b>	<b>S4 OUTPUT (d)</b>
<b>3. Course of Action Analysis</b>	1. Results of S3 wargame 2. S3 preferred modified COA <sup>15</sup>	1. Finalise the COLS	A1a. COLS statement A1b. COLS sketch by sub-CSS BOS A1c. COLS synch matrix
		2. Conduct synch check of COLS to ensure that it works. <sup>16</sup>	A2. Synch checked COLS
		3. Conduct technical wargame of COLS. <sup>17</sup>	A3. Modified COLS
		4. Conduct enemy wargame of COLS. <sup>18</sup>	A4. Modified COLS

<sup>15</sup> The S3 cell will not provide this information until later in the available staff time for COAA.

<sup>16</sup> Start at the preceding CSS node and end at the first dependency of the last CSS node (ie: from the FSG [first CSS node] through to Inf Coy [dependency] from the A Echelon [last CSS node] within a BDE setting).

<sup>17</sup> Find the breaking point of the technical aspects of the COLS at key points/CE/DE/etc by examining; vehicle breakdowns for distr, contaminated fuel stocks, loss of recovery assets, loss of evac assets, mass casualty, Pri 1 CASEVAC at the outer extremity of the AO, etc.

<sup>18</sup> Use the CSS threat matrix against the COLS. This wargame could include; denial of routes, destruction of bridges on supply routes, attrition of critical capability/stocks, convoy ambush (and subsequent loss of asset/stock), harassment of nodes (resulting in stand-to and loss of productivity), pilfering by civilians, etc.

**Table 8-5: Decision and Execution**

<b>STEP (a)</b>	<b>EXPECTED S2/S3/S5 INPUTS TO S4 (b)</b>	<b>S4 ACTION (c)</b>	<b>S4 OUTPUT (d)</b>
<b>4. Decision Execution<sup>19</sup></b>		1. Commence preparation of the CSS Annex to the OPORD	E1. CSS Annex with sub-CSS BOS appendices
		2. Input to S3 DE evaluation of COA with regard to sustainability and supportability	E2. Advice to S3

---

<sup>19</sup> By the commencement of the DE step of the MAP, the S4 cell should have a final COLS that will apply to the S3 scheme of manoeuvre. While technically the COMD is yet to decide on which COA to execute, the COLS should be able to cater for all eventualities with a reliance on the S3 wargaming results.



## CSS ENVIRONMENTAL EFFECTS MATRIX

ENVIRONMENTAL ELEMENT <sup>20</sup>	CSS CAPACITY / THREAT <sup>21</sup>	CSS ANALYSIS <sup>22</sup>	CSS IMPLICATION <sup>23</sup>
Terrain (contours, ground firmness, etc)	<p>1. Terrain across the AO is diverse ranging from mountainous and sparsely vegetated in the North to sandy desert regions in the East</p> <p>2. There are large areas of complex urban terrain in city centres including; XXXX, XXXX, XXXX</p> <p>3. There are several defilade areas along the MSR/SSRs.</p> <p>4. The MSR/SSRs are regularly flanked by sand dunes and large boulders and are dominated at regular intervals by high ground.</p>	<p>1. a. Movement corridors predictable.</p> <p>b. Open terrain offers good observation, fields of fire and relatively unrestricted movement for A vehicles</p> <p>c. High ground and vegetated areas provide good observation, concealment and cover.</p> <p>d. Both mountainous and desert terrain could restrict RWAME operations, particularly during sandstorms.</p> <p>2. a. Complex urban terrain can provide cover, concealment and the opportunity for observation.</p> <p>b. Urban terrain will slow vehicle convoys</p> <p>3. - 4. Defilade, vegetated areas and high ground provide good cover and concealment and the opportunity for observation and disruption of friendly movements</p>	<p>1.a. Identified MSR and SSRs remain the most effective and expedient means to deliver CSS throughout the AO.</p> <p>b. – c. Requirement to cam and conceal CSS ops as far as possible to avoid detection by En recon/ SF elms</p> <p>d. Requirement to move surface evac assets forward to support withdrawal</p> <p>2. a. Requirement to cam and conceal CSS ops as far as possible to avoid detection by En recon/ SF elms</p> <p>b. Robust actions on, and alternate routes required for movement through urban areas</p> <p>3. - 4. Recon needs to be conducted to identify these areas. Robust actions on, and alternate routes should be identified. Possible RASO requirement for CSS convoys.</p>

<sup>20</sup> List all environmental / time & space issues that could impact CSS. This would at the least include:

- Road networks
- Bridges
- Water sources
- Weather/climate
- Tides
- Terrain (contours, ground firmness, etc)
- Choke points / critical points
- Possible CSS node locations

<sup>21</sup> Determine capacities of areas in terms of vehicle density, storage capacity, tonnage rating, etc. It may also be an issue with regard to being a threat such extreme cold or heat and its impact on pers, eqpt maintenance or stock serviceability.

<sup>22</sup> Conduct an analysis of the element (ie: ask “SO WHAT?”).

<sup>23</sup> This is the result of the analysis in terms of what does CSS need to do. It would usually be in terms of a CSS action (by line of CSS) in relation to the environmental issue. It is likely that there would be a number of CSS implications resulting from each element. These implications should then be used as part of CSS COADev and/or input to S3 COADev.

