



Ministry  
of Defence

Joint Doctrine Publication 4-00  
**Logistics for Joint Operations**

Fourth Edition



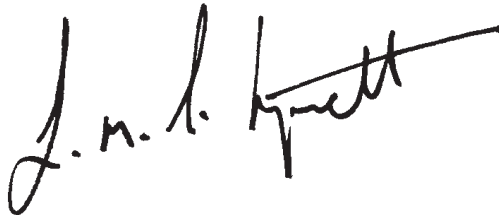
Development, Concepts and Doctrine Centre



# Joint Doctrine Publication 4-00

## Logistics for Joint Operations

Joint Doctrine Publication 4-00 (JDP 4-00) (4th Edition),  
dated July 2015,  
is promulgated as directed by the Chiefs of Staff

A handwritten signature in black ink, appearing to read "J. M. L. Hewitt". The signature is written in a cursive style with a long horizontal stroke at the end.

Director Concepts and Doctrine

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# Abstract

## Purpose

1. Joint Doctrine Publication (JDP) 4-00, *Logistics for Joint Operations* provides a handrail for planners to enable effective logistic support of deployed forces within joint and multinational contexts.
2. **Scope.** In outlining how a joint logistic framework can most effectively be employed, JDP 4-00 does not deal with component-level logistics in detail nor cover specific logistic functions. Templates and *aide memoires* are included in annexes to offer a logical framework for further specialist input, providing guidance rather than detailing every question that could be considered. Links are provided to relevant national and multinational doctrine publications, including more detailed logistic doctrine.

## Context

3. This fourth edition of JDP 4-00 describes logistics at the operational level from a joint perspective. Defence has changed significantly since we published the third edition and will continue to do so under the Transforming Defence initiative. This revision has been informed by the Defence reform programme, generated by the *National Security Strategy* direction, the *Strategic Defence and Security Review* and Defence Reform Unit work strands. This edition also reflects the direction from the Chief of the Defence Staff and the Permanent Under Secretary to place NATO at the heart of UK Defence. Where appropriate, the results of these changes have been incorporated.
4. This edition of JDP 4-00 has:
  - introduced new UK logistic principles, which are aligned to those adopted by NATO, and reflect the change from Logistic Process Owner to Defence Authority for Logistics (Chapter 1);
  - refreshed logistic command and control based on the Defence Strategic Direction terminology (Chapter 2);
  - introduced a new chapter on joint logistic enablers (Chapter 3);
  - refreshed the logistic planning process, aligning it with NATO operational-level planning by reflecting the changes flowing from JDP 01, *UK Joint Operations Doctrine* (Chapter 4);

- reflected the Whole Force approach (Chapter 5); and
- completed a major re-write of the previous redeployment and recuperation chapter. The chapter is now titled Restoring combat power and incorporates rehabilitation, redeployment and recuperation (Chapter 9).

Throughout the document we have also incorporated multinational logistic issues and host-nation support, which were formerly allocated a separate chapter. This reflects the increasing importance of collective, and alternative, support arrangements to UK operations.

## Audience

5. JDP 4-00 is designed for the joint operational commander and staff. Personnel within J1/J4 functional areas, and logistic staff in single-Service commands and Defence Equipment and Support, may find JDP 4-00 particularly relevant. This publication is also the primary joint logistic doctrine publication for students at the Joint Services Command and Staff College and other Defence training establishments.

## Structure

6. The publication is in five parts, each with a number of chapters and annexes.
  - a. Part 1 – Fundamentals.
    - Chapter 1 sets out the principles and definitions that underpin the guidance covered in this publication.
    - Chapter 2 covers logistic command and control for national and multinational operations, focusing on the operational level and emphasising the underpinning importance of logistic information systems to operational success. The two annexes cover the respective logistic command and control roles of a Joint Task Force Headquarters and a Joint Force Logistic Component Headquarters.
  - b. Part 2 – Prepare.
    - Chapter 3 covers joint logistic enablers.
    - Chapter 4 provides guidance on the logistic planning process, including developing the sustainability statement and the logistic estimate. The four annexes provide generic templates and *aide memoires*.

- Chapter 5 discusses how logistic force elements are generated through a planning cycle. This Chapter includes aspects relating to the Whole Force and contractor support to operations.
- c. **Part 3 – Project.** Part 3 addresses the logistic aspects of projecting a force into theatre.
- Chapter 6 covers logistic support to deployment.
  - Chapter 7 provides detail on the reception, staging, onward movement and integration process. Recognising the J3 lead of integration, this Chapter focuses predominantly on reception, staging and onward movement.
- d. **Part 4 – Sustain.** Chapter 8 covers how we sustain a deployed force. The annex provides an *aide memoire* of the planning considerations raised by the '4Ds'.<sup>1</sup>
- e. **Part 5 – Restoring combat power.** Chapter 9 follows the force recovery phase of an operation from rehabilitation, through redeployment, to recuperation. The three annexes outline the redeployment process and suggest logistic issues that may need to be considered.
- f. **Annexes.** Annexes A to C outline logistic procedures specific to the maritime, land and air environments, respectively. Annex D covers the Defence Equipment and Support organisation.
- g. **Lexicon.** Throughout this publication we have only included terminology definitions and descriptions in the main text where they may aid your immediate, full understanding of the subject being discussed. However, we have also provided those definitions, as well as others used in the text, in a comprehensive lexicon which also includes the acronyms and abbreviations used in this publication.

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1 Distance, destination, demand and duration.

## Linkages

7. All supplementary publications, subordinate instructions, planning activity and training should be consistent with JDP 4-00 (4th Edition) and updated in-line with it. This publication should be read in conjunction with:

- NATO Allied Joint Publication (AJP)-4, *Allied Joint Logistic Doctrine* (and subordinate AJP-4 series publications);
- JDP 01, *UK Joint Operations Doctrine*;
- AJP-5, *Allied Joint Doctrine for Operational-level Planning* (with UK national elements); and
- NATO Allied Command Operations' *Comprehensive Operational Planning Directive*.

Other linkages are referred to throughout the text.



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## Overview

Chapter 1 introduces and outlines the:

- definition of logistics;
- logistic principles;
- Defence Support Network; and
- Defence Authority for Logistics.

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The line between disorder and order lies in logistics...

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Sun Tzu

# Chapter 1 – Overview

## Section 1 – Introduction

1.1. Joint Doctrine Publication (JDP) 4-00, *Logistics for Joint Operations* is the UK's keystone doctrine publication for joint logistics on operations. JDP 4-00 is aligned with the keystone NATO Allied Joint Publication (AJP)-4, *Allied Joint Doctrine for Logistics*.<sup>1</sup>

1.2. JDP 4-00 provides commanders, staff officers and personnel with a handrail to help them understand how joint logistic functions interact and contribute to delivering effective and efficient logistic support to joint operations, both in national and multinational contexts. We should read JDP 4-00 alongside:

- Bi-Strategic Commands' Joint Operational Guidelines 13/01, *Logistics*;<sup>2</sup>
- JDP 1-05, *Personnel Support for Joint Operations*;
- AJP-4.10, *Allied Joint Doctrine for Medical Support*;<sup>3</sup> and
- Joint Warfare Publication (JWP) 4-01, *Logistic Enablers for Joint Operations*.<sup>4</sup>

.....  
 1 Allied Joint Publication (AJP)-4, *Allied Joint Doctrine for Logistics* provides a common perspective for planning and conducting multinational joint logistic support for Allied operations to support NATO commanders achieve their mission.

2 To bridge the gap between AJP-4(A) and the delayed AJP-4(B), the two NATO strategic commands, Allied Command Transformation and Allied Command Operations, published Joint Operational Guidelines 13/01, *Logistics* in January 2013. Though the Joint Operational Guidelines do not carry the authority of a ratified AJP, they provide a reliable indication of refreshed logistic doctrine beyond AJP-4(B) and we should read it in that light.

3 During 2015, Joint Doctrine Publication (JDP) 4-03, *Joint Medical Doctrine* was merged with AJP-4.10(B), *Allied Joint Doctrine for Medical Support* to form a hybrid publication.

4 Joint Warfare Publication (JWP) 4-01 covers: water; fuel; operational feeding; air despatch; and power. This publication is being gradually reviewed; as those separate sections are completed they are being renamed and re-categorised as joint tactics, techniques and procedures publications (JTTP).

## Logistics

1.3. Understanding what logistics is varies across military and civilian organisations. Informally (and in its very basic terms) successful logistics comprises having materiel or services:

- in the right quantity;
- in the right condition;
- in the right place; and
- at the right time.

1.4. On a more formal basis, Defence uses the NATO definition of logistics:<sup>5</sup>

Logistics is the science of planning and carrying out the movement and maintenance of forces. In its most comprehensive sense, the aspects of military operations which deal with:

- design and development, acquisition, storage, movement, distribution, maintenance, recovery and disposal of materiel;
- transport of personnel;
- acquisition or construction, maintenance, operation and disposition of facilities;
- acquisition or furnishing of services; and
- medical and health service support.<sup>6</sup>

1.5. Effective operational logistics is vital to conducting and sustaining any military deployment. Logistics should be underpinned by robust logistic information services.

Effective operational logistics is vital to conducting and sustaining any military deployment.

5 NATO MC 0319/3, *NATO Principles and Policies for Logistics*, August 2014.

6 Though it is included in the ratified NATO definition of logistics, Belgium, Czech Republic, Germany, Hungary, Slovakia and the United States do not consider medical and health service support to be a logistic function.

## Section 2 – Logistic principles

### NATO at the heart of UK Defence

1.6. The Strategic Defence and Security Review (SDSR) 2010 recognised NATO as the bedrock of the UK Defence. NATO underpins the defence of the UK and our allies, while also providing deployable, expeditionary capabilities.<sup>7</sup> Following the Chief of the Defence Staff's direction to align with NATO as far as practical, we have adopted NATO's logistic principles. Those principles are:

- authority;
- primacy of operational requirements;
- coordination and cooperation;
- assured provision;
- sufficiency;
- efficiency;
- simplicity;
- flexibility; and
- visibility.<sup>8</sup>

We should apply them to provide the necessary foundation for assured, effective, efficient and coherent logistics in both national and multinational operations. As part of a multinational response, we should, where possible, coordinate and explore all possibilities of combining support chains with other nations. We can expect that, in an effort to minimise national support chains in Allied operations, NATO will look to deploy a Joint Logistic Support Group (JLSG)<sup>9</sup> to de-conflict and coordinate logistic support to the deployed force. Figure 1.1 explores these principles in more detail.

7 D/CDS/3/1/5, *Putting NATO at the Heart of UK Defence*, 13 July 2012.

8 NATO MC 0319/3, *NATO Principles and Policies for Logistics*, paragraphs 18-26.

9 AJP-4.6, *Allied Joint Doctrine for the Joint Logistic Support Group*.

## UK logistic principles, adopted from NATO<sup>10</sup>

### Overarching principle – Collective responsibility

Nations and NATO authorities have a collective responsibility for logistic support of NATO’s multinational operations. This collective responsibility encourages nations and NATO to cooperatively share the provision and use of logistic capabilities and resources to support the force effectively and efficiently. Standardisation, cooperation and multinationality in logistics and robust logistics command and control build together the basis for flexible and efficient use of logistic support thereby contributing to operational success.<sup>11</sup>

Principle	Description
Authority	There is an essential interdependence between responsibility and authority. The responsibility assigned to any NATO commander must be matched with the delegation of authority by nations and NATO to allow the adequate discharge of responsibilities in order to receive, employ, sustain and redeploy capabilities assigned to NATO by nations in the most efficient manner.
Primacy of operational requirement	All logistic efforts, from both the military and the civilian sectors, should be focused to satisfy the operational requirements necessary to guarantee the success of the operations and missions.
Coordination and cooperation	Cooperation and coordination across the full spectrum of logistics, including between the civilian and military sectors within and between allies, will contribute to the best use of limited resources. Generic and standing pre-arranged agreements are the tools to facilitate logistic coordination and cooperation. The overall responsibility for logistic coordination in NATO-led operations lies with NATO and should be conducted as a matter of routine under the authority of the North Atlantic Council. <sup>12</sup>

<sup>10</sup> In a non-NATO context, we should read references to NATO or NATO commander as appropriate to a UK or coalition operation.

<sup>11</sup> NATO MC 0319/3, *NATO Principles and Policies for Logistics*, paragraph 17, August 2014.

<sup>12</sup> Cooperation within, and among, nations is essential. We should coordinate logistic support across the force, including with all allies.



Principle	Description
Assured provision	Nations and NATO must ensure the provision of logistic resources to support the forces and capabilities allocated to NATO during peace, crisis and conflict. <sup>13</sup>
Sufficiency	Logistic support must be available in the necessary quantity and quality, when and where it is required throughout the full spectrum of operations and missions. It must be ensured for any NATO-led operation continuously for the duration required to accomplish the mission. <sup>14</sup>
Efficiency	Logistic resources and capabilities must be used effectively and efficiently. Requirements must be identified and addressed in a timely manner to optimise the efficient provision, and effective use, of such resources and capabilities. Therefore, from the onset of the operational planning process, NATO and nations must consider multinational solutions prior to deciding to choose national solutions.
Simplicity	Uncomplicated mission-orientated logistics organisations, structures and procedures minimise confusion and help to ensure that the support provided meets NATO commanders' requirements. Additionally, clear orders, simple plans and reporting mechanisms ensure accurate and efficient dissemination of information and minimise misunderstandings.
Flexibility	Logistic support must be adaptive and flexible to be effective. Adequate planning allows NATO and nations to react in a timely manner to changes in the operational situation and/or requirements.
Visibility	Visibility of logistic resources and capabilities is essential for effective and efficient logistic support and will be provided by NATO and nations' logistic information management services, as required. National and NATO logistic information services require a facilitation of the delivery of the right information, because NATO commanders require timely, accurate and relevant information to make effective decisions and to plan and coordinate logistic operations in the joint operations area. Visibility of nations' support arrangements (for example, lines of communication and transit areas) will assist NATO commanders in the planning for, and execution of, operations and missions. The key to this information is visibility of logistic requirements, resources, capabilities and processes. This visibility must extend across the multiple levels of management and command for NATO, nations and other actors and must provide the information required at each level. <sup>15</sup>

13 Assured provision is required of all individual nations and Allied organisations.

14 We should ensure sufficiency for any operation the UK is involved in.

15 All UK commanders must have visibility within and across the deployed area. Assistant Chief of the Defence Staff (Logistic Operations) has issued policy direction on the use of Logistic Functional Area Services.

Figure 1.1 – UK/NATO logistic principles



## The integrated approach

1.7. Alongside the logistic principles, and the overarching principle of collective responsibility, NATO and the UK look to build on collective responsibility and cooperation in complex situations. The UK has adopted the term ‘integrated approach’<sup>16</sup> to reflect this. While NATO uses this term in the context of the force, it uses the term ‘comprehensive approach’ in the wider context of UK’s integrated approach and describes it as the influencing of ‘complex situations’ through the application of diplomatic, information, military and economic instruments of power, and civil capabilities.<sup>17</sup>

1.8. NATO identifies activity at three levels that contribute to delivering a comprehensive approach.

- The political and strategic level – generating international understanding.
- The operational level – where cooperating with other international actors is necessary in planning for complex operations where significant civil-military interaction will be required.
- The theatre level – where NATO force commanders must be empowered to cooperate and coordinate effectively with indigenous local authorities and other international actors.

1.9. How we contribute to an integrated (UK) or comprehensive (NATO) approach may vary from one deployment to another (as well as between phases of an operation). However, the guiding principles are enduring and appropriate for all multinational operations. The success of each approach depends upon several factors.

- Proactive engagement – before, and during, a deployment.
- Shared understanding – engendered through cooperative working, liaison, doctrine, education and a common language.
- Collaborative working – based on mutual trust and understanding to help offset cultural and organisational differences, a willingness to cooperate (born out of institutional familiarity), personal contact and information sharing.

How we contribute to an **integrated** (UK) or **comprehensive** (NATO) approach may vary from one **deployment** to another (as well as **between** phases of an **operation**).

16 JDP 0-01, [UK Defence Doctrine](#), (5th Edition), Chapter 2.

17 AJP-01(D), *Allied Joint Doctrine*, paragraph 0226, December 2010.

- **Outcome-based thinking** – developed by actors working towards a common goal (or outcome) and, ideally, mutually agreed objectives underpinned (even without unity of command) by a unity of purpose.

## Section 3 – Defence Support Network

1.10. In the military context, logistics is end-to-end – from industry through to the frontline in an operational theatre or to a deployed force element, such as a warship. Logistics stretches across a network of nodes with multiple processes, through which personnel and materiel flow and services are provided. There are also interfaces between stakeholders including:

- MOD Head Office;
- Joint Forces Command;
- single-Service commands;<sup>18</sup>
- Permanent Joint Headquarters (PJHQ);
- Defence Equipment and Support (DE&S); and
- industry.

1.11. We continue to develop our logistic capabilities in order to deliver a Defence Support Network.<sup>19</sup> The Defence Support Network is defined as: a flexible set of supply chains connecting points of production and use, ensuring the most appropriate and efficient use of resources across the Whole Force, maximising information and technology to assure logistic support to operational commanders.<sup>20</sup> Figure 1.2 (overleaf) illustrates the Defence Support Network.

1.12. The Defence Support Network consists of a series of linked nodes through which support is delivered in an agile manner, giving end-to-end visibility and control. As the Defence Support Network and through-life support concepts mature, the network will reach further into tiered-support within industry and the joint operations area (giving increased control over resources).

1.13. The Defence Support Network depends on capable logistic information services to deliver assured logistic information. This is fundamental to providing visibility of, and confidence in, logistics and is underpinned by the need for high quality data.<sup>21</sup>

18 Navy, Army and Air.

19 The Defence Support Network builds on the Joint Capability Concept paper, *Support Network*, 3 March 2010.

20 Joint Operating Concept Committee paper, dated 3 March 2010.

21 For further information on logistic information systems see Chapters 2 and 4.

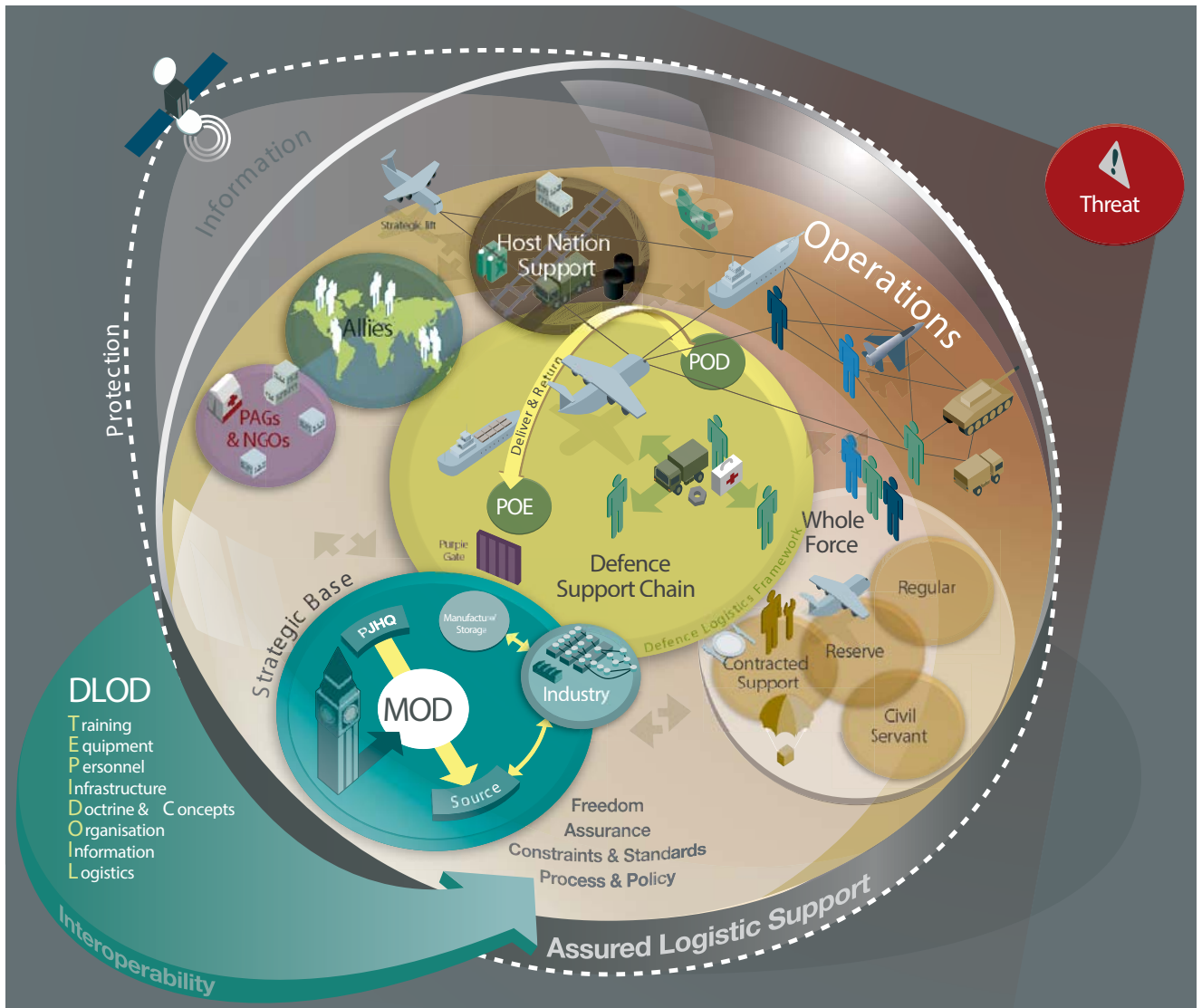


Figure 1.2 – Defence Support Network

1.14. Defence support includes those support activities that maintain military capability at pre-planned availability, readiness and sustainability profiles through its whole life, and end-to-end. Defence support comprises:

- personnel support;
- logistic support;
- equipment support;
- computer information system support;
- infrastructure support;
- legal support; and
- medical support.

1.15. Military and industry partners must each be encouraged to bring innovation and developments into Defence from the private sector, as part of the continual improvement process. Defence must be responsive to these developments. With

collaborative working, these developments could result in increasingly innovative support solutions. This may be as part of the Whole Force,<sup>22</sup> or as part of developing relationships with industry, supporting operational outcomes.

1.16. Sustainable development technologies<sup>23</sup> are at the core of future support solutions. As well as providing environmental benefits, incorporating these technologies presents logistic opportunities and potential financial savings. Using more efficient and reliable equipment and platforms reduces transport, distribution and storage requirements.

## Section 4 – Defence Authority for Logistics

### Chief of Defence Materiel

1.17. The Chief of Defence Materiel (CDM) is the Chief Executive of DE&S and the Defence Authority for Logistics. As such, CDM receives two letters of delegation from the Permanent Under Secretary (PUS) – one as a top-level budget holder and one as a Defence Authority. As the Defence Authority, CDM is empowered by PUS to issue general direction with which other top-level budget holders are expected to comply. This direction ensures logistic activities enabling wider Defence business are conducted on a coherent and consistent basis. That, in turn, will maintain or improve overall effectiveness, efficiency and resilience, and ensure compliance with legislation and other external requirements. To support this and promote coherent development and improvement of logistic functions and services, the Defence Authority owns the Defence Logistics Strategy and the Defence Logistics Plan.

### Assistant Chief of the Defence Staff (Logistic Operations)

1.18. Assistant Chief of the Defence Staff (Logistic Operations) (ACDS (Log Ops)) supports CDM to deliver those responsibilities. ACDS (Log Ops) sits within Joint Forces Command but has three distinct (yet complementary) roles, reporting on each to different heads, as outlined below.

- a. **Chief of Defence Materiel.** ACDS (Log Ops) represents CDM in MOD and is responsible for delivering pan-Defence policy and strategy on CDM's behalf as the Defence Authority for Logistics. For the Defence Authority, ACDS (Log Ops)

.....  
22 For further information see Chapter 5.

23 D/VCDS&2ndPUS/5/1/10 letter, dated 23 December 2009.

ensures the delivery of effective and efficient end-to-end logistic support which involves:

- establishing the logistic governance framework; and
- ensuring compliance.

b. **Commander Joint Forces Command.** ACDS (Log Ops) is responsible for delivering Defence logistic requirements and the Joint User for Logistic Enablers' priorities and standards on behalf of Commander Joint Forces Command. As the Joint User for Defence Logistics, ACDS (Log Ops) also ensures the joint logistic capability requirement is properly defined and coherent. This involves:

- advising capability areas and single-Services on joint aspects of single-Service capabilities; and
- articulating the risk of unfunded capability.

c. **Deputy Chief of the Defence Staff (Military Strategy and Operations).** ACDS (Log Ops) is responsible to the 3\* Deputy Chief of the Defence Staff (Military Strategy and Operations) for delivering strategic-level logistic planning and direction to support current and contingent operations.

## Governance

1.19. Logistic governance is controlled by CDM through the Defence Logistics Board in accordance with Defence Strategic Direction, the Defence Plan and the Defence Logistics Strategy. Defence Logistics Direction augments the Defence Strategic Direction planning assumptions and provides greater depth and detail against those planning guidelines relating to logistic support and sustainability. Though produced by ACDS (Log Ops), Defence Logistics Direction is issued by Deputy Chief of the Defence Staff (Military Capability).