Daylight	Sunrise: 0715 h Sunset: 1730 h Hours of darkness: 11 Hours 45 minutes	Hours of darkness: 11 Hours 45 minutes	Sufficient time for road movement of CSS elms under cover of darkness.
Lunar Illumination	1. 19 - 23 July X1: Full Moon 2. 24 - 27 July X1: $\frac{3}{4}$ Moon 3. 28 - 02 July X1: Half Moon 4. 03 - 06 Aug X1: $\frac{1}{4}$ Moon 5. 07 - 11 Aug X1: New Moon	1, 2. Good visibility for night operations 3, 4. Limited ambient light and visibility for night operations 5. Virtually nil ambient light and visibility to support night operations	1, 2. Movement at night of CSS elms conducted during these periods preferred for visibility.
Weather/Climate	1. Desert climate: min temp 35°C, max temp 50°C 2. Currently the dry season: average daily rainfall < 1mm 3. Regular sandstorms from the East, usually during mid afternoon.	1. a. Urban centres are conducive to the spread of vector borne and other diseases. b. Water consumption rates will increase due to the extreme heat. c. The temp, sand and dust is likely to have a negative impact on vehicles, supplies and equipment. 2. - 3. a. Road movement speed may be affected by reduced visibility, poor road conditions and sandstorms. b. RWAME operations may be effected by sandstorms, reduced visibility and poor weather conditions.	1. a. (1) Preventative health teams will be required to conduct health surveillance and instigate preventative measures against vector borne diseases (2) Personal Protective measures must be instigated across the force. (3) Temperate rates will be required when calculating casualty estimates b. A significant supply of water per person per day will be required c. The climactic effects on equipment, vehicles and supplies must be considered. 2. - 3. a. Contingency planning for potential reduction in distribution rates/capability in to the AO. b. Surface evac contingency must be in place to reduce reliance upon RWAME c. CSS nodes will require adequate drainage and formed road ways which may require Engr spt.
Water sources	Persisting conditions have reduced local water storage to minimal capacity. Ice -	Municipal Water and utility services are available unless destroyed. Northern	There are sufficient water resources to support force elements. Use of local

	<p>operations in constant high temperature will result in increase demand for ice. Procurement of ice will require contract support from local areas. Major water sources available at: XXXX, XXXX, XXXX</p>	<p>areas all pipelines are in good condition and present significant capacity for water distribution. Local authorities are unable to provide additional water distribution assets.</p>	<p>water services may increase tensions with local populations due to water restrictions. (need to provide own water) Water distribution by integral asset, if addition distribution capacity required this will have to be sourced from non government agencies.</p>
Choke points / critical points	<ol style="list-style-type: none"> <li>1. Bridges</li> <li>2. Culverts</li> <li>3. Urban centres</li> <li>4. Terrain <ol style="list-style-type: none"> <li>a. XXXX</li> <li>b. XXXX</li> <li>c. XXXX</li> <li>d. Observation Towers IVO XXXX and XXXX</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. Bridges are designated key terrain and are critical to movement within the AO</li> <li>2. Culverts provide high ground, defilade areas and observation of movement in the AO</li> <li>3. Urban centres will slow road movement and make convoy movement vulnerable to En interdiction</li> <li>4. Terrain channelling vehicular movement will create choke points making movement predictable and targetable</li> </ol>	<p>1. – 4. RASO requirement. These areas should be avoided or observed and where possible secured or dominated prior to the arrival of CSS elements.</p>
Possible CSS node locations	XXXX, XXXX, XXXX	Road, Air and Railheads available. Critical Points	Can establish CSS nodes at XXXX, XXXX or XXXX provide road, rail and air access.
Local Authorities	Police and local authorities have poor presence within the AO - co-operation (friendly and helpful) Fire services willing to provide assistance	Police barely capable of maintaining law and order. Fire services with notice could assist in fire control	Local police need assistance to maintain law and order within AO.

## CSS INFRASTRUCTURE MATRIX

INFRASTRUCTURE ELEMENT <sup>24</sup>	CSS CAPACITY / THREAT <sup>25</sup>	CSS ANALYSIS <sup>26</sup>	CSS IMPLICATION <sup>27</sup>
Road networks	1. Significant road network throughout country 2. Roads to a very high standard 3. Current threat on MSR PHOENIX / SSR unconfirmed (likely to be AMBER) 4. Can spt both A & B vehicles 5. MSR PHOENIX 4 lane sealed highway and is wide enough for hvy vehicles 7. Very heavy vehicles will require significant recon 8. A SSR has been ID as the road between XXXX, XXXX, XXXX Hwy and XXXX Hwy. 9. Lateral Routes: XXXX - XXXX Rd XXXX Hwy XXXX Hwy. XXXX Rd	1. High mobility access, 2. Dependable and additional engr spt should not be required unless belligerent activity renders them unusable. 3. The MAF will attempt to disrupt operations by targeting key points along routes. 4. MSR PHOENIX can be used for limited A veh movement (class 130). 5. MSR PHOENIX allows 2 way traffic. 8/9. SSR and laterals provide good alternative routes allowing freedom of action for the movement contingencies between the SSR and MSR PHOENIX and prov freedom of action if either is restricted. Capable of supporting both A & B vehicles (classes 60 -130)	1. Good distribution network can be est. 2. Eng assets may not be required to be attached to CSS elms. Eng can be used elsewhere in AO. However engr need to BPT conduct sustainment engineering. 3. There is significant requirement for convoy protection, route recon and identification/mitigation of choke points. 4. A veh can drive on roads if req however roads will not sustain prolonged use. 5. Significant supply route that can sustain a large amount of traffic, allows civilian and mil traffic to move at the same time, and requires limited engr work. 8. Affords a greater freedom of movement to the AO. Maybe used as an alternate if MSR PHOENIX is restricted.