## Assurance

1.20. CDM provides assurance of the delivery of end-to-end Defence logistics through an annual assurance report.

a. Logistic readiness risks (force elements at readiness and force elements at sustainability) are reported by the single-Service commands, top-level budget holders and trading funds as part of the Defence Performance Framework. The risks are reported via the capability, operations, standing tasks and recuperation (COSTR) inputs to the Defence Quarterly Performance and Risk Report (QPRR).

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**Logistic governance is controlled by CDM through the Defence Logistics Board in accordance with Defence Strategic Direction, the Defence Plan and the Defence Logistics Strategy.**



- b. ACDS (Log Ops) draws on the above inputs to produce the Quarterly Assessment of Sustainability Risk (QASR). This provides a coordinated view of sustainability risks and shortfalls against the force elements listed in the Defence Plan as adaptive, committed and responsive forces.

## Single-Service command logistic structures

1.21. Logistics for operations is directed through PJHQ and often coordinated through a deployed joint logistic command and control node. If required, each single-Service is responsible for environmentally specific elements of logistic delivery to operations. Annexes A, B and C provide details of logistic structures and processes within the maritime, land and air environments, respectively.

## Defence Equipment and Support

1.22. DE&S is the single Defence organisation that manages coordinated materiel support to Defence and the provision of supplies and services from the strategic base to deployed forces. Liaison between DE&S and deployed logistic staff on operations is critical and is conducted through PJHQ.

1.23. Defence Support Chain Operations and Movements (DSCOM) sits within DE&S and focuses on mounting, sustaining, recovering and recuperating the force to, on, and from, operations. For operations, DSCOM manages the effort on behalf of the owner, PJHQ, and reports through Chief of Materiel (Land). Annex D provides further information on DE&S and DSCOM.

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Logistics for operations is **directed** through PJHQ and often **coordinated** through a deployed **joint logistic command and control node**.

//

## Key points

- The UK uses the NATO definition of logistics: logistics is the science of planning and carrying out the movement and maintenance of forces. In its most comprehensive sense logistics encompasses those aspects of military operations which deal with:
  - design and development, acquisition, storage, movement, distribution, maintenance, recovery and disposal of materiel;
  - transport of personnel;
  - acquisition or construction, maintenance, operation and disposition of facilities;
  - acquisition or furnishing of services; and
  - medical and health service support.
- Delivering logistics is end-to-end, underpinned by information and enabled by logistic information services which provide visibility and confidence throughout the support chain.
- CDS/PUS directed that NATO should be at the heart of UK Defence; we have therefore adopted NATO's logistic principles, beneath the overarching NATO principle of collective responsibility.
- Defence support encompasses all those support activities that maintain military capability at pre-planned availability, readiness and sustainability profiles. Defence support embraces all the functions described in the NATO definition of logistics. Defence support is enabled by the integrated, and end-to end, Defence Support Network.
- CDM is the Defence Authority for Logistics, responsible to the Defence Board for coordinating and cohering the logistic enterprise.
- CDM is also the Chief Executive of DE&S, the single organisation managing coordinated materiel support to Defence and the provision of supplies and services to deployed forces.



Notes:





# Command, control and logistic information services

Chapter 2 discusses logistic command and control for national and multinational operations. It focuses on the operational level, set in the context of strategic-level command and control structures. This Chapter concludes by considering the underpinning importance of effective logistic information services.

- Section 1 – Strategic-level command and control . . . . . 19
- Section 2 – Logistic command and control . . . . . 22
- Section 3 – Logistic command, control and information services . . . . . 29
- Annex 2A – Joint Task Force Headquarters logistic command and control . . . . . 32
- Annex 2B – Joint Force Logistic Component command and control . . . . . 36

“  
Only a commander who understands logistics  
can push the military machine to the limits  
without risking total breakdown.  
”

Major General Julian Thompson,  
Royal Marines

# Chapter 2 – Command, control and logistic information services

## Section 1 – Strategic-level command and control

### National and multinational logistic activities

2.1. Regardless of the nature of the operation, the primary logistic aim should be to provide effective and efficient support. The highest degree of multinational cooperation and NATO's overarching principle of collective responsibility<sup>24</sup> should both be at the centre of all logistic planning. A coherent, commonly understood logistic command and control structure, supported by logistic information systems, is key to enabling operational logistics.

### Multinational command and control

2.2. Multinational operations could see the UK involved in deployments alongside several countries or individuals of several nationalities. This could be as part of a United Nations (UN) mission, supporting NATO, a European Union (EU) deployment, with the bi-national (UK/France) Combined Joint Expeditionary Force (CJEF)<sup>25</sup> or in a coalition formed to meet the circumstances of the situation.

2.3. For NATO operations, the Supreme Headquarters Allied Powers Europe (SHAPE)<sup>26</sup> will develop the Allied strategic plan, with the Joint Force Commander (JFC) it has appointed.<sup>27</sup> Planning is completed alongside the troop contributing nations to develop the contingency operation plans. SHAPE, with participating nations, will direct and provide guidance to the JFC developing logistic command and control and

24 The UK has adopted the NATO logistic principles. See Chapter 1 for further details.

25 For more information refer to Combined Joint Expeditionary Force (CJEF) Concept of Employment.

26 The Supreme Headquarters Allied Powers Europe (SHAPE) is the strategic-level headquarters of the Allied Command Operations (ACO), commanded by the Supreme Allied Commander Europe (SACEUR).

27 JFC is a term used by both NATO and the UK to refer to the operational Joint Force Commander, as distinct from the UK command organisation, Joint Forces Command. Joint Forces Command is not abbreviated in this publication.

subsequent force generation. A joint logistic support group (JLSG)<sup>28</sup> may then be activated.

2.4. **Force generation.** When a NATO operation is planned, SHAPE requests nations to commit logistic forces through the Combined Joint Statement of Requirement (CJSOR). Allied Command Operations (ACO) staff identify and address any shortfalls in logistic support (including theatre enabling requirements), after taking into account:

- nations’ logistic capabilities;
- pre-arranged memoranda of understanding;
- technical arrangements; and
- host-nation support.

ACO considers a wide range of alternatives to cover any shortfalls, including contractor provided services.<sup>29</sup>

### National command and control

2.5. **UK political framework.** Whether for a national operation or a UK contribution to a multinational operation, government ministers exercise command and control of crisis management at the highest level, either individually or in committee. Joint Doctrine Publication (JDP) 01, *UK Joint Operations Doctrine* provides greater detail.<sup>30</sup>

2.6. **Defence Crisis Management Organisation.** The Defence Crisis Management Organisation provides the strategic-level military liaison with other government departments, allies and coalition partners, as well as with international organisations such as the UN. Within the Defence Crisis Management Organisation, Assistant Chief of the Defence Staff (Logistic Operations) (ACDS (Log Ops)) is the lead organisation for logistic advice. Figure 2.1 shows a generic, logistics-focused, UK command and control structure.

// Within the **Defence Crisis Management Organisation**, Assistant Chief of the Defence Staff (Logistic Operations) is **the lead organisation** for logistic advice.



28 Allied Joint Publication (AJP)-4.6, *Allied Joint Doctrine for the Joint Logistic Support Group*.

29 NATO Bi-Strategic Commands’ Joint Operational Guidelines 13/01 – *Logistics*, January 2013.

30 Joint Doctrine Publication (JDP) 01, *UK Joint Operations Doctrine*, Chapter 1.

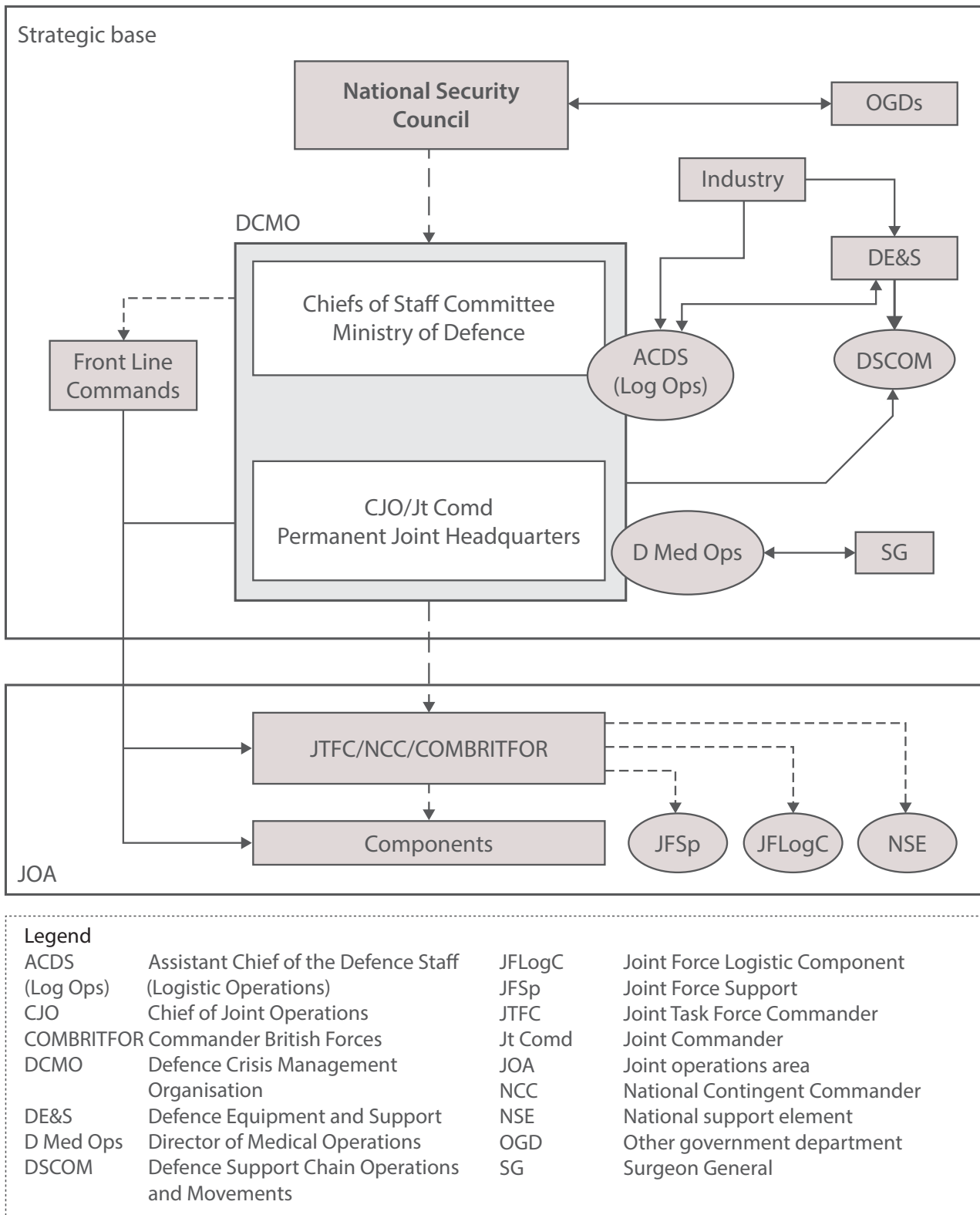


Figure 2.1 – Logistic command and control for operations

## Section 2 – Logistic command and control

### Multinational logistic command and control

2.7. Operations are likely to be joint and multinational. Multinational logistic arrangements make operational and economic sense. As a first principle, before making individual national arrangements national staffs should explore all options to work together. Multinational logistic arrangements for contingent operations are complex and need to be agreed (and processes established) in advance of an operation.<sup>31</sup> These arrangements may include:

- appointing a logistic lead nation<sup>32</sup> to provide the logistic support framework for the whole force;
- appointing logistic role specialist nations,<sup>33</sup> where one country provides a particular service or commodity for the whole force;
- nations contributing to multinational integrated logistic units and multinational logistic units;<sup>34</sup>
- other bilateral/multilateral agreements, including in-place memorandum of understanding; and/or
- NATO agencies, such as the NATO Support Agency (NSPA)<sup>35</sup> and the NATO Consultation, Command and Control Agency (NC3A), may support operations from within their area of competence, in particular negotiating contracts and host-nation support.

31 In accord with AJP-4.9, *Allied Joint Doctrine for Modes of Multinational Logistic Support*.

32 Logistic lead nation is defined as: one nation assumes overall responsibility for organising and coordinating an agreed broad spectrum of logistic support for all or part of a multinational force, including headquarters, within a defined geographical area for a defined period. The logistic lead nation can also provide capabilities as logistic role specialist nation at the same time. AJP-4.9(A), Chapter 2.

33 Logistic role specialist nation is defined as: one nation assumes the responsibility for providing or procuring a specific logistic capability and/or service for all or part of the multinational force within a defined geographical area for a defined period. Compensation and/or reimbursement will then be subject to agreement between the parties involved. AJP-4.9(A), Chapter 3.

34 AJP-4.9(A), Chapters 4 and 5, respectively.

35 NATO Support Agency (NSPA) can provide greater ability to achieve value for money on deployed contracts and should be used whenever possible.



## Multinational logistic information services

2.8. In supporting UK force elements within a multinational force, we may retain our own joint supply area which would receive, hold and issue UK-specific stocks of materiel. In accordance with the Chief of the Defence Staff's and Permanent Under Secretary's direction to put NATO at the heart of Defence,<sup>36</sup> reinforced by ACDS (Log Ops), we should use NATO logistic information services to ensure there is asset visibility across the deployed NATO force and provide the Force Commander with decision support.<sup>37</sup> Applications within NATO Logistic Functional Areas Services (LOGFAS)<sup>38</sup> provide those information services. When LOGFAS cannot be used, we must ensure we are able to exchange our national logistic information with other NATO forces. Logistic information exchange requirements are therefore a vital part of the planning phase of any multinational operation.

## National contingent command

2.9. A national contingent commander or Commander British Forces is appointed when the UK operates as a partner in a coalition force.<sup>39</sup> Components then normally remain within the overall UK command system, although the national contingent commander may not have detailed planning authority over UK contingents embedded within larger coalition components.<sup>40</sup>

## UK logistic command and control within a national contingent headquarters

2.10. The national contingent commander headquarters will normally have a J1/4/8 cell<sup>41</sup> to oversee UK logistic arrangements which may differ substantially from other nations'. The J1/4/8 cell is likely to be responsible for:

- briefing the national contingent commander on operational logistic issues;
- interfacing with other staff branches;

36 D/CDS/3/1/5, *Putting NATO at the Heart of UK Defence*, 13 July 2012.

37 *NATO and EU Direction to Nations to Use LOGFAS* letter, ACDS (Log Ops), 11 November 2011.

38 Logistic Functional Area Services (LOGFAS) is due to be replaced by Logistic Functional Services (LOGFS) at a date yet to be determined.

39 Where components are highly dispersed and/or operating within different coalition command and control structures, national component commanders may act as *de-facto* national contingent commanders in their area of operation.

40 JDP 3-00, *Campaign Execution* (3rd Edition, Change 1), Annex 1E shows illustrative multinational command and control arrangements. JDP 3-00 will be superseded by AJP-3, *Allied Joint Doctrine for the Conduct of Operations* during 2015/16 and a revised version of Annex 1E may be included as an insert to the version published in the UK.

41 J1-J9 are recognised military staff branches. J1 – personnel; J4 – logistics; J8 – resource management.



**We should use NATO logistic information services to provide the Force Commander with decision support.....**  
When LOGFAS cannot be used, we must ensure we are **able to exchange our national logistic information** with other NATO forces.



- providing direction and policy to the deployed UK logistic command and control node and UK logistic elements of embedded contingents; and
- interfacing with coalition partners at the operational level.

### National support element

2.11. A national support element (NSE) can provide the national logistic focus for the Joint Task Force Commander within a multinational operation. A NSE may not be established automatically, as the requirement for it will depend on the size and complexity of the deployment. For an enduring operation, a NSE is likely to be the follow-on organisation to the initial UK logistic command and control node and would remain for the life of the operation.

2.12. The structure of the NSE will depend on:

- the complexity of the operation;
- the range of national logistic activities to be undertaken;
- the UK contribution and force laydown; and
- any requirement for the UK to act as logistic lead nation or logistic role specialist nation.

The UK does not have a standing NSE. When required, a NSE will either be formed from a standing headquarters (with some augmentation) or be created from individual augmentees and tailored to meet the requirement.

### Joint Logistic Support Group

2.13. Multinational operations (particularly in NATO) may require a Joint Logistic Support Group (JLSG) and its associated headquarters (JLSG HQ).<sup>42</sup> The JLSG de-conflicts and coordinates the logistic requirement and support to the deployed force, optimising efficiency and effectiveness. The JLSG is underpinned by the overarching principle of collective responsibility.

2.14. Joint Logistic Support Group Headquarters. A JLSG HQ:

- is scalable, adaptable and task-organised to match the mission;
- coordinates logistic support at the theatre level<sup>43</sup> between participating nations, component commanders, host nations and non-military organisations; and

42 AJP-4.6, *Allied Joint Doctrine for the Joint Logistic Support Group*.

43 Theatre-level logistics is defined as: a collection of means, resources, organisations and processes derived from the strategic logistic level and utilised by the Joint Force Commander to support the tactical level. AJP-4.6(B).

// The UK **does not have a standing NSE. When required, a NSE will either be formed from a standing headquarters (with some augmentation) or be created from individual augmentees and tailored to meet the requirement.**



- tasks any logistic units, logistic lead nations and logistic role specialist nations, or any contracted logistic support assigned by nations to support the overall deployed force.

The core staff element of the JLSG HQ is drawn from either NATO Command Structure or NATO Force Structure headquarters. The UK may choose, or be required, to provide manpower to augment the core staff element. In normal circumstances, NATO does not expect individual nations to provide the core staff element of a JLSG HQ, except where they have an established responsibility for a NATO Force Structure headquarters. However, it remains possible that NATO may ask a nation to provide the core staff element.

## Combined Joint Expeditionary Force

2.15. Should the UK deploy as part of the UK/France Combined Joint Expeditionary Force,<sup>44</sup> it is likely that logistic staff would be provided as the UK contribution to the Combined Joint Support Group (CJSG) and its headquarters (CJSG HQ). Within the CJSG HQ, the balance of British and French staff will depend on the context of the operation.<sup>45</sup>

2.16. **Combined Joint Support Group headquarters.** Similarly to the JLSG HQ in a NATO operation, the bi-national CJSG HQ will be task-organised and adaptable, with the intent that, wherever possible, the headquarters should have a totally integrated France/UK staff. The CJSG should also aim to integrate and incorporate as many of the national support element functions of both nations as is practical in the operational circumstances.

- When established, Commander CJSG will have responsibility for the command and control of the logistic resources assigned to the CJSG to execute theatre-level logistic support. Logistic control is the minimum command and control authority that should be employed.
- The generic construct of the CJSG HQ is a scalable headquarters depending upon the scale and complexity of the task. The headquarters' size may range up to around 110 personnel (when including integrated national support element functions but excluding real life support and communications and information systems staff).

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44 For further information, see Combined Joint Expeditionary Force Concept of Employment.

45 For example, whether the joint operations area is in a UK or French sphere of influence; whether either nation has already established lines of communication or supply routes to the joint operations area; or whether either nation is better placed to provide a class of supply for the combined force, may influence the nationality of the command group and some functional areas within the headquarters.

“ The CJSG HQ should have a **totally integrated** France/UK staff and should also **aim to integrate** and **incorporate** as many of the national support element functions of **both nations** as is **practical** in the **operational circumstances**. ”

## UK command and control for operations

2.17. Chief of Joint Operations (CJO) is responsible for planning and executing joint, national and UK-led multinational operations conducted outside the UK. CJO exercises operational command of UK forces assigned to a specific operation and is responsible at the operational level for the:

- deployment;
- direction;
- sustainment; and
- recovery of deployed forces.

CJO acts as each UK operation's Joint Commander (generally delivered rear-based in the PJHQ) and may appoint a Joint Task Force Commander (JTFC) to plan and execute the theatre campaign.<sup>46</sup>

## UK command and control for logistic operations

2.18. Within the Joint Task Force Headquarters (JTFHQ), a Deputy Chief of Staff J1/J4/J8<sup>47</sup> directs logistic planning and activity on behalf of the JTFC. Although deploying a JTFHQ would be the usual command and control arrangement for a joint operation, there is no single model for the command and control of logistic operations.<sup>48</sup> The scale of the logistic command and control node is dictated by factors including:

- the environment;
- adversary activity;
- the size and shape of the force structure;
- the level of contractor capability required to support the force;
- friendly forces;
- time and space;
- security;
- the type of intervention; and
- the overall operational requirement.

46 JDP 01, *UK Joint Operations Doctrine*, Chapter 2, Section 6.

47 The Deputy Chief of Staff J1/J4/J8's responsibilities will include all elements of J1/J4/J8. Further details can be found in: JDP 1-05, *Personnel Support for Joint Operations*, AJP-4.10, *Allied Joint Doctrine for Medical Support*, Joint Warfare Publication (JWP) 4-01, *Logistic Enablers* (being revised into a series of joint tactics, techniques and procedures publications (JTTP)) and Joint Service Publication (JSP) 462, *Financial Management Policy Manual* (Chapter 8, Overseas operational deployments).

48 See Annex 2A for further logistics-related detail on the Joint Task Force Headquarters (JTFHQ). For fuller details on JTFHQ see JDP 01, *UK Joint Operations Doctrine* and JDP 3-00, *Campaign Execution* (3rd Edition, Change 1) (until superseded by AJP-3, *Allied Doctrine for the Conduct of Operations*).

Although deploying a JTFHQ would be the usual command and control arrangement for a joint operation, there is no single model for the command and control of logistic operations.

Figure 2.2 shows a range of models which could be used for deployed joint logistic command and control.

Operational definitions <sup>49</sup>	Logistic command and control node delivered by	Remarks
Simple	JTFHQ J1/J4/J8 or component headquarters.	To deliver logistic command and control, the JTFHQ may require augmentation. For a simple intervention (such as a non-combatant evacuation operation or humanitarian assistance to a disaster relief operation) a single component headquarters (for example, maritime/land/air/logistic) could provide the required logistic command and control.
Complex	JTFHQ J1/J4/J8 or a Joint Force Logistic Component Headquarters (JFLogCHQ).	To deliver logistic command and control, the JTFHQ may require augmentation. For a complex intervention, a JFLogCHQ may be established depending on the operational situation and complexity of logistic operations.
Enduring stabilisation	JTFHQ J1/J4/J8 initially, then augmented to form a Joint Force Support Headquarters.	This may require the UK to create a national support element.
Concurrent operations	JTFHQ J1/J4/J8, a JFLogCHQ and/or another component headquarters.	All deployed headquarters may require augmentation.
Best effort	A JFLogCHQ supported by a logistic brigade headquarters.	The logistic brigade headquarters is likely to pick up residual taskings and support a JFLogCHQ.

Figure 2.2 – Possible deployed joint logistic command and control arrangements

2.19. **Simple intervention.** For a simple intervention, such as a non-combatant evacuation operation, the JTFC may elect to exercise command directly over assigned logistic forces through the JTFHQ staff. In normal circumstances, for this type of operation, the core JTFHQ J1/J4/J8 staff will retain a high degree of centralised control of operational, theatre and tactical-level logistics. However, though classified as simple in operational terms, an operation of this nature may still involve managing complex and demanding lines of communication. The logistic

<sup>49</sup> Defence Strategic Direction (2013) (CONFIDENTIAL UK eyes only), Part 2 (paragraphs 5 to 8) and Annex C.

complexity may therefore require a logistic command and control node distinct from, though subordinate to, the JTFHQ. In such circumstances, individual component commanders<sup>50</sup> may be required to discharge this responsibility.

2.20. **Complex intervention.** For a complex intervention, JTFHQ may lack the organic staff resources to manage and control the logistic effort, particularly when multiple components are deploying. The JTFHQ has an augmentee manning list from which to draw additional resources to meet the need. However, complex interventions may also require a separation between the operational-level JTFHQ and theatre-level logistic command and control. A Joint Force Logistic Component Headquarters (JFLogCHQ) may be required if the scale or complexity of the operation exceeds the capacity or capabilities of the JTFHQ J1/J4/J8 staff.

2.21. **Joint Force Logistic Component Headquarters.** Deploying a scalable, task-organised JFLogCHQ enables logistic support between components to be coordinated. The headquarters has a dual role:

- looking forward, to provide logistic support to the components in theatre; and
- looking backward, to monitor and influence logistic activities from, and in, the strategic base.

While likely to be deployed in a complex intervention, a JFLogCHQ may also be required in a simple intervention if the logistic context is sufficiently complex or logistics-focused. Annex 2B discusses the roles of a JFLogCHQ.

2.22. **Enduring stabilisation.** An enduring stabilisation operation is usually preceded by a simple or complex intervention. Therefore, it is likely the enduring construct will be formed around the in-place joint logistic command and control. Over recent operations, Joint Force Support Headquarters has become the tried and tested model for providing national support to this type of operation.<sup>51</sup> However, the actual joint logistic command and control node for any future enduring stabilisation, while drawing heavily on lessons identified from past experience, would need to apply them to the context faced.

2.23. **Best effort.** For a national best effort<sup>52</sup> operation, the UK would typically deploy a 2\* component headquarters for each environment, below a single 3\* JTFHQ.<sup>53</sup> Due

50 Maritime, land, air or logistic.

51 Introduced in Operation TELIC and developed in Operation HERRICK.

52 The likely scale of a UK best effort operation is described in *Defence Strategic Direction* (CONFIDENTIAL UK eyes only), Part 2, paragraph 8, 2013.