<sup>24</sup> List all available logistic infrastructure issues that could impact/supplement CSS. This could as a minimum include:

- Hospital
- Warehouse storage
- Maintenance facilities or capabilities
- POL storage / supply
- Foodstuffs availability / supply
- Waste disposal
- Transport capabilities/contractors
- Casual labour availability
- Recovery capability
- Casualty evac capability
- Mortuary contractors

<sup>25</sup> Determine capacities in terms of spare capacity for ADF use, is it fully functioning, and costs.

<sup>26</sup> Conduct an analysis of the element (ie: ask "SO WHAT?"). Useful outputs from the analysis are in terms of reliability, security and meeting political objectives.

<sup>27</sup> This is the result of the analysis in terms of can CSS use it. It is likely that there would be a number of CSS implications resulting from each element. These implications should then be used as part of CSS COADev and/or input to S3 COADev.

			<p>These allow CSS assets to move in to and around the AO quickly. There are several major SSRs that in conjunction with lat routes will provide a great deal of flexibility to CSS plans; however, this will require a robust traffic control plan</p> <p>9. Affords a greater freedom of movement to the AO. In conjunction with the SSRs these allow CSS elms to swap from one SSR to another if MSR PHOENIX is interdicted.</p>
Bridges	<p>1. Capacity of bridges along MSR is 130T. Many ancillary roads throughout the country have small bridges and culverts rated between 60T and 130T.</p> <p>2. The rail lines within country also have bridges and culverts</p> <p>3. The major bridges are on the XXXX River between or at: XXXX, XXXX, XXXX and XXXX</p>	<p>1/2. Bridges are likely to become choke points. As KT these bridges are likely to be targeted by belligerent forces and cause delays, damage or loss of routes.</p> <p>3 Capacity of bridges unknown - RFI for engineer recon. There is a limited amount of crossings over the XXXX River. If these are tgt or denied it would greatly restrict its movement in subsequent phases of the operation.</p>	<p>1&amp;2. Through recon of these critical points will need to occur. Alternate routes and contingency planning must be undertaken to ensure the continued provision of CSS and movt support should bridges be targeted by enemy elements.</p> <p>3. Without control of these bridges, movement north of the IRB could be greatly reduced or even halted. Alternate sites for engr bridging assets may have to be considered IOT retain movement ability over the river. Alt methods of tpt may also have to be looked into such as Air lift, air drop and train.</p>
Rail	<p>1. Extensive rail network.</p> <p>2. Main line sth to north through XXXX, XXXX and XXXX.</p> <p>3. Priority normally goes to passenger trains</p> <p>4. Unknown rolling stock</p> <p>5. Railway crossings mixture of gated and not gated</p> <p>6. Major bridge</p>	<p>1-2 &amp; 9. Can consider rail as mode of tpt/sup.</p> <p>3-4. Need to consider civ priorities.</p> <p>5. Potential for accidents at crossing points.</p> <p>6-7. Vulnerable to belligerent atk which could render the line completely useless for large periods of time. Loaded cargo would be very hard to cross-</p>	<p>1-4 &amp; 9. Liaise with Civ re: AS tpt/sup reqs. Also need to consider requirements for chains and tie downs.</p> <p>5. Control measures need to be introduced for rail xing to reduce risk of accidents.</p> <p>6-7. This is a very vulnerable mode as it is easily targeted and the implications are severe. Thorough recon of</p>

	<p>crossing at the following locations: XXXX causeway bridge  XXXX river bridge at XXXX River Bridge at XXXX River Bridge at XXXX  7. Numerous small bridges and culverts.  8. Numerous small sidings and yards along line at the following locations (but no cranes or end ramps): XXXX, XXXX, XXXX, XXXX  9. Civ infrastructure avail for contracting – XXXX rail \$X per tonne/km  Load/unload \$X per gang per hr  10. Standard Gauge between XXXX and XXXX Broad Gauge XXXX to XXXX  11. Restrictions on siding 80T in, Max Width 2.502m and height 3m  12. Rail transit times: XXXX (150km) a spd 60km/hr, XXXX - XXXX (100km) av spd 50km/hr.  Restrictions- train length limited to 200m (approx 7 wagons /train) XXXX capacity to load 8 VFKX wagons at platform, XXXX load/unload 8 VFKX wagons (end loading ramp for vehicles avail) XXXX freight yard can handle up to 500m of train without disrupting main line, XXXX freight yard 1000m of train.</p>	<p>load if train was sudden halted on the line.  8. Allows for more than one train load to be moved.  9. Very expensive mode for tpt that does not afford a great deal of flexibility.  10 – 12. Possible restrictions.</p>	<p>these critical points will need to be considered and alternative plans est for the event this mode is restricted due to atk or civil transport use.  8. Requirement for terminal support and liaison with Civ auth due to lack of infrastructure and personnel.  9. Could cost a lot of money and have a very low efficiency if attacked or restricted.  10 – 12. Possible restrictions.</p>
Airports	<p>1. Numerous airfields in Northern regions.  2. Main airfield is XXXX. C130 /C17 capable airfields are loc at XXXX, XXXX,</p>	<p>1. Can consider air as mode of tpt/sup that can access most parts of the AO.  2. C130s can utilise most of these airfields</p>	<p>1. Prov quick distr of sups and possible pax that is hard to tgt enroute. Will need to have alt landing gnds prepared to remain</p>