53 In a coalition operation, unless acting as the framework nation, the UK would expect to deploy a 3\* national contingent commander with force elements assigned to combined component headquarters.

// The actual joint logistic command and control node for any future enduring stabilisation, while drawing heavily on lessons identified from past experience, would need to apply them to the context faced.



to the size and expected complexity of a best effort operation, it is likely that the joint logistic command and control node would require a JFLogCHQ, supported by a logistic brigade headquarters.

## Section 3 – Logistic command, control and information services

2.24. The ability to capture, handle, process and present high quality logistic information<sup>54</sup> underpins a commander's situational awareness. This situational awareness contributes to enhanced freedom of movement and improves understanding and informed decision-making. The ability to deliver effective logistic command, control and information is essential for any deployment and must be considered at the earliest stage of the planning phase. Situational awareness can be enabled through timely and accurate management of logistic information. Logistic information should always be:

- the right information;
- delivered to the right people;
- in the right place;
- at the right time;
- to enable the right decision;
- to deliver the right effect; and
- achieve the right outcome.<sup>55</sup>

2.25. Logistic information is provided by, and accessed through, a variety of software applications which together support end-to-end logistic activity.<sup>56</sup> Logistic information primarily focuses on managing inventory and meeting materiel demands. The key is to provide the highest quality information that enables staff to minimise inventory holdings and reduce the deployed logistic footprint. Regardless of the application which provides the information, the focus, in terms of planning, should always be on:

- the service that the end-user requires; and
- what decisions the information is required to inform.

54 Including command systems and consignment tracking, materiel accounting and engineering asset management.

55 [MOD Information Strategy 2011](#).

56 These are being rationalised into a smaller number of joint applications designed to be generic rather than to support specific platform processes.

“  
**Network enabled capability for logistics is potentially a force multiplier and should form a fundamental element of logistic operational planning.**  
”

2.26. In an operational environment, logistic information, combined with operational information and intelligence, provides full logistic situational awareness. This helps staff assess, plan and manage logistic resources in a coordinated manner. Logistic information management is enabled by several supporting capabilities.

- a. **Network enabled capability for logistics.** Network enabled capability for logistics<sup>57</sup> enhances logistic information usage by providing and managing information in a timely and secure manner. The capability enables better decision-making. Network enabled capability for logistics is potentially a force multiplier and should form a fundamental element of logistic operational planning.
- b. **Logistic decision support.** The recognised theatre logistic picture is coordinated by the deployed joint logistic headquarters as a means of delivering situational awareness across the deployed force. The recognised theatre logistic picture should provide a snapshot of the logistic situation. However, the commander’s critical information requirements drive what is also included (for example, sustainability statement levels or availability of key equipment types). These critical information requirements will be met through information services and their enabling systems which include:
  - NATO Logistics Functional Area Services (LOGFAS);
  - Management of the Joint Deployed Inventory (MJDI);
  - Joint Asset Management and Engineering System (JAMES);
  - Base Warehouse Inventory Management System (BWIMS); and
  - Air Core passenger movements system.
- c. **Information infrastructure.** Information infrastructure is designed to meet operational capability requirements. The Defence Information Infrastructure (DII) provides a single, integrated, coherent bearer for both static and deployed forces and supports the progressive delivery of networked enabled capability.

.....  
<sup>57</sup> Includes hardware, software, processes and individual and collective training, underpinned by the development of a secure, robust and extensive network of networks.



## Key points

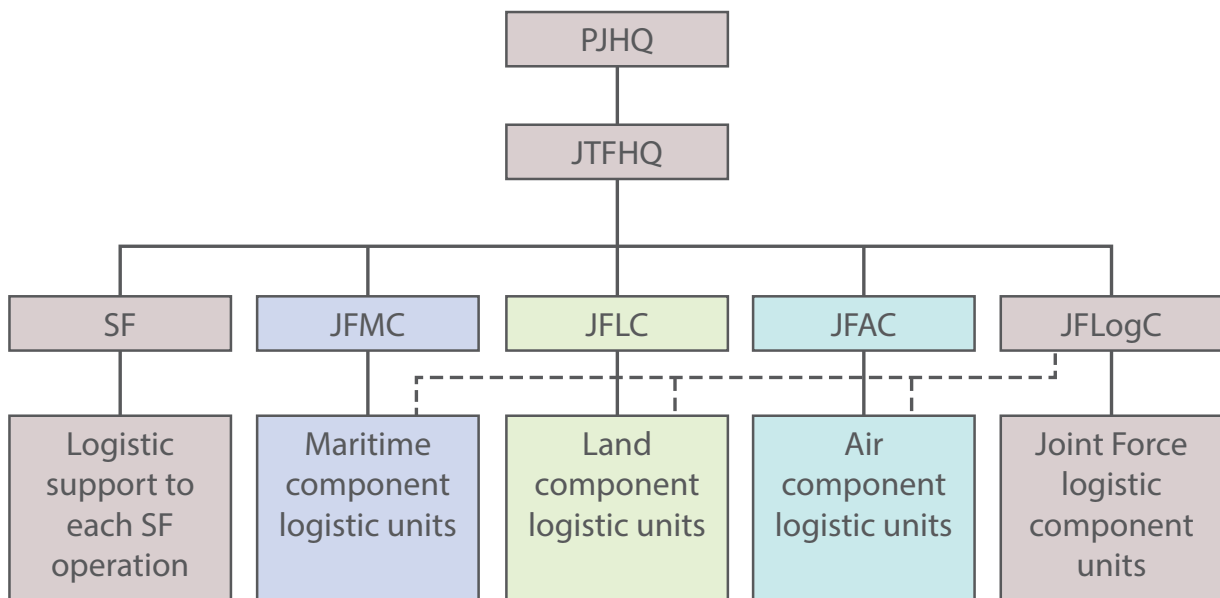
- A coherent and well understood logistic command and control structure, supported by robust logistic information systems, is key to enabling operational logistics.
- ACDS (Log Ops) is the lead provider of logistic advice within the Defence Crisis Management Organisation.
- In multinational operations, national staffs should explore all options to work collaboratively before making bespoke national logistic arrangements.
- ACDS (Log Ops) has directed that UK forces use Logistic Functional Areas Services (LOGFAS) on NATO operations to ensure asset visibility across the Allied force, enhance logistic interoperability and provide the Force Commander with decision support.
- In NATO or other multinational operations, the theatre logistic requirement is likely to be coordinated by a Joint Logistic Support Group.
- There is no single arrangement for national deployed joint logistic command and control. The arrangement will be determined by the nature of the operation, as well as allies' deployed capabilities. For more complex or larger scale operations, it may include a Joint Force Logistic Component Headquarters at the theatre level.
- On all operations, command, control, communication, computers and information enable the commander's situational awareness and inform decision-making. This is underpinned by logistic information, enabled by logistic information services, and is critical to operational success.

# Annex 2A – Joint Task Force Headquarters logistic command and control

2A

## Operational-level logistic command and control

2A.1. The Permanent Joint Headquarters (PJHQ) is responsible for the logistic aspects of planning, deploying, sustaining and redeploying the force. Figure 2A.1 shows generic logistic command and control relationships. The arrangements for the Special Forces component are broadly similar but on a smaller scale. The size and complexity (operational and/or logistic) of a deployment drives the construct of operational logistic command and control and may lead to the discrete componency illustrated below.



### Legend

JTFHQ	Joint Task Force Headquarters	PJHQ	Permanent Joint Headquarters
JFMC	Joint Force Maritime Component	SF	Special Forces
JFLC	Joint Force Land Component	—	Command
JFAC	Joint Force Air Component	- - - -	Coordination
JFLogC	Joint Force Logistic Component		

Figure 2A.1 – Operational-level logistic command and control relationships

2A.2. When plans are initially developed, PJHQ J4 produces the operational logistic plan. During planning, PJHQ J4 ensures logistic issues are represented to:

- determine the logistic feasibility of operations;
- inform the Joint Task Force Commander (JTFC) where logistic vulnerabilities lie and where risks can be taken;
- exploit logistic strengths and minimise weaknesses arising from deployed force elements or assets, taking remedial action as necessary; and
- develop future plans, including providing the logistic input to redeployment planning.

2A

### Joint Task Force Headquarters logistic staff

2A.3. The Joint Task Force Headquarters (JTFHQ) logistic staff direct all logistic activity at the operational level. Deputy Chief of Staff J1/J4/J8<sup>58</sup> in the JTFHQ sets priorities, monitors performance and shapes support for future tasks as well as considering overall Defence support (including medical, personnel, infrastructure and welfare). JTFHQ staff rely on reachback for assistance and influence through PJHQ.

2A.4. Based on strategic guidance issued by PJHQ, JTFHQ:

- sets theatre logistic policy;
- establishes the logistic and movement priorities within the joint operations area; and
- monitors the recognised theatre logistic picture.

The JTFHQ will have discrete cells for:

- supply;
- movement and transportation;
- equipment support;
- contractors on deployed operations (CONDO);
- contracted logistics; and
- medical support.

2A.5. **Joint Task Force Headquarters logistic staff responsibilities.** Many support tasks, such as the medical support chain, extend across the joint operations area,

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<sup>58</sup> J1-J9 are recognised military staff branches. J1 – personnel; J4 – logistics; J8 – resource management.

and beyond, as continuous processes. To ensure resources are used effectively, and speed and flexibility are maintained as circumstances change, the JTFC must clearly define the roles and responsibilities within components' relationships (including, if deployed, with a Joint Force Logistic Component (JFLogC)). The JTFHQ logistic staff is responsible for managing this relationship. At the operational level they have several further responsibilities.

- a. The JTFHQ staff contribute to the military strategic estimate through the logistic estimate.<sup>59</sup>
- b. The staff configure logistics, including medical support,<sup>60</sup> in accordance with the JTFC's intentions.
- c. The staff also set the theatre logistic policy, priorities and governance structures. This includes the auditable authorisation of high priority demands in accordance with current supply policy. This function could be delegated to a JFLogC headquarters (JFLogCHQ) or national support element commander.<sup>61</sup>
- d. The JTFHQ staff also negotiate host-nation support and in-country resource provision (supported by civil secretary and civil-military cooperation staff). Where no memoranda of understanding are in place, the MOD directs who is to negotiate and draft the over-arching host-nation support arrangements.
- e. The HQ staff set the theatre policy for recruiting and administering local civilians employed directly to support the mission.
- f. The staff manage and coordinate contracted logistics and theatre contractors deployed on operations.
- g. The staff also coordinate, with PJHQ, the availability of scarce or crucial resources between components and allies, to avoid duplication of capability or effort.
- h. With PJHQ, the staff set priorities for movement into, and out of, the joint operations area and the subsequent use, maintenance, repair and

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59 The estimates are covered in Chapter 4.

60 Medical support is covered in Allied Joint Publication (AJP)-4.10, *Allied Joint Doctrine for Medical Support* (with UK national elements).

61 Writing the operational-level logistics plan, including policy in the joint operations area for common-user resources such as fuel, food and water, usually based on a logistic lead Service or even logistic lead nation.

redeployment of resources in-line with the campaign plan, including use of the military estate.<sup>62</sup>

i. The HQ staff develop the recognised theatre logistic picture and report the logistic resource state within the joint operations area. This includes collating reports from the component logistic staffs, including a JFLogCHQ if deployed, or receiving consolidated data for the whole theatre from a JFLogCHQ.

j. Finally, the staff coordinate the logistic requirements of other nations where the UK is the logistic lead nation for all, or some, aspects of logistic support.

**2A.6. Prioritising support.** Prioritising support is particularly important where there are substantial constraints on the lines of communication, such as where access can only be by air, or where there are insufficient accessible stocks to meet the demands of all components. With the introduction of the Whole Force approach, including industry and contractors in the planning phase from the outset is vital to ensure coherence and minimise risks and costs.

**2A.7. Theatre priority list.** The JTFHQ is not normally required to become involved in routine supply, other than to ensure that unequivocal policy on the standard priority system and codes is set and the sustainability statement level maintained. By exception, where conflicting demands exist, the JTFC is required to advise PJHQ of the desired priority through the creation of a theatre priority list.<sup>63</sup> PJHQ, on behalf of Chief of Joint Operations, will then direct Defence Equipment and Support to deliver according to those priorities.

**2A.8. Prioritisation information.** Prioritisation decisions depend on information from many sources, including the:

- end-user of the equipment;
- demanding component's maintenance and supply organisation;
- demanding component's operations staff, for relevance to tactical plans;
- other components; and
- strategic base, for availability and delivery issues.

Depending on the nature and volume of prioritisation requirements, the JTFHQ J1/J4 staff may draw on expertise from a JFLogCHQ to coordinate information before working with J3<sup>64</sup> staff to establish the implications for the JTFC's campaign plan. Effective asset tracking and visibility can significantly ease this process.

<sup>62</sup> Covered in Joint Tactics, Techniques and Procedures (JTTP) 4-05, [Operations Infrastructure](#).

<sup>63</sup> The theatre priority list is covered in more detail in Chapter 8.

<sup>64</sup> J1-J9 are recognised military staff branches. J3 – operations.

# Annex 2B – Joint Force Logistic Component command and control

## 2B

2B.1. **Theatre support to joint operations.** Effectively executing theatre logistics to support joint operations requires a joint staff, coordination between single-Services and appropriate use of component logistic resources. In some circumstances, that joint staff, or joint logistic command and control node, might be provided by the Joint Task Force Headquarters (JTFHQ) J1/J4/J8<sup>65</sup> or the logistic staff of one of the components. Planners should, however, consider deploying a Joint Force Logistic Component Headquarters (JFLogCHQ).

2B.2. **Joint Force Logistic Component Headquarters.** Where the size, nature or complexity of an operation requires, a JFLogCHQ may be deployed as the joint logistic command and control node (subordinate to the JTFHQ). As a task-organised joint logistic command and staff organisation, the deployed JFLogCHQ would, most usually, be a 1\* command. However, the headquarters is scalable and could be organised and commanded at lower levels, depending on operational requirements. The JFLogCHQ includes staff from across the Services, with a broad range of specialist expertise.

2B.3. **Joint Force Logistic Component tasks.** The tasks undertaken by the joint logistic staff, and the component as a whole, flow from the Joint Task Force Commander's (JTFC) intent and direction. Those tasks involve tri-Service coordination, while recognising that some low-level logistic systems would continue to operate between the components and Defence Equipment and Support (DE&S) in the strategic base. The JFLogCHQ may have a range of units placed under its command.

2B.4. **Deploying a Joint Force Logistic Component Headquarters.** The decision to deploy a JFLogCHQ is made by the Permanent Joint Headquarters (PJHQ). While estimate-driven, a JFLogCHQ is the likely choice for enabling a new theatre of operations (except in the simplest scenarios). The number of force elements required by the headquarters is likely to be most significant during the deployment, and subsequent redeployment, stages of an operation. Task-organised component force

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65 J1-J9 are recognised military staff branches. J1 – personnel; J4 – logistics; J8 – resource management.

elements are assigned to the JFLogCHQ by the JTFC for specific tasks and are later returned to their parent components to meet JTFC priorities or other task allocation.

**2B.5. Component logistics.** Component logistic staffs coordinate and develop their elements of the JTFC's campaign plan, liaising with JFLogCHQ to ensure coherence with the joint logistic element. Tactical-level logistic command and control normally remains within the combat components.

**2B.6. Role of a Joint Force Logistic Component Headquarters.** A JFLogCHQ provides a single joint focus for all logistic activity supporting the deployed joint task force. The headquarters has particular responsibility for the reception, staging and onward movement<sup>66</sup> of force elements in the joint operations area and sustainment of the operation. A deployed JFLogCHQ commands the theatre end of the Coupling Bridge<sup>67</sup> and makes sure that force elements and sustainment stocks arrive in theatre in accordance with the JTFC's priorities and are configured as required.

**2B.7. Joint Force Logistic Component Headquarters responsibilities.** A Joint Force Logistic Component Headquarters has a number of responsibilities which are outlined below.

- a. Command all logistic assets and capabilities assigned to it by the JTFC.
- b. Contribute to the JTFHQ J1/J4/J8 operational estimate process and liaise with coalition partners, deployed contractors, other government departments and non-governmental organisations. If required, the JFLogCHQ may provide an early-entry reconnaissance capability via a logistics-focused Operational Liaison and Reconnaissance Team (OLRT).<sup>68</sup>
- c. Coordinate in-theatre logistic support in accordance with the JTFC's priorities, including through activating and maintaining robust lines of communication. Each component retains command of logistic assets deployed as an integral part of its units and formations, unless otherwise directed by the JTFC. However, to ensure economy of effort and maximise logistic efficiency, integration and standardisation, a deployed JFLogCHQ is normally given coordinating authority over all logistic assets in the joint operations area. JFLogCHQ may be assigned more than coordinating authority over some component logistic assets on a temporary basis when necessary.

.....  
<sup>66</sup> From the joint rear area, a Joint Force Logistic Component Headquarters (JFLogCHQ) would also support the integration element of reception, staging, onward movement and integration but that would remain a J3-led activity (see Chapters 2, 3 and 7 for further information).

<sup>67</sup> The Coupling Bridge is described in Chapter 6, Section 4.

<sup>68</sup> To reflect their greater, but not exclusive, logistic focus, such liaison teams may be referred to as High Readiness Logistic Teams in this context.

- d. To establish and manage the recognised theatre logistic picture, as part of the joint operating picture, on behalf of the JTFC.

## General functions of a Joint Force Logistic Component Headquarters

2B.8. **Theatre activation.** The theatre activation party is made up of specialist logistic and administrative experts. Those experts conduct reconnaissance and implement initial in-country resource arrangements, preparing for a larger enabling force and a JFLogCHQ. The size of the theatre activation party is driven by the specialisations required. The party's composition should supplement the range of skills contained within the JTFHQ reconnaissance team.<sup>69</sup> J8 civil secretariat, finance and commercial staffs are likely to be included to establish regularity, propriety and value for money from the outset and avoid budgetary delay. Theatre activation tasks include:

- identifying availability and suitability of host-nation support and in-country resource to develop clear planning parameters for both PJHQ and the JTFHQ and to secure approved resources;
- coordinating advance party reception, including transport, accommodation and life support;
- establishing a theatre reception centre to enable the operational locations of all deployed force elements to be tracked;
- operating as the advance element of a JFLogCHQ; and
- establishing systems for asset tracking and in-transit visibility, as early as possible.

2B.9. **Movement control.** JTFHQ staffs set intra-theatre transport and movements policy and priorities and, with PJHQ, those for inter-theatre. They have a close relationship with JFLogCHQ staff, who conduct force reception and redeployment, as well as coordinating movements. The Joint Movement Unit, which initially executes the movement plan, should deploy early. The Unit may subsequently redeploy to support other operations as the JFLogCHQ becomes more established. The JFLogCHQ should include, as a minimum, the following two organisations to conduct movement control.

- a. **Force Movement Control Centre.** The Force Movement Control Centre plans and coordinates in-theatre movements from plans established by the .....

<sup>69</sup> This could include: food services; fuels; host-nation support; labour resource; environmental health; movements; local resources/supply including military contracts staff; administration; port and maritime; and appropriate engineer specialists.



joint force movement staff. The Centre is tri-Service manned and should include sufficient experienced staff to both function effectively and also to provide movements and consignment tracking command and control capabilities at key nodes. The Centre maintains close liaison with the Joint Force Air Component Command, which commands intra-theatre air transport assets and the aero-medical organisation.

b. **Force Movement Control Unit.** The Force Movement Control Unit groups tri-Service theatre movements elements under a unit headquarters to better manage operational reception<sup>70</sup> requirements at ports of disembarkation. The unit is under the operational control of the JFLogCHQ. The Force Movement Control Unit coordinates its activities with the units under JFLogCHQ command that provide:

- supply;
- transportation;
- port and maritime;
- engineering; and
- pioneer functions.

#### 2B.10. In-theatre movement and life support tasks.

a. **Reception, staging and onward movement.** Reception, staging and onward movement is covered in detail in Chapter 7. JFLogCHQ should maintain close liaison with the JTFHQ to enable timely and effective response to force element table<sup>71</sup> changes.

b. **Intra-theatre supply.** JFLogCHQ controls intra-theatre air transport and possibly main supply routes, although the latter are more likely to be controlled by the land component. If established within the joint operations area, forward logistic sites are normally under the operational control of JFLogCHQ and the tactical control of the maritime component's Group Logistic Coordinator.

c. **Redeployment planning.** With JTFHQ and PJHQ, JFLogCHQ staff are likely to be responsible for planning recovery movement and preparing equipment and stores for redeployment and future use. A separate organisation may, however, be formed to support post-conflict activities or transition to a subsequent campaign phase.

70 The unit also manages embarkation requirements during redeployment.

71 A force element table lists all assets, including personnel and materiel, that are to be deployed to the operation.

In each of the above, joint control is normally required to allocate transport assets optimally.

**2B.11. Forward mounting base support.** A forward mounting base (FMB) may be established within the operational area to support operations at forward operating bases. Depending on the scale of the operation, the FMB may also provide some logistic support functions, requiring logistic command and control, communications and functional units. It may also provide a hub for intra-theatre airlift. Both the Joint Force Air Component and JFLogCHQ would, therefore, need to establish clear control arrangements with PJHQ to avoid compromising logistic capability in the joint operations area.

**2B.12. Forward mounting base activation.** Responsibility for selecting and activating a FMB rests with PJHQ, closely assisted by Defence Support Chain Operations and Movements. Assets would need to be identified and allocated to the FMB. The task of supporting it would only fall to the JFLogCHQ if it is geographically appropriate. However, the FMB would be a discrete element of the theatre lines of communication and the JFLogCHQ would therefore require some control over the FMB's logistic assets. PJHQ, JTFHQ and JFLogCHQ should carefully consider FMB support during planning, to make sure the integrity and continuity of support across the Coupling Bridge (and into the joint operations area) is maintained.

**2B.13. Logistic functional control.** Logistic functional control is defined as: the authority to direct the method and processes employed to conduct logistic functions in order to ensure commonality and efficient use of resources.<sup>72</sup> Commander Joint Force Logistic Operations coordinates a range of logistic support activities to support the joint force. These activities include:

- supply and distribution;
- movements;
- maintenance and infrastructure;
- providing fuel, water, electrical power, temporary deployable accommodation; and
- medical and personnel administration support.

This support may be provided by:

- the UK;
- multinational military sources;
- the host nation;

.....  
<sup>72</sup> Joint Doctrine Publication (JDP) 0-01.1, [United Kingdom Supplement to the NATO Terminology Database](#).

- contractors; or
- other in-country resources.

Delivery of effective joint support to operations depends on JFLogCHQ exercising coordination authority over all in-theatre logistic assets, as well as command of those units providing that joint support. Task-orientated groups may be established as joint units, formed from assets, personnel and equipment from each of the components. JFLogCHQ also needs the capability to establish and maintain logistic detachments to provide essential logistic support functions for joint logistic units at dispersed locations.

**2B.14. Force supply and distribution.** Inventory control and prioritisation are fundamental to operating the force economically and efficiently. Routine individual demands do not normally pass through JFLogCHQ. Supply and distribution units under JFLogCHQ command, and in accordance with JTFC's priorities, are responsible for:

- receiving;
- storing;
- controlling;
- maintaining;
- accounting for; and
- distributing operational logistic stocks.

Using alternative support arrangements, such as contracting for availability, may increase support chain complexity and reduce asset visibility. JFLogCHQ should monitor how effectively the Defence Support Chain operates.

**2B.15. Force supply and distribution priorities.** JFLogCHQ generates and controls the theatre priority list to ensure an operationally-prioritised flow of materiel to and from theatre. Priorities for out-loading materiel are determined by JTFHQ J4 staff. PJHQ directs the order of loading of these stocks from the strategic base through Defence Support Chain Operations and Movements.

## Specific functions of a joint force logistic headquarters

**2B.16. Equipment support.** Equipment support is normally conducted by individual components. However, the nature of the operation and the commonality of equipment and practices may require some resources within the joint operations area to be coordinated.<sup>73</sup> The Whole Force approach will play an increasingly important

.....  
73 Including military personnel, units and contractors.

role in delivering equipment support in theatre. That support is coordinated by the JFLogCHQ. The JFLogCHQ sets force policy for:

- repair;
- recovery;
- back-loading;
- cannibalising equipment;
- modifying equipment;
- disposal;
- salvage; and
- dealing with hazardous waste.

JFLogCHQ also coordinates producing the theatre mission critical equipment list (in consultation with other components and the JTFHQ) and manages the theatre equipment priority list on behalf of the force.

**2B.17. Medical support.** Medical support<sup>74</sup> is increasingly joint and multinational in its delivery but roles 1 and 2 remain integral to each component. JFLogCHQ has responsibility for controlling and managing:

- Joint Force Logistic Component role 1 and 2 medical facilities;
- theatre-level role 3;
- air and surface medical evacuation; and
- medical stocks, drugs and equipment provision.

Depending on geography and the operational situation, some JTFHQ medical planning cell functions may be embedded in JFLogCHQ. This provides better access to communications and greater physical proximity to the majority of medical units. However, those planning cells remain part of the JTFHQ. Elements of joint medical support are provided by other components.