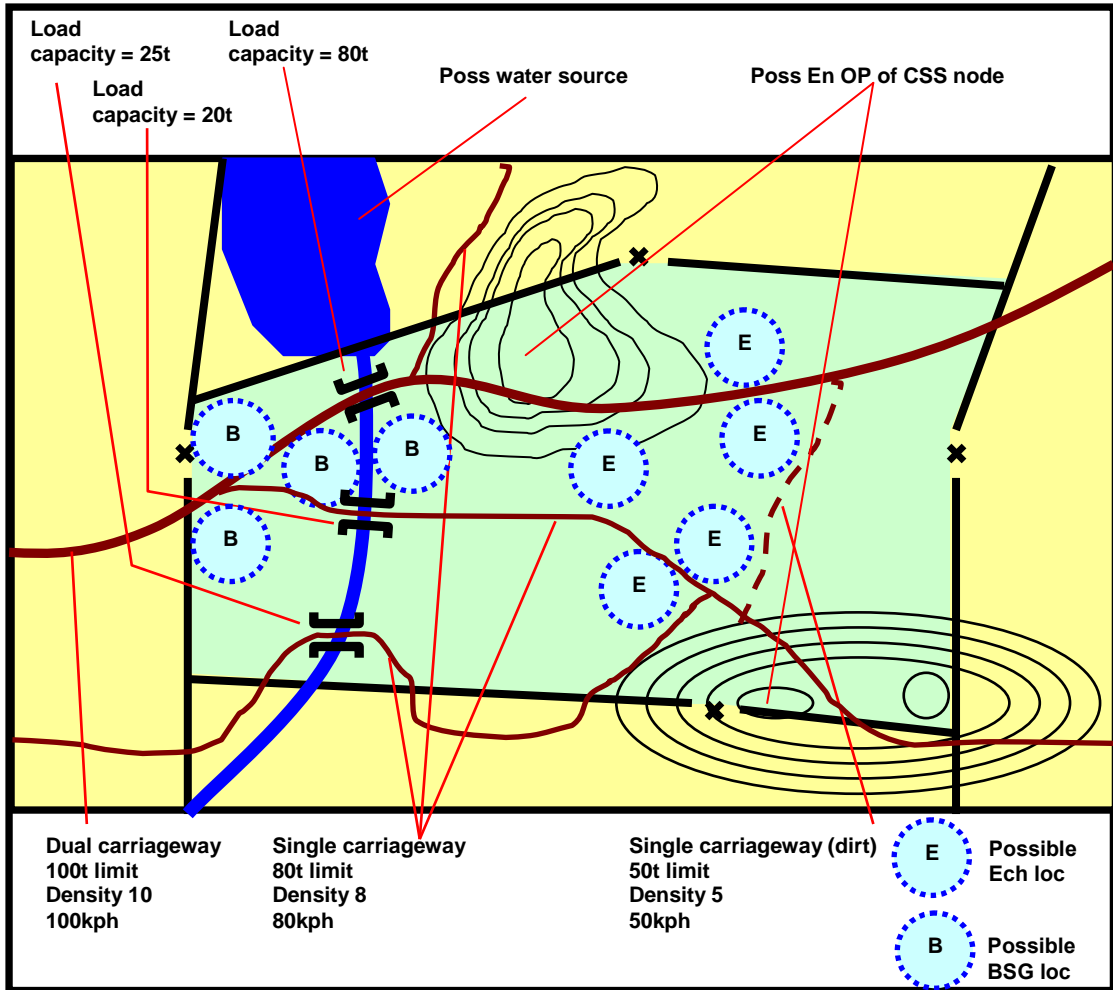
	<p>XXXX and XXXX.  3. Most other airfields are Caribou capable with assessment required for C130.  4. Time restrictions - C130: 20 min load/unload, 30 min refuel and svc/2hrs flight time. Flight times C130 XXXX to XXXX 50min XXXX to XXXX 1 h 10 min, XXXX to XXXX 1 h 35 min. CH-47 Flight times XXXX to XXXX 45 Min, XXXX to XXXX - 1 hr and XXXX to XXXX 1 hr 10 min.</p>	<p>which means a large amount of sup can be moved into the area at once.  3. Troop movement and smaller resups could be conducted in the AO.</p>	<p>flexible. Planes could be tgt on gnd therefore airfields will need to be secure. Possible liaison with civilian authorities will need to be conducted.  2. C130s could be used in the initial resup, or if there was a surge in activity. They could also be utilised in the initial move north. Possible use of Air Dispatch personnel to supplement RAAF pers.  3. Caribous could be utilised for re-sup.</p> <p>With all air-movement, ground tpt liability needs to be considered to move the sups to other locs etc.</p>
Ports	<p>1.Cranes (heavy Lift Capacity 26.5 Tonne and lowest capacity 5 Tonne, 50 tonne ISO available, Pilotage available to XXXX Bay (No restriction) Load (wharves) Corinquay west Stern loading Ramp (roll on roll off) 26.5 Tonne cap, Phone less contacts Port charges and various warehousing available.</p>	<p>1. All weather/all hour port capable of strategic lvl inload/backload; however current info suggests cranes and RORO cannot lift M1.</p>	<p>Can use sea for strategic inloading/backloading. Travel times for sea will have to be added to provision lead times. Can backload hvy equipments if unable to repair in country – need to consider use of spreader bars to lift M1 or other options.</p>
Power	<p>1. Supply only capable of sptng surge for the local population  Not capable of sptng a significant deployment  The local authorities are willing to assist where possible</p>	<p>1. Limited power avail for AS use.</p>	<p>1. AS forces will req to generate own power therefore the requirement for additional generators may need to be considered. The rate of fuel use and maint will be higher as a result.</p>
Water	<p>1. Potable water is available through the municipal authorities.  2. No likelihood of water shortages in the next 12 months.  3. Pipelines are in good condition and represent a significant capability.  4. Authorities willing to assist; however, do</p>	<p>1. We can utilise local water sources but will need to distribute it using AS assets.</p>	<p>1. Will require engineer support and Pvt med support to be utilised. Provides considerable flexibility for AS FE to win own water thus reducing burden on strat lift and 3<sup>rd</sup> line tpt assets to deliver stock from NSB and/or XXXX.</p>