- a. Ground medical evacuation and land-based role 3 support is primarily provided by Army Medical Services.
- b. Constructing role 3 facilities for the land and air components is an Army engineer responsibility.
- c. Aeromedical evacuation, whether conducted tactically from forward areas, or strategically out of theatre, is normally provided through the air component.

.....  
<sup>74</sup> Medical issues are covered in detail in Allied Joint Publication (AJP)-4.10, *Allied Joint Doctrine for Medical Support* (with UK national elements).

- d. Medical support to the maritime component is covered in Annex A.

**2B.18. Infrastructure.** Using its infrastructure staff, JFLogCHQ produces an infrastructure development plan, as directed by PJHQ. Infrastructure support includes:

- enabling main supply routes and sea and air ports of disembarkation;
- developing reception, assembly and staging areas (including bases, headquarters and facilities to receive and cross-load materiel);
- providing utilities such as bulk fuel, potable water and electrical power generation; and
- establishing technical and living accommodation.

**2B.19. Recognised theatre logistic picture.** The recognised theatre logistic picture is coordinated by JFLogCHQ to provide logistic decision support and situational awareness. This is used by staff in-theatre and agencies throughout the Defence Support Chain. The recognised theatre logistic picture contains force element and force logistic data, geospatial information and other logistic and operational documentation (such as signals, situation reports and theatre priority lists).

**2B.20. White fleet management.** Planning and conducting white fleet operations within the joint operations area is generally coordinated by JFLogCHQ. White fleet transport often forms a vital element in linking ports of disembarkation with forward mounting bases.

**2B.21. Reverse supply chain.** JFLogCHQ coordinates the return of materiel from theatre through the reverse supply chain, in close liaison with the Defence Support Chain Operations and Movements and Logistic Services organisations.<sup>75</sup> Efficiently executing this function makes sure critical items are swiftly returned to the repair loop, availability is maintained and stocks kept to an appropriate minimum.

**2B.22. Urgent operational requirement management.** Urgent operational requirement-related materiel needs to be prioritised to enable its timely delivery and subsequent integration. JFLogCHQ, Defence Support Chain Operations and Movements and industry maintain close liaison to ensure such materiel is delivered in good time.

.....  
<sup>75</sup> Logistic Services was formerly known as Joint Support Chain Services and prior to that the Defence Storage and Distribution Agency.

2B.23. **Contract management and labour support.** Contractors provide significant capability as part of the Whole Force. The Whole Force size will change over the course of an operation. JFLogCHQ lets contracts to provide services in theatre, in accordance with national contractor support to operations policy. As logistic contracting activities can affect the delivery of campaign objectives, it is vital to coordinate with other staff branches (J3, J8, J9)<sup>76</sup> and other government departments during the contract planning stage. Local labour may also be employed in direct support of the Joint Force Logistic Component. A cell within the JFLogCHQ undertakes this function, also ensuring that all personnel deployed to provide contractor support to operations are integrated into the force structure.

2B.24. **Support chain performance management.** The effectiveness of the Defence Support Chain should be optimised. JFLogCHQ oversees its function in theatre, identifies choke points and makes recommendations for resolving difficulties when they occur.

2B.25. **Provost.** In joint operations, Provost support across lines of communication should also be joint, and fully coordinated. Provost assets may therefore include police from all three Services. A Provost Marshal, and staff, may be established within the JFLogCHQ.

2B.26. **Captured persons.** The JTFC is responsible for designating the Captured Persons Handling Organisation Commander.<sup>77</sup> If that role is allocated to the Commander Joint Force Logistic Operations, it would be discharged through a separate branch or section within JFLogCHQ.

2B.27. **Force Postal and Courier Services.** JFLogCHQ will command the Postal and Courier Services unit deployed with the joint force.

2B.28. **Personnel and administration support.**<sup>78</sup> JFLogCHQ's responsibilities in delivering personnel and administration support include the following.

- a. Administering the operational establishment table, with PJHQ J1 and J3, to ensure force elements are generated and deployed to meet JTFC's intent.
- b. Controlling and administering personnel arriving into, and departing from, theatre, ensuring the administrative aspects of reception, staging and onward movement are carried out, including:

76 J1-J9 are recognised military staff branches. J3 – operations; J9 – civil-military cooperation.

77 JDP 1-10, *Captured Persons* (3rd Edition), Chapter 4.

78 For more detail, see JDP 1-05, *Personnel Support for Joint Operations*.

- operational location tracking;
- reception briefings; and
- administering the deployment welfare package.

Operational location tracking is required to account for all manpower in the joint operations area, including ship-to-ship movement of personnel. At least one data capture team should be deployed to each port of disembarkation/embarkation, as well as another held in reserve. Personnel tracking difficulties are significant and, before deployment, the JFLogCHQ should develop plans to ensure the full and correct collation of personnel information.

- c. Coordinating theatre policy for Joint Personnel Administration and maintaining force personnel records.
- d. Maintaining a single point of contact for casualty and compassionate reporting. With J4 Medical and the Force Movement Coordination Cell, JFLogCHQ is responsible for administering an effective system for managing and moving casualties and compassionate cases.
- e. Managing theatre aspects of fatalities, including in-theatre coordination of repatriation.
- f. Administering some aspects of theatre discipline chains, providing advice for convening official inquiries and staffing honours and awards submissions.
- g. The Force Cashier is responsible for indenting, accounting for, and supplying, cash to unit and formation imprest account holders under the operational control of JFLogCHQ. The Force Cashier is also responsible for supporting unit and formation pay and personnel staffs.

**2B.29. Environmental and operational safety.** A joint organisation responsible for maintaining the general safety of the force may be established to assist the JTFC in the managing environment-related operational risk. The organisation is controlled by JFLogCHQ and should include elements responsible for:

- fire safety;
- environmental health;
- transport safety;
- environmental intelligence; and
- environmental policing.

The challenge is significant, especially when the force is widely dispersed across a large theatre, over several different phases. The logistic estimate should consider how best to provide environmental safety.<sup>79</sup>

2B.30. **Governance.** JFLogCHQ carries out the following functions in accordance with the constraints, rules and procedures within the *Defence Logistic Framework*.<sup>80</sup>

- Confirms that Joint Forces Command and the single-Service commands have effective governance procedures in place for their in-theatre force elements.
- Confirms that contract sponsors have effective governance procedures in place for the support and services delivered under host-nation support and contract support to operations arrangements.<sup>81</sup>
- Identifies gaps between single-Service instructions and procedures in theatre to achieve safety and quality across components and specifically between individual units and multinational partners.
- Identifies areas where adopting joint practices and procedures would rationalise and/or improve single-Service process/system effectiveness.
- Engages logistic subject matter experts within theatre to provide process improvement proposals to operational commanders, at all levels.
- Reviews in-theatre incident and accident reports and takes action to coordinate process improvements when reports indicate boundary issues between individual units and/or multinational partners.
- Ensures that management checks take place in accordance with theatre-specific terms and conditions of service regulations.<sup>82</sup>

2B.31. **Civil Secretariat.** Depending on the scale and complexity of the operation, the deployed JFLogCHQ may include a scalable civil secretariat cell covering the J8 finance and commercial functions. Relevant tasks beyond the scope of the deployed cell will be covered via reachback to PJHQ J8.

79 Joint Tactics, Techniques and Procedures Publication (JTTP) 4-05, *Operational Infrastructure* and JTTP 4-05.2, *Lands and Environmental Procedures*.

80 The *Defence Logistic Framework* subsumed Joint Service Publication (JSP) 886, *The Defence Logistic Support Chain Manual* during 2015.

81 See Chapter 5 for further information on contractor support to operations.

82 JSP 908, *The Defence Manual of Deployed Labour Support*, Chapter 10.



a. **J8 Finance.** Deployed civil secretariat staff may carry out following finance functions.

- Financial scrutiny and value for money assessment, including basic investment appraisals, before committing resources.
- Financially control and scrutinise all in-theatre operational expenditure, ensuring that financial propriety and regularity are maintained throughout.
- Manage procedures and systems which enable collection, effective communication and recovery of costs for stores, services and facilities provided either directly to other nations, their personnel embedded within UK formations or to cost-sharing partner nations in accordance with established memoranda of understanding.
- Provide advice to commanders of UK deployed forces on applying the rules on gifts, rewards and hospitality.<sup>83</sup>
- Provide guidance on the use of in-place enabling contracts.
- Manage third-party claims from local nationals.

b. **J8 Commercial.** Deployed civil secretariat staff may provide the following commercial support functions.

- Place contracts for goods and services in connection with the operation, ensuring value for money and demonstrating due regard to commercial rules, regulations and best practice.
- Provide commanders with timely and accurate commercial advice.
- Develop and implement commercial strategies for delivering goods and services, making sure that contracts are managed effectively and appropriate performance management processes are in place.
- Develop and maintain a strong commercial resource base.
- Assure commercial propriety and regularity.
- Provide advice and guidance on in-theatre sales activity.

.....  
83 JSP 462, *Financial Management Policy Manual*.



## Joint logistic enablers

Chapter 3 defines joint logistic enablers, describes where they are likely to be located and sets out their potential roles.

It also outlines logistic nodes that deployed joint logistic enablers facilitate in the joint rear area, including:

- joint logistic units;
- the joint theatre logistic rendezvous;
- the joint supply area; and
- the Theatre Reception and Redeployment Centre.

“  
There is nothing more common than to find  
considerations of supply affecting the strategic  
lines of a campaign and a war.

”  
Carl von Clausewitz

# Chapter 3 – Joint logistic enablers

3.1. **Definition.** Joint logistic enablers are: those force elements and capabilities that deliver the logistic effects necessary for:

- the successful mounting, deployment, reception, staging, onward movement and integration of a force;
- sustaining, recovering and redeploying a force across a Coupling Bridge and within theatre; and
- opening, operating and closing ports of disembarkation/embarkation.<sup>84</sup>

Joint logistic enablers are required both in the strategic base and in theatre, mainly within a forward mounting base. They are broken down into two discrete sub-sets – strategic base and deployed.

3.2. **Strategic base joint logistic enablers.** Strategic base joint logistic enablers deliver the logistic effects necessary for the successful mounting, deployment, receipt, recovery and redeployment of a force out of, and into, the strategic base. They also enable the sustainment process across the Coupling Bridge to and from theatre. Joint logistic enabler capabilities in the strategic base are primarily Defence Equipment and Support-delivered (for example, Defence Support Chain Operations and Movements, storage and distribution, mounting and recovery) but some are also delivered via single-Services (for example, air and sea ports of embarkation and the Joint Air Mounting Centre).

3.3. **Deployed joint logistic enablers.** Deployed joint logistic enablers deliver the logistic effects necessary for successfully:

- opening, operating and closing theatre ports of disembarkation/embarkation;
- deploying from forward mounting bases;
- receiving, staging, onward moving and integrating the Whole Force;
- sustaining the force in theatre;
- transitioning to stabilisation operations;
- drawing the theatre down; and
- redeploying the force from theatre.

84 Assistant Chief of the Defence Staff (Logistic Operations) (ACDS (Log Ops)), *Delivering Joint Logistics Post Joint Forces Command Full Operating Capability Study*, 1 July 2013. Proposed definition for inclusion in Joint Doctrine Publication (JDP) 0-01.1, [United Kingdom Supplement to the NATO Terminology Database](#).

Joint logistic enabler capabilities in the strategic base are primarily Defence Equipment and Support-delivered but some are also delivered via single-Services.

3.4. **Types of joint logistic enabler.** Force elements that are able to deliver the deployed joint logistic enabler function(s) can be further categorised into two types.

- **Type 1** – organisations or units that solely (or by a large majority) provide or support joint logistic effect.
- **Type 2** – organisations or units that are attributed to deliver single-environment logistic effect but which can be task-organised to provide joint logistic effect.

3.5. **Logistic nodes.** Deployed joint logistic enablers will establish logistic nodes to facilitate activating theatre entry and establishing the Coupling Bridge<sup>85</sup> within the joint rear area. Figure 3.1 shows a generic laydown of the various logistic nodes forming the joint rear area. Under command of the theatre logistic headquarters (for example, Joint Task Force Headquarters J1/J4/J8<sup>86</sup> or Joint Force Logistic Component Headquarters (JFLogCHQ)), the nodes include air, rail and sea ports of disembarkation (Type 1 joint logistic enablers), the joint supply area, theatre rendezvous and forward logistic sites (Type 2 joint logistic enablers).

### Joint logistic unit

3.6. A joint logistic unit is a headquarters or command and control node for logistic enablers which operate logistic nodes at the air and sea ports of disembarkation, joint theatre logistic rendezvous and joint supply area. The size and construct of each joint logistic unit is tailored to the operational requirement. The units can be augmented for operational peak or surge activities.

3.7. The joint logistic unit's main function is to develop and execute an effective support plan that meets the needs of those that operate within the joint rear area. Each joint logistic unit reports into the theatre logistic headquarters (usually Joint Task Force Headquarters J1/J4/J8 or JFLogCHQ) on how the deployment into theatre is progressing and on the state of our sustainment holdings.

### Joint theatre logistic rendezvous

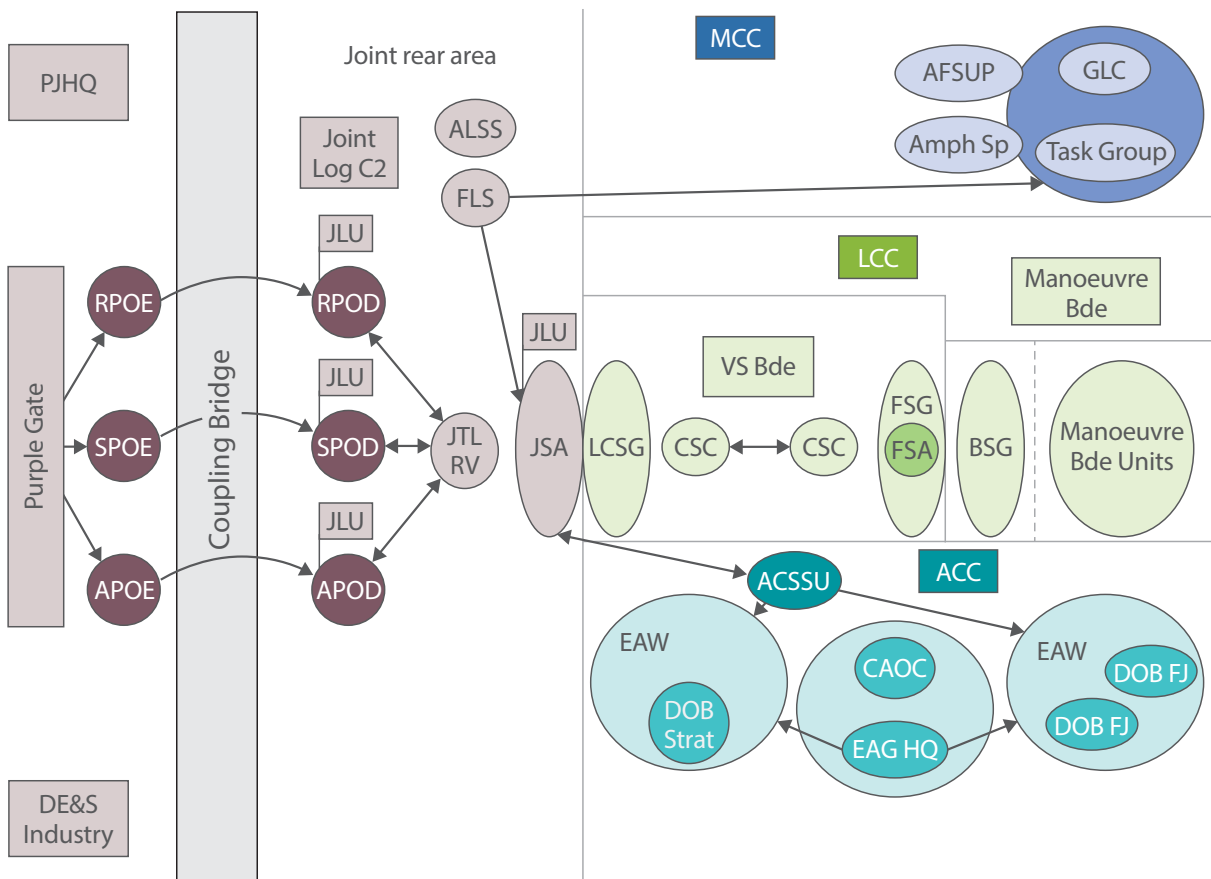
3.8. The joint theatre logistic rendezvous conducts consignment tracking and maintains visibility of all stock entering the joint rear area. Supply personnel are likely to operate the rendezvous but they are commanded by a dedicated, scalable joint logistic unit.

85 The Coupling Bridge is described in Chapter 6, Section 4.

86 J1-J9 are recognised military staff branches. J1 – personnel; J4 – logistics; J8 – resource management.

“  
The **size and construct** of each joint logistic unit is **tailored to the operational requirement.**”

”



Legend	
ACC	Air Component Command
ACSSU	Air combat service support unit
AFSUP	Afloat support
ALSS	Advanced logistic support site
Amph Sp	Amphibious support
APOD	Air port of disembarkation
APOE	Air port of embarkation
BSG	Brigade support group
C2	Command and control
CAOC	Combined Air Operations Centre
CSC	Convoy support centre
DE&S	Defence Equipment and Support
DOB FJ	Deployment operating base fast jet
DOB Strat	Strategic deployment operating base
EAG	Expeditionary air group
EAW	Expeditionary air wing
FLS	Forward logistic site
FSA	Forward supply area
FSG	Forward support group
GLC	Group Logistic Coordinator
JLU	Joint logistic unit
JSA	Joint supply area
JTL RV	Joint theatre logistic rendezvous
LCC	Land Component Command
LCSG	Land component support group
MCC	Maritime Component Command
PJHQ	Permanent Joint Headquarters
RPOD	Rail port of disembarkation
RPOE	Rail port of embarkation
SPOD	Sea port of disembarkation
SPOE	Sea port of embarkation
VS Bde	VANGUARD Support Brigade

Figure 3.1 – Generic theatre laydown of logistic nodes<sup>87</sup>

3.9. The joint theatre logistic rendezvous may be required to separate out bulk stores, reorganise them into consignments for their intended units or sub-units and prepare them for onward transportation. To enable a clear picture of how stock is progressing through the supply chain, it is vital that the rendezvous is linked into the network of logistic information systems.

<sup>87</sup> Stocks could be deployed from the strategic base directly to the components and not be received in the joint supply area.

3.10. The joint theatre logistic rendezvous is also an important element in supporting an efficient reverse supply chain. As well as tracking consignments, rendezvous personnel can prepare, consolidate and package stores for movement back across the Coupling Bridge to the strategic base.

### Joint supply area

3.11. The joint supply area is only established if the operational circumstances require it.<sup>88</sup> The joint supply area’s main role is to receive and store theatre stocks and materiel in the joint rear area, for redistribution when required.<sup>89</sup> Logistic capabilities are centrally marshalled to use limited supply and distribution resources effectively. The joint supply area is commanded by a scalable joint logistic unit and needs networked logistic information systems.

3.12. Stock held in the joint supply area (though often intended for a single component’s use) will remain the deployed joint logistic headquarters’ responsibility until the Joint Task Force Commander’s priorities require it to be transferred to that single component. The deployed joint logistic headquarters is responsible for ensuring that stock levels within the joint supply area are maintained in accordance with the sustainability statement.<sup>90</sup>

### Theatre Reception and Redeployment Centre

3.13. The Theatre Reception and Redeployment Centre is initially located at one or more of the ports of disembarkation but, as the theatre matures, is usually consolidated into a single location. Each Centre is commanded by its respective port of disembarkation joint logistic unit.

3.14. The Theatre Reception and Redeployment Centre’s main role is to register personnel as they arrive in theatre and provide initial orientation briefs, orders, passes and other administrative services. Personnel are fed, accommodated and enabled to take control of their units’ equipment and vehicles which may have deployed separately. Personnel are also given the opportunity to conduct limited training and range work (for example, to prepare personal weapons) and receive an initial issue of consumable supplies.

3.15. The Theatre Reception and Redeployment Centre can assist with redeploying a force and should be considered in the initial deployment and redeployment planning. The Centre can be supported by a temporary holding facility which supports deployed personnel operating within or around the port of disembarkation areas. Temporary holding facilities may need to endure to provide a holding area for

.....

88 Alternatively, stores could be receipted into a single component storage area.

89 The joint supply area could also cross the littoral interface and include the joint sea base.

90 Chapters 4 and 8 provide more detail on the sustainability statement.

3

“  
**Stock held in the joint supply area will remain the deployed joint logistic headquarters’ responsibility until the Joint Task Force Commander’s priorities require it to be transferred to a component.**  
”



reinforcements, particularly during surge periods. Temporary holding facilities should also be able to provide stocks (predominantly ammunition (Class V)) prior to onward movement within the theatre. Temporary holding facilities should not be confused with detainee holding areas.

3.16. **Capability management of joint logistic enablers.** *Defence Reform*<sup>91</sup> and the *Strategic Defence and Security Review 2010* generated changes to capability management. As a result, Assistant Chief of the Defence Staff (Logistic Operations) provides a capability management function for those joint logistic enablers not managed either elsewhere in Joint Forces Command or by a single-Service command.

### Key points

- Joint logistic enablers deliver logistic effect for: the mounting, deployment, reception, staging, onward movement and integration of a force; sustaining, recovering and redeploying a force within and out of theatre; and opening, operating and closing ports of disembarkation or embarkation.
- They are broken down into two discrete sub-sets – strategic base and deployed. Within that they are further distinguished by type. Type 1 – those that mainly provide or support joint logistic effect. Type 2 – those attributed to deliver single environment logistic effect but which are able to provide joint logistic effect.
- Joint logistic enablers establish a range of logistic nodes from which they deliver enabling effect in the joint rear area.
- Joint logistic units provide command and control for the joint logistic enabler operating each logistic node.
- The joint theatre logistic rendezvous conducts consignment tracking and maintains visibility of all stock entering the joint rear area.
- The joint supply area receives and stores theatre stocks and materiel in the joint rear area, for redistribution when required.
- The Theatre Reception and Redeployment Centre registers personnel as they arrive in theatre and provides initial orientation briefs, orders, passes and other administrative paperwork.

91 *Defence Reform – An Independent Report into the Structure and Management of the Ministry of Defence*, [Lord Levene of Portsoken et al], June 2011.



# Logistic planning for operations

Chapter 4, Section 1 introduces the planning process and sets the context for the rest of the chapter.

Section 2 outlines logistic input to the planning process from the strategic level in MOD to the operational level in deployed headquarters. It introduces:

- the key logistic organisations involved in the planning process;
- the points at, and the manner in, which they engage; and
- the major planning products that they develop or contribute to.

Section 3 discusses the importance of integrating logistic information system planning into the operational planning process from the earliest stages.

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“  
As we select our forces and plan our operations,  
... (w)e must understand how logistics can impact  
on our concepts of operation ... Commanders  
must base all their concepts of operations on  
what they know they can do logistically.  
”

Lieutenant General Alfred M. Gray, Jr.,  
United States Marine Corps

# Chapter 4 – Logistic planning for operations

## Section 1 – Planning process

4.1. Our logistic principles emphasise how important it is to include logistic planning as an integral part of, and not in parallel to, planning for operations. When considering logistic support for an operation, strategic and operational planners must take a Whole Force perspective, addressing the constraints and opportunity of using industry and contractorised capability to enable and support the operation.

4.2. The UK planning process is addressed through Joint Doctrine Publication (JDP) 01, *UK Joint Operations Doctrine*. JDP 01 refers to further detail in Allied Joint Publication (AJP)-5, *Allied Joint Doctrine for Operational-level Planning* (with UK national elements) and Allied Command Operations' *Comprehensive Operations Planning Directive* (COPD). UK national and multinational strategic and operational planning is conducted using the NATO operations planning process, operational-level planning process and operational estimate, in accordance with JDP 01, AJP-5 and COPD.<sup>92</sup>

4.3. As part of a multinational and/or integrated approach to address crisis prevention, containment and resolution, the MOD's Defence Crisis Management Organisation conducts three types of planning.<sup>93</sup>

- a. **Crisis response planning** – to determine, often at short notice, an appropriate military response to a current or imminent crisis.
- b. **Contingency planning** – based on a mixture of intelligence and assumptions regarding potential involvement in future crises.
- c. **Current operations** – planning to manage a current operation, prevent escalation and sustain military activity. Such planning tends to follow crisis response planning, when military activity is (or is envisaged to be) prolonged. It may also involve elements of contingency planning to address potential changes in the situation, including termination or transition in anticipation of achieving the desired, or acceptable, outcome.

92 Staff planners should follow the planning process set out in the *Comprehensive Operations Planning Directive* (COPD), while taking doctrinal guidance from Allied Joint Publication (AJP)-5, [Allied Joint Doctrine for Operational-level Planning](#) and Joint Doctrine Publication (JDP) 01, [UK Joint Operations Doctrine](#).

93 JDP 01, [UK Joint Operations Doctrine](#), Chapter 2.

4.4. This Chapter focuses on the logistic engagement in crisis response planning. Fundamental to that logistic planning is ensuring robust and effective deployed logistic information systems to enable visibility and provide logistic situational awareness. Figure 4.1 shows a summary of the crisis response planning process.

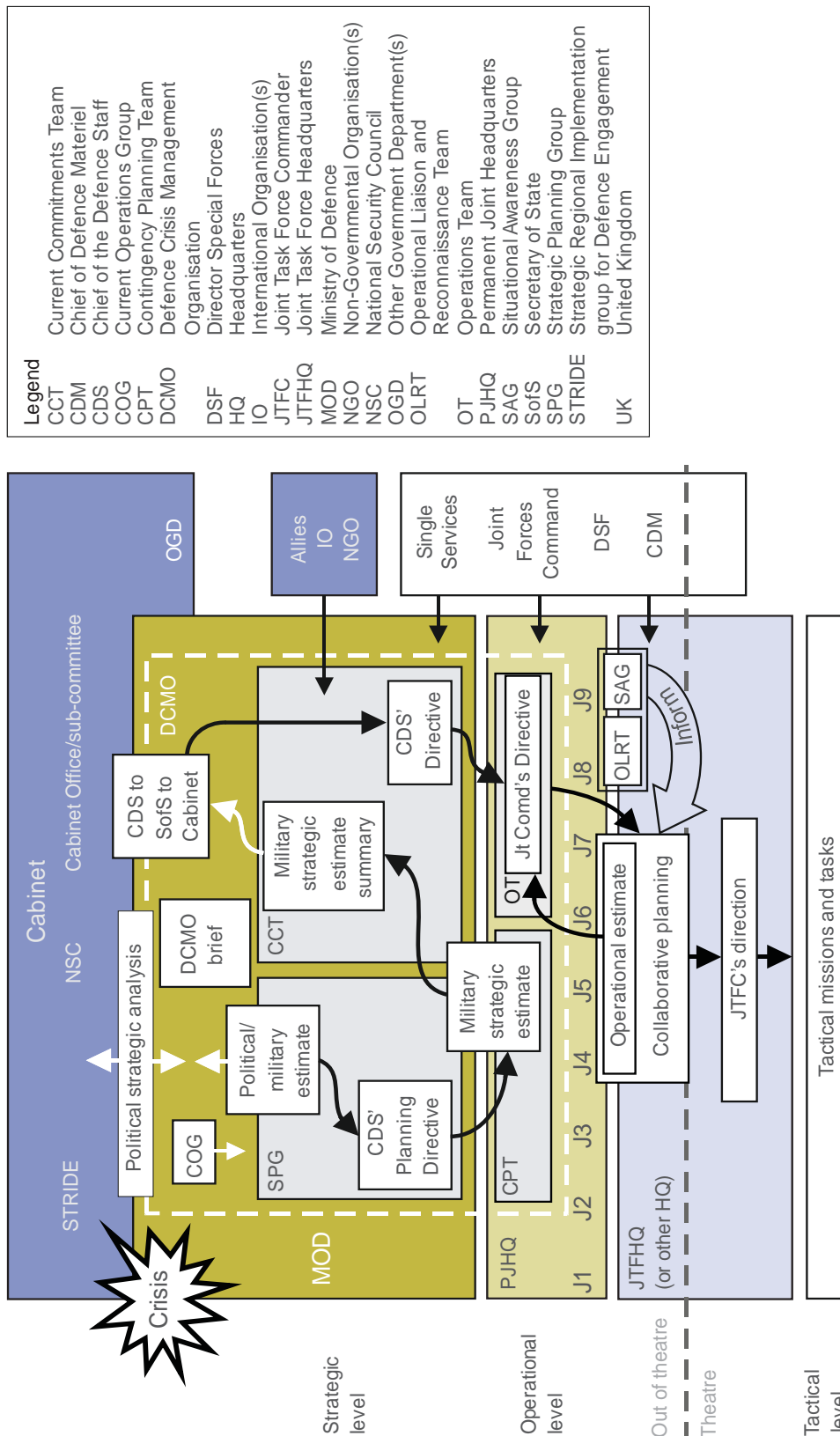


Figure 4.1 – Crisis response planning process

## Section 2 – Logistic input to the planning process

### Strategic planning

4.5. **Chief of the Defence Staff's Planning Directive.** The Strategic Planning Group, in MOD head office, prepares Chief of the Defence Staff's (CDS') Planning Directive. Logistic input to the process is led by Assistant Chief of the Defence Staff (Logistic Operations) staff (ACDS (Log Ops)) and is based on the strategic planning group's assessment of the likely duration and expected intensity of the operation. To support the Directive, ACDS (Log Ops) staff conduct a strategic logistic estimate, which includes:

- limitations on, and requirements for, critical assets;
- any in-theatre training requirement;
- concurrency with other operations;
- movement constraints; and
- guidance on using existing arrangements such as memoranda of understanding and status of forces agreements.

Logistic input to CDS' Planning Directive for short notice operations and non-enduring operations will usually be included in the main body of the document. The Directive for more complex or enduring operations will feature a logistic summary paragraph in the main body and a more detailed annex (Annex 4A shows an example) that includes:

- strategic and tactical movement;
- logistic governance;
- sustainability; and
- mounting and movement.

That information is usually immature, and therefore heavily caveatted, but enables planning progress.

4.6. **Chief of the Defence Staff's Directive.** On receiving CDS' Planning Directive, the Permanent Joint Headquarters (PJHQ) Contingency Planning Team, liaising with the Strategic Planning Group and the Current Commitments Team,<sup>94</sup> conducts a military

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<sup>94</sup> A current commitments team is formed from staff drawn from across MOD and almost always includes regional, capability, intelligence, logistics, movements and medical staff. A current commitments team handles current operational issues and issues surrounding the deployment, action and recovery of forces and in doing so liaises with other government departments, whose liaison officers may be included in a current commitment team.

// The sustainability statement confirms the overall logistic resources required and provides the authority to release and commit finance and materiel.

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strategic estimate. The Contingency Planning and Current Commitments Teams each include logistic representatives. The military-strategic estimate supports the Government's decision-making on whether or not to commit military forces. If forces are to be committed, more detailed direction is issued through CDS' Directive,<sup>95</sup> drafted by the Current Commitments Team.

4.7. **Sustainability statement.** The sustainability statement (SUSTAT) confirms the overall logistic resources required and provides the authority to release and commit finance and materiel.

- a. CDS' Directive includes the outline Defence Support Chain plan, based on factors identified during the conduct of the military strategic estimate. The Defence Support Chain plan is developed in later iterations of CDS' Directive to include the SUSTAT. The anticipated demand is predicted by analysis supporting the political-military estimate and military-strategic estimate processes. The more accurate that analysis is during the early planning stages, the more robust the operational sustainability baseline.
- b. The SUSTAT is developed by PJHQ, with contributions from subordinate joint and component headquarters.<sup>96</sup> PJHQ remains the ultimate authority for any amendments and revisions, which should also be proposed by single-Service commands through PJHQ J4.
- c. Each subordinate directive will also contain a SUSTAT. They are progressively more detailed, to meet the specific requirements of each level of command.
- d. SUSTATs are normally modified as an operation or campaign progresses and some may be developed for individual operations or phases within a campaign.

Annex 4B shows a generic SUSTAT.

## Operational planning

4.8. **Joint Commander's Mission Directive.** Within CDS' Directive, a joint commander will be nominated; this is usually the Chief of Joint Operations (CJO). The Joint Commander (with authority from CDS' Directive) will complete their own headquarters estimate (which will include logistic input from the J4 area), and then issue the Joint Commander's Mission Directive. This Directive empowers the Joint Force Commander and directs the enabling functions of deploy, sustain and recover. Alongside other key issues, the Directive details logistic factors.

95 Also referred to as CDS' Operational Directive, to distinguish it from the earlier Planning Directive.

96 Alternatively, it is developed by Navy Command, for the Response Force Task Group.



4.9. **Logistic Planning Team.** All PJHQ staff branches are represented on the Contingency Planning Team. The J4 member(s) of the team provide a logistic estimate prepared by a logistic planning team.<sup>97</sup> The PJHQ Deputy Assistant Chief of Staff J4 most appropriate to the context of the crisis chairs the Logistic Planning Team (on behalf of CJO, as the Joint Commander). Representatives from the following areas also contribute to the team:

- ACDS(Log Ops);<sup>98</sup>
- Defence Support Chain Operations and Movements (DSCOM);
- PJHQ J1;
- Joint Force Headquarters;
- Joint Force Logistic Component Headquarters;
- the single-Service commands; and
- those other government departments who are involved.

Figure 4.2 (overleaf) shows the composition, role and outputs of the Logistic Planning Team. Within the team, ACDS (Log Ops) is responsible for several areas.

- a. Communicating (to the Strategic Planning Group) the risks in not providing the minimum necessary information (the minimum information set) to the Logistic Planning Team in time.
- b. Informing CJO of the logistic aspects of CDS' Directive. The Directive should explicitly direct CJO (as the supported commander) to produce an operation-specific Defence Support Chain plan.
- c. Managing logistic assumptions during the planning process and providing strategic input into the logistic estimate.

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“ The CDS Directive should **explicitly direct** CJO (as the supported commander) to **produce** an **operation-specific** Defence Support Chain plan. ”

97 Although the Permanent Joint Headquarters (PJHQ) establishes an operational-level logistic planning team, this is a term which can be used for a team of logistic planners at any level, by any headquarters.

98 Assistant Chief of the Defence Staff (Logistic Operations) (ACDS (Log Ops)) also sits on the MOD Strategic Planning Group and so provides the coherent logistic thread throughout strategic and operational planning.

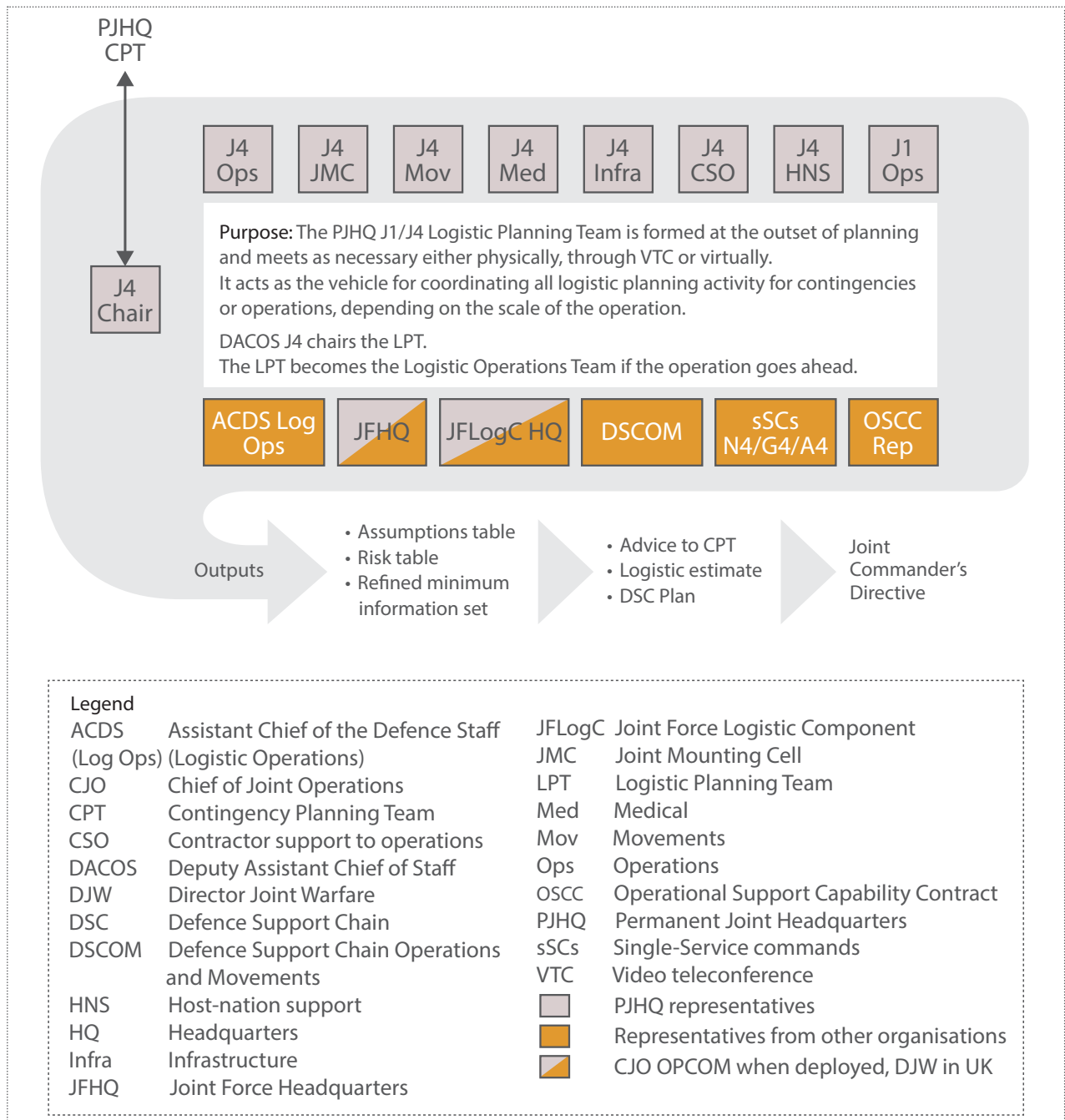


Figure 4.2 – Composition, role and outputs of the Logistic Planning Team

4.10. **Defence Equipment and Support input to the planning process.** DSCOM is responsible for pan-Defence Equipment and Support (DE&S) planning for operations and represents DE&S throughout the operational planning process. DSCOM manages DE&S inputs to the planning process by establishing an operational planning group, chaired by Head DSCOM and attended by representatives from all relevant areas of DE&S.

4.11. **Operational analysis input to the planning process.** Operational analysis advice can support the planning process (in particular the operational-level planning process and operational estimate) to:

- bound and scope the problem;
- provide baseline data and assumptions; and
- discount some courses of action to allow staff effort to focus on more likely plans.

As planning matures, more refined modelling provides decision support to the Logistic Planning Team. The analysis, and its quantitative data, allows courses of action to be modelled. Through that, the levels of logistic support that may be needed, or are available, can be assessed. This also enables the risks of those courses of action to be better understood. The analysis can help in generating, populating and configuring the joint force element table and joint desired order of arrival. Operational analysis resources are based within PJHQ and other organisations, such as the Defence Science and Technology Laboratory (Dstl) and ACDS (Log Ops).

4.12. **Logistic operational analysis tools.** Several software packages are available to support logistic operational analysis. An example is the Coupling Bridge Analysis Tool (COBRAT), developed by the ACDS (Log Ops) Operational Analysis Team. This tool enables users to map available resources against supply, movement and handling requirements for a joint force element table. More widely, NATO's Logistic Functional Area Services<sup>99</sup> includes a range of operational analysis tools that can contribute to deployment and sustainment planning and logistic reporting.

4.13. **Defence Support Chain plan.** The Defence Support Chain forms the 'spine' of logistic support to operations. The main output of the logistic estimate is an operation-specific Defence Support Chain plan. This plan requires input from J1 (personnel) and J4 (operations, movements, medical, infrastructure, contracts, host-nation support and logistic information systems). In the early stages of planning, the Logistic Planning Team may not have fully agreed with PJHQ J3 the information required to produce the best Defence Support Chain plan for the joint force element table or the joint desired order of arrival. Initial estimates can, however, be refined and agreed during the iterative stages of the planning process. Even though some information may remain unconfirmed, it should not prevent initial planning. The Defence Support Chain plan should be underpinned by a set of supporting annexes.<sup>100</sup>

- Minimum information set.** To carry out the quantitative analysis needed for Defence Support Chain planning, a minimum information set is required at the earliest opportunity before starting a logistic estimate. The minimum

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<sup>99</sup> Logistic Functional Area Services (LOGFAS) is due to be replaced by Logistic Functional Services (LOGFS) at a date yet to be determined.

<sup>100</sup> Amongst its annexes, the Defence Support Chain plan includes: the sustainability statement; the Coupling Bridge, logistic information system, medical, personnel and reverse supply chain directives; and the Joint Mounting and Movements Order.

// The **Defence Support Chain** forms the 'spine' of logistic support to operations. The main output of the logistic estimate is an **operation-specific Defence Support Chain plan.**

//

information set should be provided by the Strategic Planning Group, refined by the Logistic Planning Team, drawing on CDS' Directive or based on MOD-endorsed planning assumptions. The minimum information set is an iterative document and should be continually refined and informed by the Logistic Planning Team. The minimum information set consists of four key elements:

- destination;
- intensity;
- scale; and
- timing.

The reliability and accuracy of these elements will improve over time. They are used to address the key questions during the early stages of the planning process and subsequently for campaign transition and redeployment. Figure 4.3 provides an example of the content of a minimum information set.

b. **Synchronisation matrix.** The synchronisation matrix is a detailed Defence Support Chain timeline that shows critical milestones and dependencies. The synchronisation matrix is linked to the Commander's intent through the joint action synchronisation matrix.<sup>101</sup>

c. **Assumptions table.** J3/J5 planners will not always be able to provide detailed planning parameters. The Logistic Planning Team will produce an assumptions table to develop the plan. Those assumptions need to be owned, documented and reviewed during each iteration of the plan. To aid planning coherence, all support chain planners should use a common set of assumptions.

d. **Risk table.** The Defence Support Chain must be established with the resilience to cope with operational uncertainty. Risks<sup>102</sup> may be defined by the Joint Commander or identified during the support chain planning process. They must be accountably owned and have mitigating actions or contingency plans in place.

e. **Capability gaps.** Once the Defence Support Chain configuration is designed, it is assessed for capability gaps based on information contained in the assumptions and risk tables. Those capability gaps should be expressed to the Joint Commander as a resource bill to meet the requirement in full, along with the shortfall in operational capability that would result from failing to address the gap.

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J3/J5 planners will **not always be able to provide detailed planning parameters.** The Logistic Planning Team will **produce an assumptions table to develop the plan.**

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101 AJP-5, [Allied Joint Doctrine for Operational-level Planning](#) (with UK national elements).

102 For further information, see Joint Service Publication (JSP) 892, *Risk Management*.

	Information required	Information needed to:
Destination	<ul style="list-style-type: none"> <li>• What are the likely locations?</li> <li>• What restrictions are there on strategic lines of communication (LOC), air ports of disembarkation (APOD) and sea ports of disembarkation (SPOD), including access, basing and over-flight limitations?</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the Logistic Information System requirement.</li> <li>• Assess what LOCs and transport will be required.</li> <li>• Anticipate the level of in-theatre resource availability.</li> <li>• Identify the best options for strategic LOCs, APODs and SPODs.</li> <li>• Assess the requirement on in-theatre LOCs and nodes.</li> </ul>
Intensity	<ul style="list-style-type: none"> <li>• What is the combat activity profile?</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the rate at which the force will consume commodities.</li> </ul>
Scale	<ul style="list-style-type: none"> <li>• What force elements will be deployed?</li> <li>• What is the force laydown?</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the number of consuming elements we need to sustain.</li> <li>• Calculate the lift capacity required to transport the force to its destinations.</li> <li>• Identify how many elements will consume at active combat rate.</li> </ul>
Timing	<ul style="list-style-type: none"> <li>• What is the deployment timescale?</li> <li>• In what priority do personnel, force elements and equipment need to arrive in theatre?</li> <li>• What is the duration of the operation?</li> </ul>	<ul style="list-style-type: none"> <li>• Assess the required capacity and type of deployment transportation.</li> <li>• Identify when deployment should begin.</li> <li>• Assess the required sustainability of the Defence Support Chain.</li> <li>• Anticipate recovery requirements.</li> </ul>

Figure 4.3 – Example of minimum information set

## Enduring operations

4.14. **Relief-in-place.** In enduring operations, units that have completed their operational tour must be replaced. This process may also involve the roulement of unit equipment, providing the opportunity to conduct deep maintenance and repair.

- a. Relief-in-place is conducted in a controlled manner and, for long-standing operations, against a predicted schedule. This schedule, set against the force profile, is articulated through a statement of movements

requirement. The statement acts as the planning guidance for the relief-in-place periods and for the periods in-between; it influences the Coupling Bridge construct. The planning process is largely the same as previously described, although reliefs-in-place need scheduled tailored movements packages.

b. The joint force element table is planned and controlled by PJHQ-J4 Joint Mounting cell, with input from theatre and single-Service commands. The cell refines the statement of movements requirement and sets out the precise movement requirement over the relief-in-place period. This enables DSCOM to resource and coordinate strategic movement assets.

c. Relief-in-place may result in a distinctive cycle in the profile of demand for sustainment. Demand will fall in the weeks immediately before a unit is replaced and remain at a lower level until the replacement unit is established in the joint operations area. DSCOM adjusts the movements schedule accordingly, in-line with PJHQ direction.

### Logistic planning in the joint force

4.15. Logistic input to the main estimate must support the overall J5 plan. Planning headquarters are likely to form their own logistic planning team to conduct a logistic estimate and examine the logistic issues of the J5 plan in greater detail.<sup>103</sup> All J4 information (including risks, limits and options) should be passed to the J4-lead to ensure that the main operational estimate process reflects the logistic issues. Also, all J4 planning should be conducted in-line with, and feed into, the operational estimate. Although the operational-level planning process and operational estimate follow sequential processes, the changing nature of the planning environment makes them iterative and logistic staff should ensure that they are aware of, influence and respond to each version of the overall plan as it develops. Annex 4C is an outline guide for logistic input to the operational estimate while Annex 4D provides a non-exhaustive *aide memoire* of logistic factors that could be considered within the logistic estimate.

## Section 3 – Logistic information planning

4.16. The logistic estimate, and Defence Support Chain development, must include plans for delivering logistic information. High quality logistic information enables logistics to be more efficient and agile enough to support the deployment.

.....  
103 Commonly referred to as a deep dive.

4.17. The logistic information planning process needs to address the supporting infrastructure, information exchange requirements and communications requirements. Logistic information planning should be integrated with the logistic planning process and the wider overall communications and information systems planning process. Logistic information planners should engage early with PJHQ J6 and DE&S Support Chain Information Services, so they can concurrently identify any constraints, limitations or opportunities. The logistic information system requirement must be clearly articulated in CDS' Directive and the Defence Support Chain plan. The importance of data produced in logistic applications (including materiel accounting, consignment tracking and medical information services) is widely understood, as is its utility for audit purposes (for example, by the National Audit Office or Her Majesty's Revenue and Customs). Figure 4.4 shows the logistic information planning process.

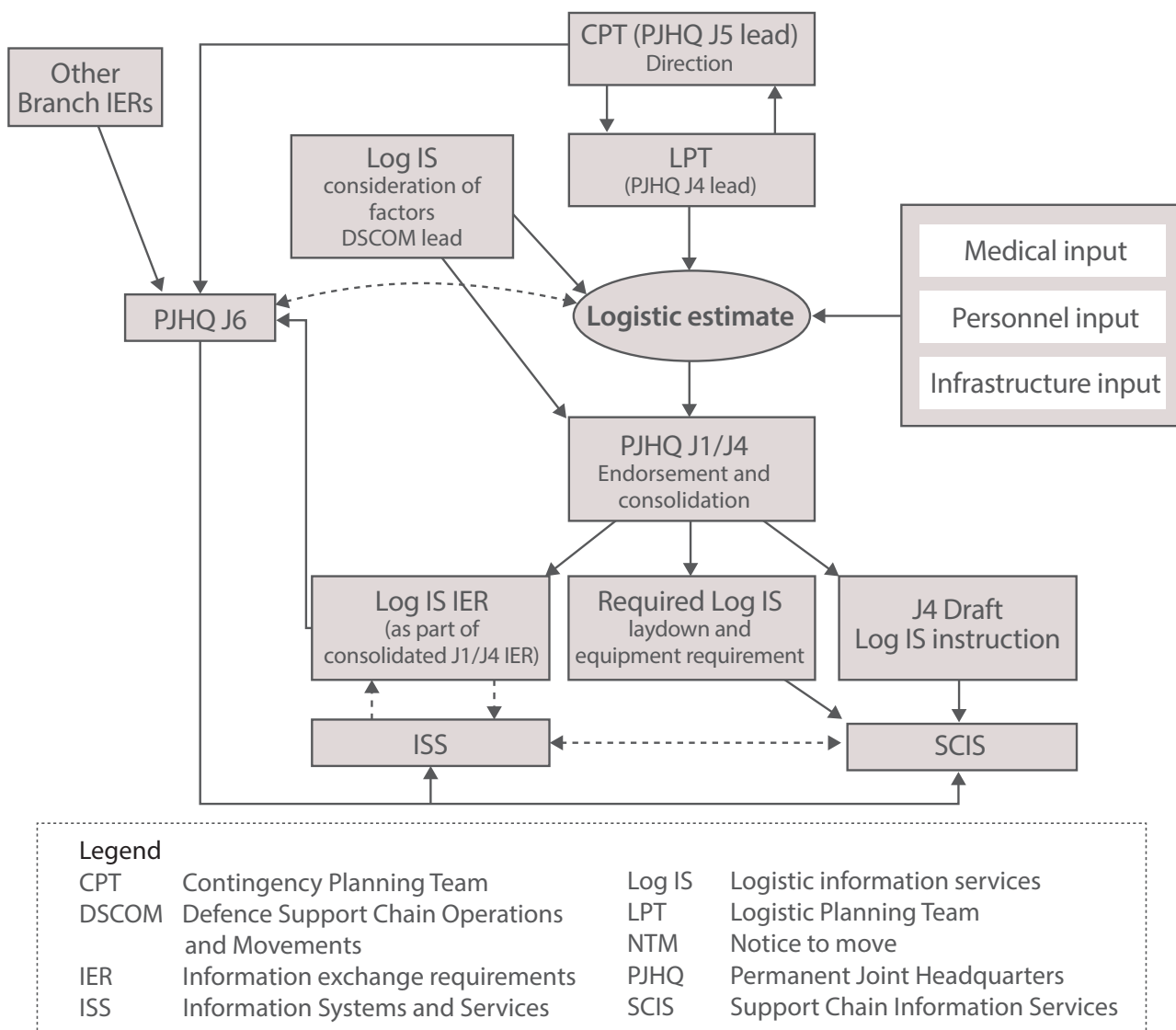


Figure 4.4 – Logistic information planning process

4.18. **Logistic information factors.** ACDS (Log Ops), as Joint User, is supported by all headquarters and organisations involved in the Defence Support Chain process in considering logistic information factors. This ensures the totality of the logistic information system requirement in the strategic base, across the Coupling Bridge and in the joint operations area is addressed.