	not have the capability to will or resources to provide additional distribution assets.		
POL	<p>1. ULP, Dieso , Avtur and Avgas available at service stations and airfields</p> <p>2. Currently at 40% holding capacity</p> <p>3. Retailers concerned that AS usage will effect local market</p> <p>4. Also concern about atk from belligerents due to helping AS</p> <p>5. Bulk fuel capabilities in Geelong and Melb.</p>	<p>1&amp;2. Limited storage and supply avail.</p> <p>3&amp;4. Host nation supply unreliable in current political climate.</p> <p>5. 3<sup>rd</sup> line could possibly use for bulk storage.</p>	<p>1-2. Due to composition of BGs a high amount of fuel will be required at a high rate of effort. Current local infrastructure will be able to be considered for limited support. Will not meet all of AS FE needs.</p> <p>3&amp;4. The CSS distr system potentially has to be able to be self sufficient therefore a greater rate of effort in transport and stock holding.</p> <p>5. With a bulk sup at XXXX or XXXX fuel could be available on demand and therefore ready for any surges in the operation.</p>
Food stuffs	1. Due to crop failures and famine for past 4 years no fresh rations can be procured from local economy.	1. No Class 1 avail from local infrastructure.	1. AS CSS elms will be required to supply all Class 1 (Rations) therefore this will need to be moved through the distr system from NSB.
Waste Disposal	Non stated	RFI submitted	Waste disposal plan needs to be considered. Existing infrastructure should be sufficient; however, collection assests will probably need to come from AS FE.
Local Labour	1. Avail to meet most tasks whilst tact sit is stable. Cost is \$16 /hr	1. May consider use of local labour for initial deployment however noting that there is significant political turmoil in the country this may not be a reliable source.	1.All CSS distr will probably need to be conducted by AS forces.
Recovery Assets	Non stated	RFI submitted	Recovery plan needs rely on assets from AS FE.
Casualty Evac/Health	XXXX has numerous L3 facilities ; however the area of XXXX cannot be used by AS	Limited Hlth spt available from Fantasia. Cannot be relied upon and	AS CSS elms will be required to provide health support, including evac, Class 8



	FE as it is being used by local government forces. Other L3 facs within XXXX loc through Nth incl XXXX, XXXX, XXXX and XXXX will only accept emergency surgery cases.	classification of 'emergencies only' is ambiguous.	and blood requirements.
Mortuary	Non stated	RFI submitted	Need to rely on AS FE to conduct mortuary support.
Vehicle Spares	Limited holding for commercial type vehs. No stock avail for Mil vehs	No RPS from local supply	AS CSS elms will be required to supply all Class 9.
Warehouse storage	Capacity of Refrigeration and cold storage - Integral assets across Bde will prov limited cold storage, this will be insufficient for both short and long term requirements. Local infrastructure does not provide adequate warehousing.	Require significant refrigeration and cold storage facilities to be contracted from local areas, supplemented by refrigeration assets brought fwd from NSB.	Require significant refrigeration and cold storage facilities to be contracted from local areas, supplemented by refrigeration assets brought fwd from NSB.
Accommodation	pre existing accommodation for large numbers of personnel in short supply - green fields site readily available	Local area unable to provide sheltered accommodation	Units must be prepared for green field deployment