## Key points

- Logistic principles emphasise how critically important it is to incorporate logistic planning, across the Whole Force and including contractor support, as an integral part of planning for operations.
- UK strategic and operational planning uses the NATO operations planning process, operational-level planning process and operational estimate, in accordance with JDP 01, *UK Joint Operations Doctrine*, Allied Command Operations' *Comprehensive Operations Planning Directive* and AJP-5, *Allied Joint Doctrine for Operational-level Planning* (with UK national elements).
- Assistant Chief of the Defence Staff (Logistic Operations) staff (ACDS (Log Ops)) leads the logistic input to the MOD's Strategic Planning Group and Chief of the Defence Staff's Planning Directive.
- MOD and PJHQ work closely together to develop the military strategic estimate which informs the Secretary of State on the implications of the UK's response options and also shapes CDS' Operations Directive. ACDS (Log Ops) staff provide the logistic link between this work and the Strategic Planning Group.
- Through the Defence Support Chain plan, CDS' Operations Directive will include a sustainability statement. This statement confirms the overall logistic resource requirement and provides authority to release and commit finance to an operation. Increasingly detailed sustainability statements are developed at each subordinate level of command.
- The logistic estimate, conducted by a PJHQ logistic planning team, provides input to both the military strategic estimate and the operational estimate. A logistic planning team is formed around PJHQ J4 and includes representation from: ACDS (Log Ops); Defence Support Chain Operations and Movements (DSCOM); PJHQ J1; Joint Force Headquarters; Joint Force Logistic Component Headquarters; single-Service commands; and those other government departments who are involved.



## Key points (continued)

- Logistic planning teams in subordinate headquarters are similarly integrated in the operational-level planning process.
- DSCOM is responsible for pan-Defence Equipment and Support (DE&S) planning for operations and represents DE&S throughout the operational planning process.
- Developing the Defence Support Chain plan is a key element of the logistic estimate. The Defence Support Chain plan is underpinned by supporting annexes.
  - Minimum information set.
  - Synchronisation matrix.
  - Assumptions table.
  - Risk table.
  - Capability gaps.
- Within the joint force, logistic input to the main estimate must continue to support the overall J5 plan. Although the operational-level planning process and operational estimate follow sequential processes, the changing nature of the planning environment makes them naturally iterative and logistic staff should ensure that they are aware of, influence and respond to each version of the overall plan, as it develops.
- Logistic information planning is a vital element of the overall logistic planning process. It enables logistics to be more efficient and agile enough to support the operation.
- Logistic information system planning should be integrated with the overall communications and information systems planning process.

# Annex 4A – Generic logistic annex to CDS’ Directive

Annex ? to CDS’ Dir \*\*/\*\* to JT Comd Op \*\*\*\* dated \*\* \*\*\* \*\* Op \*\*\*\* - Logistics Directive

## Context

1. The annex gives direction to the Joint Commander for the deployment, sustainment and recovery of Op XXXXXXXX; the UK’s military commitment to xxxxxxxxxxxxxx
2. *The paragraph should then set the context against which the Operation is executed*

## Division of responsibilities

3. The logistic division of responsibilities is as follows:

ACDS (Log Ops)	Joint Commander	SCs	DE&S
Define and maintain the strategic logistic support policy	Activate and maintain the strategic LOCs	Contribute to and execute plans as required by the Jt Comd	Allocate assets to enable the strategic LOCs
And further responsibilities as defined...			

## Logistic concept of operations

4. **Logistic intent.** *To establish efficient and robust logistic support to Op XXXXX*
5. **Logistic scheme of manoeuvre.** *Details of the overall logistic responsibilities of the Joint Commander and any considerations that must take into account when designing the logistic laydown.*
6. **Logistic end-state.** *A description of the desired logistic end-state.*

7. **Logistic Main Effort.** *Description of the Main Effort and details of SUPPORTED and SUPPORTING commands and organisations.*

## Governance and risk

8. **Risk.** *Considerations of logistic risk and details of the risk reporting mechanisms and procedures.*

9. **Governance.** *Direction to the Joint Commander to ensure appropriate logistic governance measures are implemented and that a joint inspection regime is put in place from the outset.*

## Logistic information systems

10. **NATO logistic information systems.** *Direction to the Joint Commander to ensure that national procedures for deployment, sustainment and recovery are coherent with NATO (if appropriate) and integrated with NATO logistic information systems.*

11. **National logistic information systems.** *Direction to the Joint Commander to mandate that national logistic information systems are used for all materiel accounting, equipment support, asset management and asset tracking, to comply with HRMC import export regulations and to maintain POGO.*

## Sustainability Statement

12. *Direction to the Joint Commander to ensure that end-to-end planning and forecasting is conducted to effectively match demand and supply and consequently define the optimum level of in-theatre resources required to support the deployed force. Details of publication of the Sustainability Statement (SUSTAT).*

## Equipment

13. **Equipment Table.** *Direction to the Joint Commander to ensure that the theatre Equipment Table is maintained in accordance with the Service Commands' guidance and procedures.*

14. **Equipment Support.** *Direction to the Joint Commander to define the required availability of specific platforms, equipment and systems in the Op XXXXX SUSTAT, which in turn will drive the development of the theatre equipment support plan.*

## Materiel

Details for each class of supply to support the deployed force

15. Class 1 (Uniform Rate Consumables).
16. Class 2 (ES and GS materiel).
17. Class 3 (Fuels, lubricants and associated products).
18. Class 4 (Engineer materiel).
19. Class 5 (Ammunition).

## Joint Support Chain

20. **Performance management.** *Direction for the Joint Commander to ensure both forward and reverse flows are effective and efficient.*
21. **Lines of communication.** *Details of the lines of communication (LOC) that will be necessary for the sustainment of the operation.*
22. **Multinational sharing.** *Direction for the Joint Commander to ensure that any existing multinational arrangements are fully exploited and, ensure that any spare UK sustainment capacity is offered to any other troop contributing nations.*

## Whole Force approach

23. *Details of what the Whole Force for Op XXXXX consists of and direction for the Joint Commander to determine the appropriate mix, acknowledging that that this mix will change as the operation develops over time.*

## Logistic success criteria

24. From a logistic perspective, Op XXXX will be considered a success if the following criteria have been met:
  - a. *Example:* The balance between support in-theatre and support from the strategic base is achieved such that the air bridge is able to support operational activity effectively and efficiently.
  - b. *Example:* Logistic support is costed and accounted for correctly.

# Annex 4B – Generic sustainability statement

## General

4B.1. **Introduction.** State here the purpose of the sustainability statement (SUSTAT) and the operation for which it is written. Reference the key planning documents to provide a baseline for the document. These references should include:

- Chief of the Defence Staff's (CDS') Planning Directive;
- CDS' Directive;
- theatre reconnaissance reports;
- preliminary operations reconnaissance reports and/or Assessment Reports (ASSESSREPS);
- Defence Logistic Direction;
- component logistic sustainability planning assumptions; and
- Service-specific planning directives (if appropriate).

4B.2. **Background and governance.** The SUSTAT is developed by the Permanent Joint Headquarters (PJHQ).<sup>1</sup> PJHQ remains the ultimate authority for any amendments and revisions, although these can and should be proposed by single-Service commands, and subordinate joint and component headquarters, through PJHQ J4.

## Situation

4B.3. **Key assumptions.** Key assumptions should be derived from the key planning documents or have provenance as factors from initial estimates. They set the criteria against which the rest of the SUSTAT is developed. As the SUSTAT develops through its iterations, any further planning assumptions from the Operations Directorate should be incorporated and shown in bold to highlight the change. Examples of further planning assumptions are:

- size of the area of operations;
- size/type of the deployment (for example, complex, simple and enduring stabilisation interventions);
- assumptions on multinational support and interoperability, and any support to or from other government departments;
- assumptions on host-nation support; and
- level of component command.

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<sup>1</sup> Alternatively, it is developed by Navy Command for the Response Force Task Group (RFTG).

4B.4. Force composition.

a. **Units.** Unit information should be shown pictorially as an order of battle (ORBAT) at Annex 5A to the SUSTAT and tabulated below to develop additional detail. Locations refer to in-theatre locations, not the strategic base.

Ser	Location	Maritime	Land	Air	Other
(a)	(b)	(c)	(d)	(e)	(f)
1	Location 1	Insert force elements (FE), starting with Headquarters (HQ) groups	Insert FE, starting with HQ groups	Insert FE starting with HQ groups	Ports of disembarkation
2	Location 2	As above	As above	As above	Forward Mounting Base
3	Location 3	As above	As above	As above	Other government departments (OGD)
4	Location 4	As above	As above	As above	Contractor support to operations (CSO)

b. **Key equipments.** Key equipment information quantifies the percentage availability of key equipments to be achieved at full operating capability and then be sustained. The information should be tabulated using the format and footnotes below. The figures must be compiled in consultation with Joint Forces Command and single-Service commands, who will consult subject matter experts and advise on feasibility in light of platform numbers:

Ser	Equipment	Availability <sup>2</sup>	Steady state (SS) activity <sup>3</sup>	Other combat (OC) activity	High intensity combat activity
(a)	(b)	(c)	(d)	(e)	(f)

2 Shown as a percentage figure except for helicopters which are shown as task lines from total aircraft fleet.

3 To be in kilometres/day for land assets, nautical miles/day for maritime assets and sorties for air assets. All helicopters, irrespective of Service, are shown as hours per task line or hours per aircraft depending on sustainability implications.

c. Personnel totals.

Ser	Location	Maritime	Land	Air	OGD	CSO	Force totals
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1	Location 1	Insert No.	Insert No.	Insert No.	Insert No.	Insert No.	
2	Location 2	Insert No.	Insert No.	Insert No.	Insert No.	Insert No.	

4B.5. **Supported component.** The supported component for the operation should be formally stated here in bold capitals, for example MARITIME. The supported component may be different for different phases of the operation.

4B.6. Campaign chronology.

a. Deployment period. Components will deploy to meet the following timelines.

Ser	Capability	Maritime	Land	Air	OGD	CSO
(a)	(b)	(c)	(d)	(e)	(f)	(g)
1	Preliminary Operations	--/--	--/--	--/--	--/--	--/--
2	Initial Operating Capability	--/--	--/--	--/--	--/--	--/--
3	Full Operating Capability	--/--	--/--	--/--	--/--	--/--

b. Deliberate operations. Must include the following information.

(1) **Operational profile.** This must state whether Peace Enforcement (PE)/Peacekeeping (PK)/Deliberate Intervention (DI) etc and then quantify the surge sustainment capability required. For example, 'the operational profile is for PE ops requiring Steady State (SS) sustainment but retaining the capability in theatre to surge to High Intensity Combat (HIC)'.

(2) **Provisional activity rates.** These should be tabulated below:

Component	Activity in days	In theatre training (ITT) <sup>4</sup>	SS	OC	HIC	Total days
(a)	(b)	(c)	(d)	(e)	(f)	(g)
Maritime						
Land						
Air						

4 This figure must factor in environmental training.

(3) **Concept of operations.** An outline of the provisional concept of operations must be stated in terms of:

- the support required;
- to what level of deployed force;
- over what in-theatre lines of communication (LOC); and
- over what duration.

Although this does not preclude delivering support outside these parameters, it provides a useful baseline for operational and tactical planning. It should be tabulated using the fields below.

Activity	Activity in days	OC	HIC	Total	Remarks
(a)	(b)	(c)	(d)	(e)	(f)

4B

c. **Other operations.**

4B.7. **Theatre stockholding policy.** The theatre stockholding policy should be shown as either a table, or preferably a schematic, in the annex to the SUSTAT. It must be coherent with the information on force composition at paragraph 4B.4 and must reflect the metrics relevant to each component, for example:

- endurance days for maritime;
- daily consumption rate (DCR) for land; and
- days of supply (DOS) for air.

It must include the support chain processing time (SCPT) and state whether or not the UK is complying with a NATO stockholding policy. It should be coherent with the policy on priming equipment packs and deployable spares packs. It should stipulate, by level (including maximum levels), what will be held where and tabulated as shown below:

DOS/DCR holding						
Level		ITT	SS	OC	HIC	Remarks
(a)	(b)	(c)	(d)	(e)	(f)	(g)
Force						
Formation						
Unit						



4B.8. **Support chain processing time.** In calculating theatre holdings, the formula  $h = x + y$  should be used where:  $h$  is the theatre holding to be achieved, expressed in DOS,  $x$  is the SUSTAT-mandated holding (in DOS) and  $y$  is the support chain processing time for shipping a standard priority code (SPC) 03 demand. If required, the strategic airbridge must be used to mitigate sustainment risk. Care should be taken with respect to contractor logistic support (CLS), where contracting for capability and contracting for availability contracts have minimum pipeline times built into them. The minimum total time for planning purposes from placing to satisfying demands should be tabulated in accordance with Joint Service Publication 886.<sup>5</sup>

## Deploy/sustain/recover

4B.9. **Frequency of re-supply.** The frequency of re-supply will affect the sustainability of all components; therefore, the 'pull' of items and personnel into the joint operations area must be prioritised. Improved availability of re-supply options, by air or surface, will reduce the need to prioritise. Limitations on re-supply will generate a greater need to prioritise and for increased component/Joint Force Logistic Component interaction to meet the Joint Task Force Commander's operational plan.

4B.10. **Support chain processing time.** An understanding of SCPT is essential to allow the correct priority to be given for any item moving through the Defence Support Chain. Failure to correctly apply SCPT may cause items to be over-prioritised and reduce the efficiency of the support chain with unnecessary movements.

4B.11. **Operational mounting process.** The operational mounting process and accurate details of the Coupling Bridge are essential for effective movement from the strategic base to the joint operations area. The diverse requirements of components must be reflected together with clear parameters for the allocation of movement priorities.

## Destination

4B.12. This paragraph should cover the characteristics of the operational theatre. It should also cover any intra-theatre or intra-joint operations area LOCs but not the strategic LOC. It must describe the environment, the threat, port of disembarkation characteristics and transport infrastructure and deliver an assessment of host-nation support capability. This should be tabulated as shown below or articulated under separate sub-headings.

.....

<sup>5</sup> Joint Service Publication (JSP) 886, *Defence Logistics Support Chain Manual*, Volume 3, Part 1. Additionally, contractor logistic support (CLS) and contracting for availability contractual obligations to return key components/assemblies for repair need to be considered to avoid additional contract costs or non-availability of key/critical spares. JSP 886 is to be subsumed by the *Defence Logistic Framework* during 2015.

Ser	Factor	Characteristics	Remarks
(a)	(b)	(c)	(d)
1	Environment		
2	Threat		
3	Transport		
4	Host-nation support		
5	APOD/SPOD		

### Distance

4B.13. Distance should be stipulated using nautical miles (nm), hours (hrs) and days as the metric for maritime and air and kilometres (km), hrs and days for land. Where known, details on the 'going' for land (metal, paved or unpaved road) should be included.

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Ser	LOC	Geographical boundaries	Characteristics
(a)	(b)	(c)	(d)
1	Strategic sea		
2	Strategic land (eg, rail)		
3	Strategic air		
4	Operational sea		
5	Operational land		
6	Operational air		
7	Tactical sea		
8	Tactical land		
9	Tactical air		

### Duration

4B.14. Duration must be coherent with the campaign chronology articulated at paragraph 4B.6. Additional information should focus on any phasing that requires the use of staged or temporary locations and/or capabilities. Examples may include deploying an air or aviation force into the joint operations area or using a forward mounting base for deployment and recovery. The use of key equipments could also be phased with more assets required for deployment and recovery than for sustainment.

## Demand

### 4B.15. Class 1.<sup>6</sup>

- a. **Water.** The quantities for this commodity are contained in planning assumptions. Military judgement should be applied when using them.

Ser	Purpose	Volume SS activity	Volume OC activity	Volume HIC activity	Remarks
(a)	(b)	(c)	(d)	(e)	(f)
1	Field consumption				
2	In-camp steady state				
3	Medical				
4	Bottled water				
5	Vehicle maintenance				
6	Aircraft maintenance <sup>7</sup>				
7	CBRN decontamination				
8	In-theatre washdown				

4B

- b. **Rations.**

Ser	Type	Requirement
(a)	(b)	(c)
1	Fresh	
2	Operational Ration Packs (ORP)	

4B.16. **Class 2 – Materiel-scaled.** Joint Forces Command and single-Service commands, in conjunction with DE&S project teams, are to direct unit holdings of scaled materiel and consumables consistent with the campaign chronology at paragraph 4B.6 and based on:

- historical and predictive equipment failure data;<sup>8</sup>
- SCPT guidance in the SUSTAT;
- support urgent operational requirement equipment;
- environment-specific personal equipment issues; and
- environment-specific equipment packs.

<sup>6</sup> Maritime figures can be found in *Maritime Logistic Support Planning Assumptions*.

<sup>7</sup> Should include any requirement for ionised water.

<sup>8</sup> Including for equipment supported through CLS, where scaled.

4B.17. **Class 2 – Materiel-general.** This should stipulate the in-theatre stockholdings for all Class 2 materiel.

4B.18. **Class 3 – Fuel and lubricants.** This paragraph should direct the Strategic Fuels Authority (SFA) to hold a shelf stock, where possible, of the required items from the Joint Forces Command and single-Service commands. This will minimise the risk of nil stock and delay to the SCPT. Increasing use of CLS will see some elements of fuel and lubricants being provided by a contractor rather than the SFA. It should also:

- stipulate the in-theatre stock holding for general and specialist commodities; and
- tabulate the bulk fuel types, by quantity and location, that are to be held as sustainment stock in-theatre.

4B.19. **Class 4 – Engineer and general Defence stores.** This paragraph should mirror the format above and as a minimum include:

Ser	Type	Requirement
(a)	(b)	(c)
1	Expeditionary Camp Infrastructure (ECI)	
2	Defence stores	
3	Engineer resources	

4B.20. **Class 5 – Ammunition.** The likelihood of variations to the SCPT due to specialist natures, additional release authority, requirement for controlled humidity environment storage or customs and specialist transport requirements should be assessed.

- a. Theatre stockholdings should be articulated using specific Joint Forces Command and single-Service commands nomenclature (for example, standard weapon loads), geographic location and planned intensity of operation.

Ser	Type	Location	Requirement
(a)	(b)	(c)	(d)
1	Maritime component	1	
2		2	
3	Land component	1	
4		2	
5	Air component	1	
6		2	

b. Any stock held by DE&S to reduce the deployed footprint, and mitigate the cost of controlled humidity environment storage in-theatre, should be held at a stipulated readiness to move which must be articulated here.<sup>9</sup>

4B.21. **Medical.** The medical laydown must comply with the force composition table at paragraph 4B.4. J1 staff may draw upon operational analysis to estimate potential fatalities for repatriation planning. The planned laydown of Role 1/2/3 in theatre must be specified. A casualty estimate should be tabulated as shown below:

Ser	Type	Requirement
(a)	(b)	(c)
1	Wounded in action (WIA) peak	% range, of which ?% will require
2	Disease and non-battle injuries	% of which ?% will require
3	Medical evacuation	As required
4	Strategic air evacuation	% per month

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4B.22. **Chemical, biological, radiological and nuclear.** Any detailed chemical, biological, radiological and nuclear (CBRN) scalings should be relegated to an annex. Given the cost and limited life of CBRN-specific antibiotics, these CBRN stocks should only be deployed where the J2 assessment supports the decision.

4B.23. **Mission essential equipment.** Details of any mission essential equipment required for the operation should be provided along with the priorities that must be applied to ensure its availability. This will inform the relative priorities for moving, maintaining, repairing and fitting mission essential equipment.

4B.24. **Servicing and repair policy.** Effective servicing and repair is essential for maintaining the availability of equipment and force elements. This support may be provided by individual components, host-nation support or contractors. Clear policy guidance must be given to ensure awareness of the available solutions for dealing with unserviceable equipment at theatre level.

Distribution:

- Fleet Commander
- Commander Land Forces
- Deputy Commander Operations Air Command
- Commander Joint Task Force

.....  
 9 Planners should consider units being supported from the sea.

## Logistic planning for operations

Maritime Component Commander  
Land Component Commander  
Air Component Commander  
Commander Joint Force Logistic Operations  
Commander British Forces  
Commander Preliminary Operations (if nominated)  
Assistant Chief of the Defence Staff (Logistic Operations)  
Service Commands - Logistic branches  
Defence Support Chain Operations and Movements  
Multinational Liaison Officers (as appropriate)  
Headquarters Director Special Forces

4B

# Annex 4C – *Aide memoire* for logistic input to the operational estimate

4C.1. Allied Joint Publication (AJP)-5, *Allied Joint Doctrine for Operational-level Planning* provides doctrinal guidance, in eight steps, for the operational-level planning process.<sup>1</sup> NATO Allied Command Operations' *Comprehensive Operations Planning Directive* (COPD) describes, in six phases, the activities to be carried out when planning at the operational level.<sup>2</sup> COPD Phase 3 is the operational estimate which broadly covers the same section of the operational-level planning process as AJP-5 steps 2 to 6. This *aide memoire* offers guidance to J1/J4 staff on how to provide logistic input to the operational estimate, using COPD Phase 3 as a frame.

## Framing the operational-level problem

4C.2. This activity is J2-led and the J4 input should focus on using the J2 feed to understand the destination environment. The J4 planner should consider:

- real estate and infrastructure (for example, ports of disembarkation or potential basing options);
- potential main supply routes; and
- host nation, as well as coalition/partner, capabilities.

As well as the operating environment, J4 staff should be aware of the anticipated intensity, scale and timing of the operation, as well as concurrent operations and other contingency planning.

.....  
1 Allied Joint Publication (AJP)-5, [Allied Joint Doctrine for Operational-level Planning](#) (with UK national elements).

2 NATO Allied Command Operations' *Comprehensive Operations Planning Directive*.

## Phase 3A: Mission analysis

### Analyse the mission

4C.3. As the headquarters focuses on analysing the mission, and developing an initial operational design, in preparation for the mission analysis brief to the Commander, the J1/J4 default approach should be as follows.

- a. **Logistic principal officer** (either on own or with selected staff officers) undertakes a logistic mission analysis by answering four broad questions.
- What type of operation is it? For example, is it kinetic, non-combatant evacuation, disaster relief or humanitarian assistance? This provides an early focus on key logistic challenges and requirements.
  - Where will forces be operating? Understanding the destination and joint operations area size better helps staff to refine the Coupling Bridge requirement as well as lines of communication into, and within, the joint operations area. Staff should assess what emphasis can be placed on host-nation support, contractor logistics and in-country resources.
  - What forces are available? Both in terms of forces that must be supported and also logistic force elements that are available to deliver that support. Capabilities should be understood at this stage, so that they can be matched to the required logistic effects.
  - How long will the operation last? This helps scope the sustainment phase of the operation but also has a direct impact on equipment support, roulement and redeployment functions.
- b. SO1/2s concurrently carry out initial factor analysis, within which the problem is framed and capabilities are identified.
- (1) Key (broad order) output should include:
- environmental capabilities (by interpreting the order of battle (ORBAT)/force element table analysis);
  - destination, distance, demand and duration (the 4Ds);

4C



- key timings which will initiate logistic planning for the joint desired order of arrival – based on force element readiness, current lines of communication, deployment timings, initial operating capability, full operating capability, overlaid on to any campaign/operational phases;
- strategic through to tactical speed/time/distance calculations; and
- an estimate of the overall size of force within the joint operations area.

(2) This leads to an initial cross-brief amongst the J1/J4 staff, following which the logistic principal officer provides further direction and guidance.

(3) Teams then break into environment groups and conduct more detailed factor analysis. Key outputs, which must be formally captured and recorded, are:

- staff tasks (further work for J1/J4);
- logistic effects required (and potential troops to task);
- risks/issues;
- constraints;
- freedoms; and
- additional resource bids/requests for forces (to provide or enhance missing or insufficient capabilities).

(4) J4 staff must also consider joint enablers and may establish a separate work strand (to include logistic command and control).

(5) By liaising with other staff branches, J1/J4 staff ensure logistic assumptions and interpretations are common across the headquarters.

(6) Routine cross-briefs should take place to ensure a common understanding across J1/J4 staff. The briefing format should follow:

- bottom line up-front;
- shortfalls;
- tasks;
- risks;
- freedoms; and
- constraints.

- (7) As Phase 3A progresses, staff report by exception until the final cross-brief to the logistic principal officer.
- (8) A J1/J4 staff officer should be nominated to consolidate J1/J4 three-column formats and corral:
- staff tasks;
  - tasks (and tactics and techniques);
  - planning guidance;
  - requests for information;
  - additional resource bids/requests for forces;
  - risks;
  - freedoms; and
  - constraints.

## Phase 3B: Courses of action development

### Develop own courses of action

4C.4. After the Commander's direction following the mission analysis brief, J1/J4 provides a minimum of one logistic subject matter expert to each of the headquarters' course of action (COA) development teams.

- Environmental subject matter experts are the default (if available) unless an individual COA has a specific requirement (for example, medical or movement).
- The logistic subject matter experts provide the logistic conscience to the COA development teams. They ensure that the initial idea is, and remains, logistically feasible as it is developed.
- The logistic subject matter experts also ensure that the core J1/J4 team is routinely briefed on how each COA is developing and what logistic implications are emerging.

4C.5. Concurrently, the remainder of the J1/J4 staff form a logistic planning team to refine the logistic aspects which are common to all COAs. This is the time for detailed logistic planning across:

- the 4Ds;
- command, control, communication, computers and information (C4I);
- each class of supply (remembering storage and specific requirements – for example, chilled);
- mounting and movements (staff can start initial desired order of arrival work with J5);
- infrastructure;
- tactical movements (air, aviation, ground);
- host-nation support, in-country resource and contractor logistics;
- J1;
- medical; and
- J8.

## Analyse courses of action

4C.6. As COAs are further developed, J1/J4 must understand and articulate the logistic implications – reach, sustainability, time, additional resource requirements and so on should all become apparent here (considering both the art of the possible and the art of the practical).

4C.7. Each COA, as it is developed, must be logistically staff-checked. This can create a logistic ‘drag’ to headquarters planning and, to improve its effectiveness and coherence, J1/J4 staff should follow the mantra:

- requirement;
- resource; and
- risk.

4C.8. The Commander’s direction will articulate (‘big hand, small map’) the capability priorities and this stage should now start to refine them. The Commander’s capability priorities should be captured and will, eventually, form the mission critical equipment list. J1/J4 staff report on mission critical equipment in terms of equipment availability and that, in turn, drives any requirement for further detailed reports and returns.

## Compare courses of action

4C.9. During evaluation, COAs should be scored against the logistic principles<sup>3</sup> and ‘stressed’ against logistic frictions. The results will contribute towards the staff’s COA recommendations to the Commander.

.....  
3 See Chapter 1.

## Refine selected course of action

4C.10. After the Commander's course of action decision, the plan is developed in detail before completing the Phase by issuing the operational planning directive to component headquarters.

- a. The COA must be fully resourced (and sequenced), the joint desired order of arrival must be refined and detailed sustainability assumptions proven.
- b. There may be a temptation for headquarters staff branches to revert to stovepipes while refining the COA. J1/J4 staff should therefore maintain a rigorous process of liaison with other branches and internal cross-briefing. Changes to the COA should be captured and staff-checked for logistic consequences and feasibility. Resourcing can then be confirmed or adjusted.

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## Throughout Phase 3

4C.11. **Requests for information.** Requests for information must be recorded as they arise. J1/J4 should hold them centrally. The requests for information are coordinated and monitored by a nominated J1/J4 officer, who will:

- staff them through the branch coordinator;
- ensure that answers are distributed; and
- hasten outstanding requests for information until they are answered or can be closed as no longer required.

4C.12. **Risk<sup>4</sup>** is a key element of the logistic planning process. A risk represents a threat to a desired effect, decisive condition, line of operation or the mission and needs to be elevated from branch to headquarters level. If a threat does not impact a decisive condition, it is an issue and should be managed accordingly by the branch within its logistic planning. Risk should be managed centrally in the branch by a nominated post (usually at SO2 level). The branch risk manager interfaces with the wider headquarters risk process, using the treat, tolerate, terminate and transfer model. Any residual risk needs to be articulated and understood.

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4 For an explanation of risk in operational-level planning see AJP-5, [Allied Joint Doctrine for Operational-level Planning](#) (with UK national elements).

# Annex 4D – Consideration of factors *aide memoire*

Question area	Deduction	Responsibility
<b>1. Destination</b>		
<ul style="list-style-type: none"> <li>Environment (temperature, altitude, precipitation and so on) - what specific environmental factors will affect demand?</li> <li>Equipment.</li> </ul>	<ul style="list-style-type: none"> <li>Identify seasonal differences and timelines to ensure adequate seasonal stocks are delivered by surface.</li> </ul>	<ul style="list-style-type: none"> <li>Defence Support Chain Operations and Movements (DSCOM) to task project teams.</li> </ul>
<ul style="list-style-type: none"> <li>Equipment.</li> </ul>	<ul style="list-style-type: none"> <li>Impact on critical spares.</li> <li>Special environmental enhancements and lead times for procurement/urgent operational requirements and impact on the Coupling Bridge (volume and timing).</li> <li>Maintenance capacity.</li> </ul>	

Question area	Deduction	Responsibility
<ul style="list-style-type: none"> <li>• Supplies.</li> </ul>	<ul style="list-style-type: none"> <li>• Special storage requirements by class.                             <ul style="list-style-type: none"> <li>– Class 1: refrigeration and warehousing.</li> <li>– Class 2: cover.</li> <li>– Class 3: environmental control.</li> <li>– Class 4: real estate and implications for engineers.</li> <li>– Class 5: bulk off-take available.</li> </ul> </li> <li>• Location of storage for each commodity type.</li> <li>• Impact on shelf life by class or nature.</li> <li>• Supply and storage of medical cold-chain and ambient temperature supply items.</li> <li>• Reverse supply chain.</li> </ul>	<ul style="list-style-type: none"> <li>• DSCOM to task project teams.</li> </ul>

Question area	Deduction	Responsibility
<ul style="list-style-type: none"> <li>Infrastructure and facilities - what is available and what are its capabilities and capacities?</li> </ul>	<ul style="list-style-type: none"> <li>Identify key facilities available (for example, storage and refrigeration):                             <ul style="list-style-type: none"> <li>issues of obtaining permission to use;</li> <li>capacity to handle Defence Support Chain throughput (in volumetric terms);</li> <li>marshalling space for backlog, transport links to main supply routes;</li> <li>force protection issues;</li> <li>multinational issues;</li> <li>cost;</li> <li>political issues;</li> <li>power and water;</li> <li>other users;</li> <li>operational security; and</li> <li>explosive ordnance clearance.</li> </ul> </li> <li>Options for building and lead time to prepare for usage.</li> </ul>	<ul style="list-style-type: none"> <li>Joint Task Force Headquarters (JTFHQ)-J4.</li> <li>Joint Force Logistic Component Headquarters (JFLogCHQ).</li> <li>Permanent Joint Headquarters (PJHQ).</li> <li>Components.</li> </ul>

Question area	Deduction	Responsibility
<ul style="list-style-type: none"> <li>• Air ports of disembarkation.</li> </ul>	<ul style="list-style-type: none"> <li>• Types of aircraft (including defensive aid suite requirement) that can use air ports of disembarkation:                             <ul style="list-style-type: none"> <li>– ramp availability;</li> <li>– existing mechanical handling equipment;</li> <li>– hangar space;</li> <li>– fuel storage;</li> <li>– passenger accommodation; and</li> <li>– explosives licence.</li> </ul> </li> <li>• Other user requirements.</li> <li>• Daily average and peak/surge capacity in number of aircraft.</li> <li>• Force protection.</li> </ul>	<ul style="list-style-type: none"> <li>• FJLogHQ.</li> <li>• Air Command/2 Group.</li> <li>• PJHQ.</li> <li>• DSCOM.</li> </ul>



Question area	Deduction	Responsibility
<ul style="list-style-type: none"> <li>Sea ports of disembarkation.</li> </ul>	<ul style="list-style-type: none"> <li>Berth types (suitability for roll-on/roll-off ferries):                             <ul style="list-style-type: none"> <li>mechanical handling equipment (suitability for container handling);</li> <li>capacity to marshal shipping offshore;</li> <li>warehouse space;</li> <li>customs;</li> <li>port authorities; and</li> <li>suitability for bulk fuel, ammo etc.</li> </ul> </li> <li>Daily average and peak/surge capacity in ships.</li> <li>Force protection.</li> </ul>	<ul style="list-style-type: none"> <li>Logistic brigades.</li> <li>JFLogCHQ.</li> <li>PJHQ.</li> <li>DSCOM.</li> </ul>
<ul style="list-style-type: none"> <li>Accommodation.</li> </ul>	<ul style="list-style-type: none"> <li>Capacity in steady state and surge.</li> <li>Vehicle parking.</li> </ul>	<ul style="list-style-type: none"> <li>Joint Forces Command.</li> <li>Single-Service commands.</li> </ul>
<ul style="list-style-type: none"> <li>Storage.</li> </ul>	<ul style="list-style-type: none"> <li>Covered space for detail and bulk stores and capacity (including container capacity).</li> <li>Ammunition storage capacity; environmental protection; and proximity to other facilities.</li> <li>Material handling and infrastructure and loading ramps.</li> </ul>	<ul style="list-style-type: none"> <li>Land component.</li> <li>Air component (deployment operating base/air port of disembarkation/forward operating base).</li> <li>JFLogCHQ.</li> </ul>

Question area	Deduction	Responsibility
<ul style="list-style-type: none"> <li>Main supply routes.</li> </ul>	<ul style="list-style-type: none"> <li>Average speed and capacity in trucks per day, time to transit/loops per day.</li> <li>Load limits; vehicle restrictions.</li> <li>Impact of weather on speed and capacity; loss to weather.</li> <li>Capacity for reverse supply chain.</li> </ul>	<ul style="list-style-type: none"> <li>Land component.</li> <li>PJHQ J4.</li> <li>JFLogCHQ.</li> </ul>
<ul style="list-style-type: none"> <li>External support:                             <ul style="list-style-type: none"> <li>– host-nation support;</li> <li>– contractor support to operations;</li> <li>– multinational; and</li> <li>– in-country resources.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Costs and risk to supply.</li> <li>Lead times to contract.</li> <li>Operations security issues.</li> <li>Force protection issues.</li> <li>Impact of operational risks on contractor availability, cost by class of supply.</li> </ul>	<ul style="list-style-type: none"> <li>PJHQ J2.</li> <li>PJHQ J8/9.</li> <li>PJHQ Contractor logistics.</li> <li>Industry/contractors.</li> <li>Local Defence attache.</li> <li>Defence Industrial Strategy.</li> </ul>
<b>2. Distance</b>		
<ul style="list-style-type: none"> <li>Strategic lines of communication – what is required to enable and support?</li> </ul>	<ul style="list-style-type: none"> <li>Diplomatic clearances and timing.</li> <li>Airspace restrictions.</li> <li>Assets available, lead time/cost for commercial shipping and aircraft.</li> <li>Capacity for reverse supply chain.</li> </ul>	<ul style="list-style-type: none"> <li>DSCOM.</li> </ul>

Question area	Deduction	Responsibility
<ul style="list-style-type: none"> <li>• Forward mounting base:                             <ul style="list-style-type: none"> <li>– is a forward mounting base needed;</li> <li>– what will its role be;</li> <li>– where will it be; and</li> <li>– what are the likely daily average and peak transit volumes?</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Forward mounting base roles include:                             <ul style="list-style-type: none"> <li>– reception, staging and onward movement;</li> <li>– tactical air transport loading; and</li> <li>– issuing ammunition/first line scales.</li> </ul> </li> <li>• Force protection arrangements.</li> <li>• Diplomatic clearances/Customs.</li> <li>• Command and control structure for forward mounting base.</li> <li>• Internal forward mounting base lines of communication:                             <ul style="list-style-type: none"> <li>– freedom of movement; and</li> <li>– host-nation factors.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• PJHQ J5/J4.</li> <li>• As for air port of disembarkation and sea port of disembarkation.</li> </ul>
<ul style="list-style-type: none"> <li>• Strategic lift/intra-theatre lift.</li> </ul>	<ul style="list-style-type: none"> <li>• Distances.</li> <li>• Times for flights/surface movement.</li> <li>• Possible choke-points.</li> </ul>	<ul style="list-style-type: none"> <li>• DSCOM.</li> </ul>

Question area	Deduction	Responsibility
<ul style="list-style-type: none"> <li>Rear area security - what operation specific issues are there for security in the rear area?</li> </ul>	<ul style="list-style-type: none"> <li>Operations security constraints.</li> <li>Sensitive installations, supplies, particularly movement in UK.</li> <li>Host-nation sensitivities and host-nation controls.</li> <li>Force protection.</li> </ul>	<ul style="list-style-type: none"> <li>PJHQ J4.</li> <li>DSCOM.</li> </ul>
<b>3. Demand</b>		
<ul style="list-style-type: none"> <li>Force element table.</li> </ul>	<ul style="list-style-type: none"> <li>Difficult-to-move equipments in the force element table, impact on the Defence Support Chain.</li> <li>Force elements at readiness (FE@R) and required level of sustainment required.</li> </ul>	<ul style="list-style-type: none"> <li>Joint Forces Command.</li> <li>Single-Service commands.</li> <li>DSCOM to task project teams.</li> </ul>
<ul style="list-style-type: none"> <li>Priming equipment packs.</li> </ul>	<ul style="list-style-type: none"> <li>Timeliness of warning to Defence Equipment and Support (DE&amp;S) to generate scales and materiel.</li> <li>Availability of materiel on shelf or from industry to meet timelines.</li> <li>Ability to generate priming equipment packs outload to meet force element timelines for deployment.</li> </ul>	<ul style="list-style-type: none"> <li>Joint Forces Command.</li> <li>Single-Service commands.</li> <li>DSCOM to task project teams.</li> <li>Storage, Distribution and Technical Services.</li> </ul>

Question area	Deduction	Responsibility
<ul style="list-style-type: none"> <li>• Non-priming equipment packs deployment stocks.</li> </ul>	<ul style="list-style-type: none"> <li>• Consider:                             <ul style="list-style-type: none"> <li>– ammunition;</li> <li>– general materiel;</li> <li>– welfare;</li> <li>– urgent operational requirements;</li> <li>– force level assets;</li> <li>– communication and information systems; and</li> <li>– contractor support to operations supplies (in terms of days of supply/daily consumption rate) holding levels for each commodity type.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• DSCOM to task project teams.</li> <li>• Joint Forces Command.</li> <li>• Single-Service commands.</li> <li>• PJHQ J4.</li> </ul>

Question area	Deduction	Responsibility
<ul style="list-style-type: none"> <li>• Non-priming equipment packs deployed stocks (continued).</li> </ul>	<ul style="list-style-type: none"> <li>• Identify:                             <ul style="list-style-type: none"> <li>– volumetrics;</li> <li>– packaging and handling requirements;</li> <li>– mode of transport;</li> <li>– hazardous material;</li> <li>– point of arrival in joint operations area;</li> <li>– final destination; and</li> <li>– force protection requirements.</li> </ul> </li> <li>• Identify location of second and third line holding stocks for each node.</li> <li>• Identify timelines for commitment to industry, available for dispatch.</li> <li>• Identify UK base transport requirements particularly for hazardous material/ammunition.</li> <li>• Identify reception, staging and onward movement requirements, including the need to break bulk.</li> </ul>	<ul style="list-style-type: none"> <li>• DSCOM to task project teams.</li> <li>• Joint Forces Command.</li> <li>• Single-Service commands.</li> <li>• PJHQ J4.</li> </ul>

Question area	Deduction	Responsibility
<ul style="list-style-type: none"> <li>• Training (particularly in theatre) – impact of operation-specific training.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify:                             <ul style="list-style-type: none"> <li>– timing;</li> <li>– force elements involved;</li> <li>– level of activity; and</li> <li>– firing of specialist natures.</li> </ul> </li> <li>• Impact on Defence Support Chain to provide training (training stocks plus training support).</li> </ul>	<ul style="list-style-type: none"> <li>• Joint Forces Command.</li> <li>• Single-Service commands.</li> <li>• Joint Task Force Commander (JTFC).</li> <li>• PJHQ J4.</li> </ul>
<ul style="list-style-type: none"> <li>• Sustainment consumption - what are the daily activity rates for each part of the force?</li> </ul>	<ul style="list-style-type: none"> <li>• Consider costs, force protection issues in all cases.</li> </ul>	

Question area	Deduction	Responsibility
<ul style="list-style-type: none"> <li>The Whole Force.</li> </ul>	<ul style="list-style-type: none"> <li>Force laydown – including military force elements (regular and reserve) as well as industry and contractors.</li> <li>Inventory to be held at each location (in days of supply/daily consumption rate at activity level) and theatre sustainability stock levels (in days of supply/daily consumption rate at activity level), by class of supply.</li> <li>Casualty and casualty evacuation rates in theatre and to UK – frequency and numbers.</li> <li>Fresh rations/operational ration packs; urgent operational requirements expected; procurement timelines; expected shipment dates; welfare package; Expeditionary Forces Institute stores and post (consider seasonal effects).</li> </ul>	<ul style="list-style-type: none"> <li>Joint Forces Command.</li> <li>Single-Service commands.</li> <li>PJHQ J4 and J5.</li> <li>DE&amp;S.</li> </ul>
<ul style="list-style-type: none"> <li>Multinational.</li> </ul>	<ul style="list-style-type: none"> <li>Lead nation roles for UK and other nations with reliability of supply and resulting contingency measures.</li> </ul>	<ul style="list-style-type: none"> <li>PJHQ J4.</li> </ul>
<ul style="list-style-type: none"> <li>Detainees/internees.</li> </ul>	<ul style="list-style-type: none"> <li>Number and composition of detainees/internees needing support; likely infrastructure, life support and separation issues (gender, ethnicity and disabilities).</li> </ul>	<ul style="list-style-type: none"> <li>PJHQ J4.</li> </ul>



Question area	Deduction	Responsibility
<ul style="list-style-type: none"> <li>Supply arrangements.</li> </ul>	<ul style="list-style-type: none"> <li>Transport mode for each class of supply (or host-nation support/multinational/contractor support to operations) by point of entry and across joint operations area.</li> <li>Entry point into joint operations area and routes by class of supply to final destination.</li> <li>Expected delivery frequencies for delivering sustainment/ replenishing stocks.</li> <li>Surge arrangements.</li> <li>Reverse supply chain requirements.</li> </ul>	<ul style="list-style-type: none"> <li>PJHQ J4.</li> <li>Joint Forces Command.</li> <li>Single-Service commands.</li> <li>DSCOM.</li> <li>Project teams.</li> </ul>
<b>4. Duration</b>		
<ul style="list-style-type: none"> <li>What are the activity levels across nodes in joint operations area?</li> </ul>	<ul style="list-style-type: none"> <li>Activity level at each node for steady state and surge/peak.</li> </ul>	<ul style="list-style-type: none"> <li>DSCOM.</li> </ul>
<ul style="list-style-type: none"> <li>Timeline of support arrangements.</li> </ul>	<ul style="list-style-type: none"> <li>Impact on infrastructure investment - accommodation, force protection and so on.</li> </ul>	<ul style="list-style-type: none"> <li>PJHQ J5.</li> <li>ACDS(Log Ops).</li> </ul>
<ul style="list-style-type: none"> <li>Surge arrangements – with what warning timelines?</li> </ul>	<p>Impact air port of disembarkation/sea port of disembarkation factors. Impact on facilities. Impact on demand.</p>	<p>As for other factors.</p>

Question area	Deduction	Responsibility
<ul style="list-style-type: none"> <li>Host-nation infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>Availability of and investment in host-nation infrastructure, particularly power, water, roads.</li> </ul>	<ul style="list-style-type: none"> <li>PJHQ J4.</li> </ul>
<ul style="list-style-type: none"> <li>Reception, staging and onward movement - what are the requirements to move, store, support force elements, materiel and equipment for reception, staging and onward movement?</li> </ul>	<ul style="list-style-type: none"> <li>Reception, staging and onward movement transit volumes and impact on sustainment demand by nodes.</li> <li>Special equipment, information systems, material handling and infrastructure required.</li> <li>Transit accommodation.</li> <li>Impact on welfare package.</li> <li>Personnel tracking.</li> </ul>	<ul style="list-style-type: none"> <li>PJHQ J4.</li> <li>Joint Mounting Cell (JMC).</li> </ul>
<ul style="list-style-type: none"> <li>Roulement and rest and recuperation.</li> </ul>	<ul style="list-style-type: none"> <li>Timing of roulement, rest and recuperation and for each service.</li> <li>Special arrangements for certain skills (for example, aircrew).</li> </ul>	<ul style="list-style-type: none"> <li>Joint Forces Command.</li> <li>Single-Service commands.</li> <li>Joint mounting centres.</li> </ul>
<ul style="list-style-type: none"> <li>Critical deadlines.</li> <li>What are the deadlines that must be supported by the Defence Support Chain?</li> <li>What is the flexibility of those deadlines?</li> </ul>	<ul style="list-style-type: none"> <li>Joint desired order of arrival – consider the Joint Task Force Commander’s requirement to have capability in certain locations. Ensure that the real sustainability requirements are understood.</li> <li>Coalition – what requirements might be placed, either due to lead nation status or to meet political and military objectives?</li> </ul>	<ul style="list-style-type: none"> <li>ACDS(Log Ops).</li> <li>PJHQ J5.</li> </ul>

Question area	Deduction	Responsibility
<ul style="list-style-type: none"> <li>• Immovable constraints.</li> <li>• What constraints to meeting deadlines exist?</li> <li>• What is the impact in operational terms?</li> </ul>	<ul style="list-style-type: none"> <li>• Procurement – particularly for undecided requirements.</li> <li>• Availability of strategic lift, particularly at medium scale and above – consider impact of multinational demand on world market.</li> <li>• Infrastructure build.</li> <li>• Political/diplomatic, memoranda of understanding, diplomatic clearances and so on.</li> </ul>	<ul style="list-style-type: none"> <li>• DSCOM.</li> <li>• DSCOM to task Project Teams.</li> <li>• ACDS(Log Ops).</li> </ul>
<b>5. Performance management</b>		
<ul style="list-style-type: none"> <li>• Overall.</li> </ul>	<ul style="list-style-type: none"> <li>• What performance does the Defence Support Chain as a whole, and each element, require to deliver the plan?</li> </ul>	<ul style="list-style-type: none"> <li>• DSCOM.</li> </ul>
<ul style="list-style-type: none"> <li>• Standard priority system – what are the expected timelines for each priority code?</li> </ul>	<ul style="list-style-type: none"> <li>• Standard priority system matrix.</li> </ul>	<ul style="list-style-type: none"> <li>• DSCOM.</li> </ul>

Question area	Deduction	Responsibility
<ul style="list-style-type: none"> <li>Performance targets - what throughput and transit time is required for each node and route?</li> </ul>	<ul style="list-style-type: none"> <li>Performance target matrix.</li> </ul>	<ul style="list-style-type: none"> <li>PJHQ J4.</li> </ul>
<ul style="list-style-type: none"> <li>Accountabilities – how does the accountability for each target map on to the command and control structure?</li> </ul>	<ul style="list-style-type: none"> <li>Accountability matrix embedded in commanders' directives.</li> <li>Authority to deliver on accountabilities.</li> <li>Review mechanisms for performance against target.</li> </ul>	<ul style="list-style-type: none"> <li>PJHQ J4.</li> </ul>
<ul style="list-style-type: none"> <li>Measurement – what is required to capture performance data?</li> </ul>	<ul style="list-style-type: none"> <li>Reports and returns.</li> <li>Logistic information systems - deployment locations, data capture and usage.</li> <li>Performance reporting requirements.</li> </ul>	<ul style="list-style-type: none"> <li>PJHQ J4.</li> <li>DSCOM.</li> </ul>
<b>6. Information, political and legal operations</b>		
<ul style="list-style-type: none"> <li>Budget – what is the budget for the operation and are there any specific constraints?</li> </ul>	<ul style="list-style-type: none"> <li>Her Majesty's Treasury can be expected to cap expenditure – therefore this cap needs to be quantified.</li> </ul>	<ul style="list-style-type: none"> <li>PJHQ J8.</li> <li>ACDS(Log Ops).</li> </ul>

Question area	Deduction	Responsibility
<ul style="list-style-type: none"> <li>Financial control – what authorities and control mechanisms are in place?</li> </ul>	<ul style="list-style-type: none"> <li>Accounting requirements.</li> <li>Civilian Secretariat resources.</li> <li>Authorities for local purchase (including government procurement card).</li> <li>Timelines for procurement authorities.</li> <li>Supply assurance regime.</li> <li>Allocate a Special Operations Code.</li> </ul>	<ul style="list-style-type: none"> <li>PJHQ J8.</li> </ul>
<ul style="list-style-type: none"> <li>Media – what media presence and sensitivities are there?</li> </ul>	<ul style="list-style-type: none"> <li>Logistic issues considered to be particularly sensitive.</li> <li>Capability to respond to media issues.</li> <li>Information sources to respond to media and political questions (for example, media logistic information pack).</li> </ul>	<ul style="list-style-type: none"> <li>ACDS(Log Ops).</li> </ul>
<ul style="list-style-type: none"> <li>Allies – what political sensitivities are there regarding allies?</li> </ul>	<ul style="list-style-type: none"> <li>Lead nation arrangements.</li> <li>Contractor support to operations commitments.</li> <li>Timing of transfer of authority and so on.</li> </ul>	<ul style="list-style-type: none"> <li>PJHQ J2.</li> </ul>
<ul style="list-style-type: none"> <li>Host nation – what political sensitivities are there regarding the host nation?</li> </ul>	<ul style="list-style-type: none"> <li>Memoranda of understanding.</li> <li>Customs.</li> <li>Host nation expectations of local expenditure.</li> </ul>	<ul style="list-style-type: none"> <li>PJHQ J2.</li> </ul>