CSS EFFECTS OVERLAY



## CSS THREAT MATRIX

THREAT ELEMENT <sup>28</sup>	WEAPONS CAPABILITY <sup>29</sup>	THREAT TO CSS <sup>30</sup>	ANALYSIS OF THREAT WRT CSS <sup>31</sup>	THREAT MITIGATION <sup>32</sup>
<p><b>10 Mech Div (10MD)</b> 10 MD is Div complete, reinforced with MAF Arty</p> <p>10 MD current disposition is North of the Murray River.</p> <p>MAF SF elements have been identified South of XXXX.</p> <p>Elements unlikely to destroy key crossing points along rivers as these are required for 10 MD Advance.</p>	<p>1. Range of Sml/Mdm Wpns Standard weapons of all forces, capable to interdict and impact on non-armoured weapons.</p> <p>2. Anti-Armour Wpns. 10 MD employs the full range of anti-armour wpns ranging from RPG-7 through to AT-5, capable to interdict all vehicle types out to a range of: 4000m</p> <p>3. Indirect Fire Support: 10 MD has the full range indirect fire weapons from 120mm Mort, 152mmSP and BM-21 MRL. This will have the ability to interdict CSS operations. Ranges (assessed not to use RAP): 120 – 7100m (all Inf Bde) 2S1 – 15300m 2S3 – 18300m 2S5 – 28500m BM-21 –</p>	<p>1 &amp; 2. All vehicles are vulnerable to the complete range of 10MD wpn systems.</p> <p>3. Indirect fire support will disrupt CSS operations, through targeting of HVT, choke points along routes and likely CSS locs.</p> <p>4. Avn elements pose a significant threat through coup-de-main operations.</p> <p>5. All 10MD capable to conduct operations by day &amp; night.</p>	<p>1. Could disrupt CSS Ops throughout the AO by targeting opportune CSS assets conducting forward operations.</p> <p>3. Indirect fire missions could affect our CSS by destroying stocks and CSS assets.</p> <p>4. Coup-de-main operations would result in the total disruption and possible loss of CSS assets, infrastructure and stocks.</p> <p>5. The use of night vision would result in all CSS operations to be observed and possibly targeted.</p>	<p>1. Route recon needs to be conducted to identify possible KT, and request S3 spt for RASO. TTPs and SOPs need to be reviewed in regards to these threats and actions. Sup classes to be spread across convoys to reduce chance of major losses. RASO needs to be considered for Fwd CSS operations.</p> <p>3. Ensure that CSS assets are dispersed to limit effects of indirect fire. Ensure that critical CSS assets are kept out of range. Use of all re-supply options (Dumps, DP etc).</p> <p>4. Active patrolling within the vic of the CSS nodes as well as the use of AD assets to protect critical CSS assets. Deny threat the use of ground, through RASO.</p> <p>5. Conduct CSS operations by day and night, avoiding the establishment of routines.</p>

<sup>28</sup> Type of enemy deep battle/other physical threat against CSS nodes/LofC.

<sup>29</sup> List the weapon systems that can be brought to bear against CSS nodes/LofC. In the case of Civilian IDP or Local it may be nil.

<sup>30</sup> Describe the threat that is posed against the CSS node/LofC. In terms of civilian IDP or Local, the threat may be theft of stock, protesting, blockage of routes due to volume of pers, soliciting, etc.

<sup>31</sup> Determine what it means to CSS by asking "SO WHAT?".

<sup>32</sup> List the ways of overcoming the threat. The final output of this action is likely to be a request for additional security for CSS nodes/LofC in terms of infantry, armour, AD or even Indir FS DF tasks.

	<p>20380m Range: 500m</p> <p>4. Avn Assets. Capable of projecting forces fwd to conduct a coup-de-main. Mi 17 &amp; Mi 24D. Fixed wing – Air Parity.</p> <p>5. Night Vision Capability.</p>			
<p><b>Ground Forces (SF)</b> Unknown elements, could be based on a Strike Bn or standard SF Bn.</p> <p>Has the ability to blend easily (male &amp; female) with the local population.</p>	<p>1. As above for 1&amp;2.</p> <p>2. DEM/IED. Has the ability to conduct DEM type ops to target KT and chock points.</p>	<p>1. As above.</p> <p>2. The ability to destroy CSS nodes and disrupt routes/infrastructure.</p>	<p>1. As above.</p> <p>2. The ability to conduct small coup-de-main ops, targeting HVT and critical CSS nodes/assets.</p>	<p>1, 2, 3, 4. As above, less the use of AD assets.</p>
<p><b>Belligerents</b> (Musorian Supporters)</p>	<p>1. Hunting sporting wpns.</p> <p>2. Home made explosives.</p> <p>3. Wpns obtained from Musorian black market.</p>	<p>1-3. Local inhabitants that spt the Musorian position may target CSS LofC due to their predictability, vulnerability and convenience. This may be done at choke points in towns, bridges, crossing points and culverts and manmade road blocks.</p> <p>They could also interfere/sabotage with stocks and CSS assets at CSS nodes.</p>	<p>1-3. LofC and therefore sup to the BGs could be significantly disrupted by belligerent activity.</p> <p>If stocks are affected within the CSS nodes fresh stock would be req to be pushed up the LofC to replace it. This would cause further strain on the distribution system.</p>	<p>1-3: Identification of choke points, conduct of route recons, SOPs, alternative routes, not forming patterns, communication with locals.</p> <p>To avoid belligerents gaining access to stocks and CSS assets patrolling programs will need to be implemented. The use of RASO.</p>
<p><b>Civilian (Urban)</b></p> <p>With the current unrest in the region, protesting and riots may occur in</p>	<p>1. Likely to be Nil.</p>	<p>1. Protestors/rioters along LofC could present the following threats:</p> <p>a. slowing of convoys and therefore disruption of timings;</p> <p>b. slowing of</p>	<p>1. These activities would have a significant effect on the ability to distribute supplies within the times required. It could also place additional strain on the system due to</p>	<p>1. Avoiding driving through towns when possible or when a protest/rioting/civil unrest has been reported. Strict actions on regarding civilians needs to be issued to ensure</p>

<p>populations centres.</p> <p>With the recent crop failure and food shortage, it is like that the local population will tgt either food stocks, or stocks that can be sold for food.</p>		<p>vehicles therefore presenting targeting opportunities by those against AS FE; and</p> <p>c. crowds damaging stock and vehicles in attempts to get food</p> <p>2. Stocks in CSS nodes may be targeted and stolen by the local population which could effect the supplies to BGs.</p>	<p>damaged stock and asset replen.</p> <p>2. These activities would result in greater strain on the distr system by the requirement to replace stolen or damaged stock.</p>	<p>greater civil unrest is avoided. Local Law enforcement agencies may also be able to be utilised for population liaison and crowd control. Maintaining good relations with local population through effective liaison, observing customs and traditions will also assist.</p> <p>2. To avoid belligerents gaining access to stocks and CSS assts patrolling programs will need to be implemented.</p>
<p><b>Civilian (Rural)</b></p>	<p>1. Due to the TAORs being in the county it is likely that some of the local population poses hunting and sporting rifles.</p>	<p>1. It is unlikely that these wpns will be tgt AS personnel. However care will need to be taken as to how areas in the TAOR are used as not to sour relations and cause civil unrest.</p> <p>2. With the recent crop failure and food shortage, it is like that the local population will tgt either food stocks, or stocks that can be sold for food.</p>	<p>1. Small arms fire will not result in veh cas however may cause physical and mental injury to personnel. It may also result in damage to stocks. Over all this may cause some effect on the CSS efficiency.</p> <p>2. Stocks in CSS nodes may be targeted and stolen by the local population which could effect the supplies to BGs.</p>	<p>1. Maintain good relations with local population by respecting property.</p> <p>2. To avoid local inhabitants gaining access to stocks and CSS assts patrolling programs will need to be implemented.</p>

## Annex E

### CSS TASK ANALYSIS MATRIX

S4 SPECIFIED TASK <sup>33</sup>	CSS ANALYSIS <sup>34</sup>		CSS IMPLICATION <sup>35</sup>
S3 SPECIFIED TASK <sup>36</sup>	CSS ANALYSIS <sup>34</sup>	CSS IMPLIED TASK <sup>37</sup>	CSS IMPLICATION <sup>35</sup>

---

<sup>33</sup> List all specific CSS tasks given by higher or own COMD.

<sup>34</sup> Analyse the tasks (ie: ask “SO WHAT?”) to determine what it actually means to CSS. This should also view the task in terms of action before, during and after the task.

<sup>35</sup> This is the result of the analysis in terms of what does CSS need to do. It would usually be in terms of an asset (by line of CSS) to do the task. It is likely that there would be a number of CSS implications resulting from each task. These implications should then be used as part of CSS COADev and/or input to S3 COADev.

<sup>36</sup> Obtain the S3 list of tasks from the S3 cell.

<sup>37</sup> The analysis of the S3 tasks should logically lead to additional IMPLIED CSS TASKS. These should then be included in the CSS Annex as tasks to the CSSU.

## Annex F

### CSS FOA ANALYSIS MATRIX

RESTRICTIONS <sup>38</sup>	CSS ANALYSIS <sup>39</sup>	CSS IMPLICATION <sup>40</sup>
CONSTRAINTS <sup>41</sup>	CSS ANALYSIS <sup>39</sup>	CSS IMPLICATION <sup>40</sup>
OPPORTUNITIES <sup>42</sup>	CSS ANALYSIS <sup>39</sup>	CSS IMPLICATION <sup>40</sup>

---

<sup>38</sup> List all restrictions given by higher or own COMD.

<sup>39</sup> Analyse the FOA (ie: ask “SO WHAT?”) to determine what it actually means to CSS. This should also view the task in terms of action before, during and after the task.

<sup>40</sup> This is the result of the analysis in terms of what does CSS need to do. It would usually be in terms of an asset (by line of CSS) in relation to the freedom/limitation/constraint. It is likely that there would be a number of CSS implications resulting from each restriction/constraint/opportunity. These implications should then be used as part of CSS COADev and/or input to S3 COADev.

<sup>41</sup> List all constraints given by higher or own COMD.

<sup>42</sup> List all opportunities that can be identified that may support the COLS.

## Annex G

### CSS OPTIONS MATRIX (COADEV)

1. The CSS OPTIONS MATRIX is designed to provide unlimited flexibility to the CSS planner. The key to understanding the matrix is to appreciate that the options are only applicable to the sub-CSS element “line” and not to the “lines” in the same sub-BOS (ie: the matrix columns are not related vertically). As a result, once the COA Analysis step has been conducted, the best option in each line may be in different matrix columns.
  
2. **COA Development.** During this step of the staff MAP, the CSS planner will not be aware of the S3 COA until the near the end of the step. Therefore they need to prepare the options matrix based on ALL logical methods of achieving the specific CSS EFFECT / TASK. In reality, once the matrix is constructed with enough detail, it should be valid for subsequent operations by the same organisation thereby saving time in the COA Dev step. Once the S3 COA are available, the ROEE needs to be revised and re-entered into the staff calculator. This information should then be used in allocating troops to requirements in the CSS OPTIONS MATRIX. The final action with the CSS OPTIONS MATRIX in this step is to cull those options that are known to be not relevant or less likely to be effective. S4 staff then conduct a comparative analysis of the remaining options within each line of the CSS OPTIONS MATRIX. The end result should be a series of options that form the COLS. Once this has been done throughout the entire matrix, the options remaining are grouped together to become the draft COLS that need to be refined during COA Analysis.
  
3. **COA Analysis.** In the COA Analysis step, each COLS is synch checked to ensure it will work, technically war gamed to ensure it is robust enough to withstand technical CSS problems, and wargamed against the threat.

CSS ELEMENT	OPTION 1 <sup>43</sup>	OPTION 2 <sup>43</sup>	OPTION 3 <sup>43</sup>	OPTION 4 <sup>43</sup>	OPTION 5 <sup>43</sup>	→ As many as needed <sup>44</sup>
<b>OVERALL CSS (INTEGRATED LOGISTIC) ASPECTS</b>						
<b>NODE LOCATION</b>						
FSG						
XP						
BSG						
DP (for Auto replen)						
Echelons						
<b>LofC ROUTES</b>						
FSG to BSG						
FSG direct to Echelon						
BSG to Echelon						
Echelon to Unit						

<sup>43</sup> A sub-CSS element OPTION is a single method of achieving the EFFECT (or requirement). It does not need to relate to other options or sub-CSS element at all. Simplistically, each “line” for the sub-CSS elements represents the COA for that “line”. They should not be referred to as COA however as there is likely to be confusion in relation to the other “lines” or the S3 COA.

<sup>44</sup> Use as many options that may be applicable within the specific sub-CSS elements’ line.



## CSS Options Matrix cont'

CSS ELEMENT	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5	→ As many as needed
<b>SUPPLY &amp; DISTRIBUTION</b>						
<b>STORAGE AT FMN<sup>45</sup></b>						
CL 1 – CRP						
CL 1 – Water						
CL 1 – Fresh						
CL 3 – Diesel						
CL 3 – Aviation fuel						
CL 3 – Oil/Lub						
CL 5 - SA						
CL 5 – Tk						
CL 5 – Arty						
CL 5 - Other						
CL 2						
CL 4						
CL 7						
CL 8						
CL 9						
<b>REPLEN 3<sup>rd</sup>-2<sup>nd</sup> line<sup>46</sup></b>						
CL 1						
CL 3						
CL 5						
CL 5 Arty						
CL 4 (bulk)						
CL 7 (large end items)						
Other Classes						
<b>REPLEN 2<sup>nd</sup>-1<sup>st</sup> line<sup>47</sup></b>						
CL 1						
CL 3						
CL 5						
Other Classes						
<b>Backloading / Salvage</b>						

<sup>45</sup> Storage options should relate to medium of storage (eg CL 3 Dieso – TTF, TFC, DFC, TPA, 20l Jerry palletised, civil bulk tanks, BLFT, etc). It should also provide a “troops to task” determination in terms of what sized supply organisation is required for that task/effect.

<sup>46</sup> For BDE HQ level planning, an understanding of the interface with 3<sup>rd</sup> line is essential. Often the BDE staff will not have a direct influence on this and as a result there may only be **ONE** option.

<sup>47</sup> The distribution methods available within the BDE should be articulated here. The options available will generally be aligned to automatic or demand replenishment, frequency of replenishment and modes of distribution. The modes of distribution essentially fulfils the “troops to task” requirement. Usually the main headings depicted (CL 1, CL 3, CL 5, other CL) will suffice but these can be further sub-divided if there are different methods of distribution required internal to the CL.

## CSS Options Matrix cont'

CSS ELEMENT <sup>48</sup>	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5	→ As many as needed
<b>MAINTENANCE</b>						
Light Grade repair						
A Veh						
B Veh						
C Veh						
Radios						
Large Caliber weapons						
Small Arms						
Other mechanical						
Medium Grade repair						
Recov Eqpt-1 <sup>st</sup> line						
Recov 1 <sup>st</sup> -2 <sup>nd</sup> line						
Recov 2 <sup>nd</sup> Line-FSG						
ECP locations						
Recov Post locations						

<sup>48</sup> Each of the elements may need to be broken up further into specific equipment classes as the method of repair and recovery could in all probability vary. Equipment classes may also need to be further divided (ie: A Veh into MBT, APC, LAV, Bushmaster).

## CSS Options Matrix cont'

CSS ELEMENT	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5	→ As many as needed
<b>HEALTH SUPPORT<sup>49</sup></b>						
Lv 1 treatment						
Lv 2 treatment						
Lv 3 treatment						
Evac Pri 1 to Lv 2/3						
Evac Pri 2 to Lv 2/3						
Evac Pri 3 to Lv 2/3 <sup>50</sup>						
Lv 2 holding						
Lv 3 holding						
Preventative Med						
Psych support						
Dental support <sup>51</sup>						
CCP locations						
<sup>52</sup>						

<sup>49</sup> While Health Support is technically a S1 function, it is included here as it is also considered a CSS function.

<sup>50</sup> The method of evacuation will be related to where Lv 2 and Lv 3 facilities are located as timeframes are critical when determining options. When determining evac options, it would be prudent to also list under what conditions that evac method is applicable (ie: Lv 2 gnd evac (only if Lv 3 copy with CSSB)).

<sup>51</sup> Dental support will generally only have three options available: organic CSSB copy, civil contractor, or backload to HSB.

<sup>52</sup> Where the dependency requiring health support is not uniform, consideration will be required for the non-uniform elements (ie: a BDE is operating with a Battle Group separated geographically and requires separate consideration).