Question area	Deduction	Responsibility
<b>7. Externals</b>		
<ul style="list-style-type: none"> <li>• Variance of transport.</li> <li>• What are the likely causes of transport time variance?</li> <li>• What impact might they have?</li> <li>• How can they be mitigated?</li> </ul>	<ul style="list-style-type: none"> <li>• Weather and seasonal (for example, shipping, runway closure, surface degradation on main supply routes, snow, mountain passes).</li> <li>• Loss of local contractors (for example, due to force protection issues; alternative demand from coalition).</li> <li>• Force protection impact on frequency, speed and volume carrying capacity of main supply routes.</li> </ul>	<ul style="list-style-type: none"> <li>• DSCOM.</li> <li>• JFLogCHQ.</li> </ul>
<ul style="list-style-type: none"> <li>• Other government departments/non-governmental organisations.</li> </ul>	<ul style="list-style-type: none"> <li>• Impact on joint operations area.</li> <li>• De-conflict ports of embarkation/diseembarkation.</li> <li>• Infrastructure requirements.</li> <li>• Force protection requirements.</li> </ul>	<ul style="list-style-type: none"> <li>• PJHQ.</li> </ul>
<ul style="list-style-type: none"> <li>• Inventory – what are the likely causes of inventory losses and how can they be mitigated?</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental factors, particularly for sensitive classes (ammunition, medical, food).</li> <li>• Enemy action destroying inventories – identify need for redundancy.</li> <li>• Loss of contractor support to operations inventories.</li> <li>• Changes in policy.</li> </ul>	<ul style="list-style-type: none"> <li>• DSCOM</li> <li>• JFLogCHQ.</li> <li>• ACDS(Log Ops).</li> </ul>

Question area	Deduction	Responsibility
<ul style="list-style-type: none"> <li>Material handling and infrastructure – what are the likely causes of variability in material handling and infrastructure and how can they be mitigated?</li> </ul>	<ul style="list-style-type: none"> <li>Weather and seasonal (for example, suitability of outdoor storage).</li> <li>Reliability and availability of military and contractor mechanical handling equipment and trained operators.</li> <li>Loss of critical facilities due to political, economic or force protection issues.</li> <li>Loss of personnel due to illness or other tasks.</li> <li>Critical performance limits on material handling and infrastructure leading to sub-optimal processes (for example, container backlog leading to raiding by units) and recovery plans.</li> </ul>	<ul style="list-style-type: none"> <li>DSCOM to task project teams for mechanical handling equipment.</li> <li>JFLogCHQ.</li> </ul>
<ul style="list-style-type: none"> <li>Information exchange – what information are we required to share with allies?</li> </ul>	<ul style="list-style-type: none"> <li>Situational awareness (logistic elements).</li> <li>Blue-on-blue avoidance.</li> <li>Reports and returns.</li> <li>Status of shared inventories.</li> <li>Joint asset tracking.</li> <li>Logistic information plan.</li> </ul>	<ul style="list-style-type: none"> <li>PJHQ.</li> <li>JFLogCHQ.</li> </ul>

Question area	Deduction	Responsibility
<ul style="list-style-type: none"> <li>Logistic command, control and logistic information services – what linkages are required and where (joint operations area), strategic base)?</li> </ul>	<ul style="list-style-type: none"> <li>Application interfaces.</li> <li>Communications.</li> <li>Bandwidth.</li> <li>Technical and security issues.</li> <li>Installation, procurement, contractor support to operations timelines.</li> </ul>	<ul style="list-style-type: none"> <li>PJHQ J6.</li> <li>Director Inventory Management Operations Centre (Support Chain Information Services) (D IMOC (SCIS)).</li> </ul>
<b>8. Command and control</b>		
<ul style="list-style-type: none"> <li>Overall.</li> </ul>	<ul style="list-style-type: none"> <li>Command and control.</li> <li>Logistic information systems.</li> </ul>	
<ul style="list-style-type: none"> <li>Requirements – what must be achieved by logistic information systems?</li> </ul>	<ul style="list-style-type: none"> <li>Recognised theatre logistic picture.</li> <li>Consignment tracking.</li> <li>Inventory management.</li> <li>Asset management.</li> <li>Personnel management.</li> <li>Allied compatibility.</li> </ul>	<ul style="list-style-type: none"> <li>PJHQ J4.</li> <li>D IMOC (SCIS).</li> </ul>
<ul style="list-style-type: none"> <li>Applications.</li> </ul>	<ul style="list-style-type: none"> <li>Identify access to applications required at each node.</li> </ul>	<ul style="list-style-type: none"> <li>Joint Forces Command.</li> <li>Single-Service commands.</li> <li>DSCOM.</li> </ul>



Question area	Deduction	Responsibility
<ul style="list-style-type: none"> <li>Hardware.</li> </ul>	<ul style="list-style-type: none"> <li>Identify required hardware.</li> </ul>	<ul style="list-style-type: none"> <li>Joint Forces Command.</li> <li>Single-Service commands.</li> <li>DSCOM.</li> </ul>
<ul style="list-style-type: none"> <li>Bandwidth.</li> </ul>	<ul style="list-style-type: none"> <li>Identify information exchange requirements and impact on overall communication and information systems arrangements.</li> </ul>	<ul style="list-style-type: none"> <li>DSCOM.</li> <li>PJHQ J6.</li> </ul>
<ul style="list-style-type: none"> <li>Redundancy and reversionary modes.</li> </ul>	<ul style="list-style-type: none"> <li>Identify required system redundancy.</li> <li>Identify reversionary modes required.</li> </ul>	<ul style="list-style-type: none"> <li>Joint Forces Command.</li> <li>Single-Service commands.</li> </ul>
<b>9. Enemy</b>		
<ul style="list-style-type: none"> <li>Overall.</li> </ul>	<ul style="list-style-type: none"> <li>Capabilities (for example, regular, regular; asymmetrical).</li> <li>Chemical, biological, radiation and nuclear threat.</li> <li>Force protection considerations.</li> </ul>	



## Chapter 5 – Generating logistic force elements

Chapter 5 is the first of five chapters which focus on deploying, sustaining and recovering the force.

- Chapter 5 – Generating logistic force elements
- Chapter 6 – Logistic support to deployment
- Chapter 7 – Reception, staging, onward movement and integration
- Chapter 8 – Sustainment
- Chapter 9 – Restoring combat power

Logistics both:

- supports generating the deploying joint force; and
- generates its own force elements to deploy.

This Chapter covers the generation of logistic force elements to support an operation. The Chapter focuses on the logistic elements of the Whole Force and, within that, the Reserves and contractor support to operations.

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Section 2 – The Whole Force . . . . . 116

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Leaders win through logistics. Vision, sure. Strategy, yes. But when you go to war, you need to have both toilet paper and bullets at the right place at the right time. In other words, you must win through superior logistics.

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Tom Peters

# Chapter 5 – Generating logistic force elements

## Section 1 – Introduction

5.1. Force generation. Force generation is: the process of providing suitably trained and equipped forces, and their means of deployment, sustainment and recovery to meet all current and potential future tasks, within required readiness and preparation times.<sup>104</sup>

5.2. Readiness. In the UK, we operate a scale of graduated readiness to enable an effective response to an unknown crisis. During the planning process, the MOD is responsible for reducing the notice-to-move of required force elements. Figure 5.1 outlines NATO, EU and UK readiness categories.

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NATO	EU	UK readiness category	Code	At 'X' days notice to move (maximum)
High readiness forces	Very High	Extremely High (EHR)	R1	Two days or less (force elements can be held at anything from minutes notice-to-move to the full 48 hours)
		Very High (VHR)	R2	Five days
			R3	Ten days
	High	High (HR)	R4	20 days
			R5	30 days
			R6	40 days
	Medium	Medium	R7	60 days
			R8	90 days
Forces with a lower state of readiness	Low	Low (LR)	R9	180 days
Long term build-up forces (LTBF)		Very Low (VLR)	R10	365 days
			R11	More than 365 days

Figure 5.1 – Readiness categories

<sup>104</sup> Joint Doctrine Publication (JDP) 0-01.1, [UK Supplement to the NATO Terminology Database](#).

5.3. **National assets.** The operational planning cycle normally dictates that those logistic assets held on the high readiness roster should be considered as the first logistic deployment option. However, the nature of the operation may require other units or headquarters to be selected (for example, as part of a multinational force). If logistic assets at lower readiness are chosen, logistic planners need to make sure these assets are the priority for training and equipment. Those lower readiness logistic assets will then be able to effectively support deploying formations and integrate with other national components, joint organisations or nations. In particular, communications and information support infrastructure needs to match the requirements of the deployed logistic information systems plan and be integrated into the deployed communications and information systems plan. For similar reasons, planners must consider the notice required by industry when generating its contribution to the force.

5.4. **Preparing logistic force elements.** Through force planning in the initial estimate, planners determine what logistic force elements we need to best meet the operational need, allowing for their availability. The force generation process should identify:

- potential economies of scale against the various readiness criteria of our force elements;
- availability of multinational logistic capabilities; and
- specific component support needs.

Once the necessary logistic tasks and associated assets have been established, PJHQ identifies any shortfalls and constraints, considering the availability of logistic support from other sources. This may be from multinational sources in a multinational/combined operation, and/or from host-nation support. From the outset, the logistic planner's mindset should be to fully abide by the logistic principle of collective responsibility<sup>105</sup> to enable the benefits to be realised.

## Section 2 – The Whole Force

5.5. Logistic force elements include elements of the Whole Force<sup>106</sup> within the strategic base and deployed through to the front line. The Whole Force is formed from:

- regular and reserve Service personnel;

105 Collective responsibility encourages nations and NATO to cooperatively share logistic capabilities and resources to support the force effectively and efficiently (Chapter 1).

106 The term 'Whole Force' does not just apply to logistic force elements.

- civil servants and strategic partners;
- contractors;
- locally employed civilians;<sup>107</sup> and
- external support elements.

5.6. The Whole Force mix will vary from operation to operation. Throughout the life-cycle of an operation, planners should consider the constraints and opportunities offered by adapting the Whole Force mix to best meet the developing logistic requirement. For example, the 'very high readiness' Whole Force mix is likely to have a greater proportion of regular personnel than the force engaged in an enduring stabilisation operation as the latter may make greater use of Reserves, or contractors instead of Service personnel.

## Reserves

5.7. A significant proportion of national military logistic manpower is held within the Reserves. How we use those Reserves effectively is a major planning factor.

5.8. Ministerial authority is required to mobilise reservists to undertake operations, in accordance with the Reserve Forces Act 1996 (RFA 96).<sup>108</sup> We need to identify and select reservists who are suitable and willing to be mobilised for the operational requirement. If there are not enough, it may be necessary to compulsorily mobilise reservists to make up the requirement.

5.9. Reservists can also serve on Full Time Reserve Service, where a reservist voluntarily serves under a full time employment contract – in many cases to do the same job as a regular. Periods of service can vary but are generally up to four years. They still remain members of their respective Volunteer Reserve Service. There are three forms of Full Time Reserve Service commitment:

- home commitment;
- limited commitment; and
- full commitment.

Members of the latter group can be deployed worldwide and have similar terms and conditions of service to regular Service personnel.

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 107 Joint Service Publication (JSP) 567, *Contractor Support to Operations*: Locally Employed Civilians (LEC) are workers who are directly engaged by the MOD (for example, by the MOD's Labour Support units) and who normally reside in the country or countries in which the contracted services are being performed. They include UK and troop contributing nations' civilian personnel who permanently reside in theatre, as well as local nationals. LECs are not contractors on deployed operations (CONDO) personnel. LECs can be hired on a daily basis.

108 As amended by the Defence Reform Act 2014.

Throughout the life-cycle of an operation, planners should consider the constraints and opportunities offered by adapting the Whole Force mix to best meet the developing logistic requirement.

5.10. Owing to their likely mobilisation timescale, we should not rely exclusively on reservists delivering the logistic requirement during the early stages of an operation. There are, however, two reservist components that can give extra flexibility and are able to deploy more quickly.

- **The high readiness reserve** – is made up of individuals who voluntarily, and with their employer’s consent, accept an increased call out liability.
- **Sponsored reserves** – are civil servants or employees of MOD contractors who can be mobilised to provide the same capability in uniform that they deliver as civilians.

### Contractor support to operations

5.11. Contractors can provide a significant number of enabling functions, primarily through service delivery contracts,<sup>109</sup> to assist with generating, deploying, sustaining and recovering the force. This may include complete, discrete capabilities<sup>110</sup> and those elements of support delivered by contractors to force elements as part of a support solution. Such an approach may offer an extra (or occasionally the only) option for meeting operational support requirements. Using contractor support to operations (CSO) requires timely planning and exercising by both the MOD and industry. Deployed military forces may face tasks for which they would not be expected to be fully capable,<sup>111</sup> such as redeveloping national infrastructure.<sup>112</sup> Contracting is a significant means by which the Commander can introduce resources, services and capability to the force to conduct those tasks.

5.12. **Ministry of Defence policy.** Joint Service Publication (JSP) 567, *Contractor Support to Operations* describes how the MOD uses CSO. There are three guiding principles that we should consider when planning for and using CSO.

- Assured support.** CSO capability must provide an assured service for the military commander. The contract sponsor should make contingency plans to cover both the risk of contractors not delivering and a deteriorating operational situation and threat environment that precludes deploying, or continuing to use, contractor personnel. Command and control of CSO capability must be integrated with that of the force.

109 Service delivery contracts enable supplier personnel (frequently skilled or technical), interacting with customer personnel, to use agile, flexible processes to provide varying outputs, both tangible and intangible, to create value for the customer and supplier in achieving joint outcomes.

110 Contracting for capability.

111 Through lack of training or equipment or, simply, in the face of the required scale.

112 JSP 567, *Contractor Support to Operations*.

**Contracting is a significant means by which the Commander can introduce resources, services and capability to the force.**



b. **Value for Defence.** CSO is only viable if the proposition is attractive to the potential contractors. At the same time, however, CSO must demonstrate value for Defence. The MOD will consider the cost of CSO against the change in operational benefit and risk.<sup>113</sup>

c. **Safe and secure environment.** The operational environment in which CSO is delivered must be sufficiently safe and secure. The MOD provides force protection for contractor personnel (within the contractual obligations) to a level commensurate with the threat, as determined by the local military commander. If the security environment deteriorates to the extent that we can no longer provide sufficient force protection, the Commander should consider withdrawing CSO.

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**CSO is only viable if the proposition is attractive to the potential contractors but must also demonstrate value for Defence.**  
 //

5.13. **Types of contractor support.** Contractors are involved in a widening range of roles and functions resulting from:

- a smaller military force;
- increased outsourcing of logistic functions; and
- introducing highly technical weapons and equipment systems into service.

5

CSO policy covers three categories of contracted personnel:

- contractors on deployed operations (CONDO);
- private military and security companies; and
- sponsored reserves.

5.14. **Contractors on deployed operations.** CONDO is the term used to describe the delivery of contracted capability within an operational area. It may include contractor logistic support arrangements and the Operational Support Capability Contract (OSCC). CONDO is the term used in contracts which apply Defence Condition (DEFCON) 697 as a specific requirement.

- Contractor logistic support is where in-service equipment is supported through a contract with the equipment provider.
- The PJHQ OSCC is a pre-competed contract for contract support to operations. The contract can be used to access a range of logistic services from an industry partner with global reach. The OSCC can only be used after

.....  
 113 When considering the total cost of contractor support to operations (CSO), we should include the indirect costs to the MOD, such as providing: force protection (for both manpower and equipment); life support (including medical support, in accordance with the medical rules of eligibility); and transportation for contractor personnel.

all other Defence, or Defence commercial, solutions have been proved to be unsuitable.

//  
**Sponsored reserves provide a capability on operations as well as under normal conditions and they should routinely be used in the initial force generation cycle.**

5

5.15. **Private military and security companies.** Personnel employed under CONDO arrangements remain the employees of the contractor and retain their civilian status. CONDO employed by the UK are not authorised to fulfil an armed role. Civilians deploying in armed roles must do so under private military and security company<sup>114</sup> contracts. The contracts are tightly controlled at the highest MOD level.<sup>115</sup> Private military and security companies must agree to comply with the Montreaux Document<sup>116</sup> and have signed the International Code of Conduct (Private Security Service Providers) before the MOD can use them.

5.16. **Sponsored reserves.** Sponsored reserves are members of a civilian workforce who are required to join the Volunteer Reserves as a condition of a contract between their civilian employer and the MOD. They provide a capability on operations<sup>117</sup> as well as under normal conditions. Depending on the threat assessment, sponsored reserves may deploy to an operational area without mobilising, under CONDO arrangements. They can be mobilised later, if the theatre threat assessment deteriorates, and so continue delivering in-theatre support uninterrupted. Sponsored reserves should be routinely used in the initial force generation cycle.

5.17. **Planning contractor support to operations.** As early as possible in the force generation process, planners should consider the level of contracting capability within the Whole Force, together with the associated constraints.<sup>118</sup> Contractors need to understand, and operate within, the bounds of military doctrine, as well as the military commander’s concept of operations. This ensures that contractor support requirements are identified early, CSO’s contribution can be fully optimised and any risks can be identified and managed. Both planned and *ad hoc* contracting can release military manpower for other tasks. However, the planned approach is more likely to make best use of both military and civilian support capabilities.

114 The term applies to all private military and security companies wherever they are registered or based, and to their local subcontractors. It does not apply to Defence industry contractors if their activity is regulated through existing export controls, an export licence has been issued or the commercial proposals are wholly within the terms of that licence. Additionally, unarmed contractors providing logistic support on operations to the MOD and covered by JSP 567, *Contractor Support to Operations*, and private security companies that operate solely in the UK domestic market are not classified as private military and security companies.

115 Secretary of State for Defence approval is required in each case.

116 Montreaux Document on *Pertinent International Legal Obligations and Good Practices of State Related to Operations of Private Military and Security Companies during Armed Conflict* agreed to by 51 governments, EU, OSCE and NATO.

117 During Operation HERRICK, over 2000 personnel held sponsored reserve status at any one time, across a diverse range of military capabilities. For example, providing the strategic sea lift requirement or delivering armour and mechanised infantry vehicles to the battlefield using tank transporters are heavily dependent on sponsored reserves.

118 Such constraints may include contractors’ legal capacity to operate in theatre and MOD’s liability towards them and their personnel (for example, force protection or medical support).

- a. Planned CSO deliberately determines what operational support can be better met by contracting a commercial provider. A planned approach identifies the likely contracting 'footprint' from force elements attributed to the operation and from other discrete deployed capabilities which may be contracted. The MOD can then plan the necessary force protection and real-life support to meet its duty of care. Contractors selected before an operation should be incorporated into the operational support planning process to ensure their capabilities are integrated. The deployment and redeployment of contractors, whether or not using their own resources, should be included.
- b. *Ad hoc* contracting, by contrast, can either be a:
- reactive outsourcing for capabilities not met through force generation; or
  - response to unforeseen requirements arising during an operation.

The last-minute nature of *ad hoc* contracting, and the time required to secure funding approval, can increase costs and cause delay. We can reduce this by integrating industry partners into the planning and force generation process so that they can be more readily engaged when the need arises.

5.18. **Managing contractor support risk.** Operational experience, particularly during the early stages, highlighted the need to consider CSO risk during the force planning process.<sup>119</sup> Should contractors be withdrawn (by the MOD) or withdraw (under company orders) from an operational area, the military risk of operational failure may be significant. The joint commander should therefore ensure measures are in place to minimise the risks to contractors (and their personnel and equipment) in the joint operations area. Contractors must be brought into the planning process as early as possible and their appetite for risk should be assessed. Operational experience has shown that contractors are reasonably resilient, provided they understand the risks in the operation. Joint risk registers are a means of sharing risk with contractors, agreeing ownership of risks and mitigation.

5.19. **Mitigating contractor support risk.** Contingencies against CSO arrangements failing may include maintaining a military capability and using Reserves (including sponsored reserves). Using long-term partnership arrangements may provide additional risk mitigation. Such arrangements help develop military-commercial relationships and encourage contractors to engage early in the planning cycle. Currently, CSO not only augments but is increasingly replacing military capability, once operations become established. Even while using contractors, planners should

// Operational experience has shown that contractors are **reasonably resilient**, provided they **understand the risks** in the operation.

//

.....  
119 JSP 892, *Risk Management*, Chapter 8, Section 4 provides further information on risk.

recognise operational risk exists and continue to consider support from other sources, such as:

- host nations;
- international partners;
- multinational organisations;<sup>120</sup> or
- other government departments.<sup>121</sup>

## Key points

- Force generation is: the process of providing suitably trained and equipped forces, and their means of deployment, sustainment and recovery to meet all current and potential future tasks, within required readiness and preparation times. (JDP 0-01.1, *UK Supplement to the NATO Terminology Database*).
- If the operation requires logistic assets at lower readiness, planners need to ensure they are given training and equipment priority. They will then be able to support the deploying force and integrate with other components and nations as the combined joint force builds up.
- The logistic planner should act on the logistic principle of collective responsibility from the outset, seeking to realise its benefits. Supporting that approach, the logistic force generation process should identify:
  - potential economies of scale;
  - availability of multinational logistic capabilities; and
  - specific component support needs.
- Shortfalls should be met from other sources such as the Reserves, civil servants, locally employed civilians or contractor support to operations (CSO) which, with regular personnel, form the Whole Force.
- Planning should compensate for the time needed to mobilise reservists. Using the high readiness reserve and sponsored reserves reduces the effect of that delay.

120 For example, NATO (perhaps through NATO Support Agency or the Operational Logistic Support Partnership) or the European Union.

121 For example, the Foreign and Commonwealth Office or Department for International Development.

## Key points (continued)

- CSO enables the commercial sector to provide deployed support to the force, offering the Commander access to more resources, services and capability. CSO is usually delivered through Service Delivery contracts. There are three guiding principles to its use.
  - Assured support to the force.
  - Value for Defence.
  - A safe and secure environment for contractors.
- Types of CSO include:
  - contractors on deployed operations;
  - private military and security companies; and
  - sponsored reserves.
- Planned CSO is likely to make best use of the mix of military and civilian support while *ad hoc* contracting can provide more flexibility but at greater cost and delay.
- Using CSO can increase operational risk. Planners should reflect that risk during the planning process and it should be managed by sharing ownership and mitigation between the MOD and the contractors.



# Logistic support to deployment

Chapter 6 outlines the processes, command and control, linkages and key documents through which logistics supports successful deployments.

J5/J3 lead deployment planning and execution and J4 is a key enabler.

Section 1 – Mounting . . . . .	127
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//  
Logistics comprises the means and arrangements  
which work out the plans of strategy and tactics.  
Strategy decides where to act; logistics brings the  
troops to this point.  
//

General Antoine Henri Jomini



# Chapter 6 – Logistic support to deployment

## Section 1 – Mounting

6.1. **Definition.** Mounting is defined as: all preparations made in areas designated for the purpose, in anticipation of an operation. It includes assembly in the mounting area, preparation and maintenance within the mounting area, movement to loading points and subsequent embarkation into ships, craft or aircraft if applicable.<sup>122</sup>

6.2. **UK context.** In the UK, the Detailed Deployment Plan directs those tasks that we need to coordinate during the mounting process. The plan allocates strategic lift assets and details how we intend to embark our personnel, equipment and cargo (Section 2). Mounting includes:

- identifying and preparing forces, their equipment and stores;
- briefing; and
- transporting them to the port of embarkation, most commonly via the Joint Air Mounting Centre or a sea mounting centre.

6.3. **Mounting command and control.** Permanent Joint Headquarters (PJHQ) is the controlling headquarters for all deployed joint operations and major joint exercises.<sup>123</sup> While mounting a joint force, PJHQ directs or coordinates the activities of:

- Joint Forces Command and the single-Service commands;
- Defence Equipment and Support (DE&S);
- other government departments (OGD);
- industry; and
- contractors.<sup>124</sup>

122 Allied Administrative Publication (AAP)-06, *NATO Glossary of Terms and Definitions*.

123 Single-Service commands can be nominated as mounting headquarters, particularly when deploying force elements are drawn primarily from a single-Service.

124 Contractors should be mounted by the Defence Support Chain Operations and Movements' (DSCOM) Contractors on Deployed Operations (CONDO) Mounting Cell, coordinated through CONDO project managers, authorised by the PJHQ J4 Contractor Support to Operations Cell and in close liaison with the PJHQ J4 Joint Mounting Cell.

Mounting is a J3-directed activity and functional responsibility for mounting lies with PJHQ's Assistant Chief of Staff (ACOS) J1/J4.<sup>125</sup>

a. **J4 Joint Mounting Cell.** The J4 Joint Mounting Cell provides a standing operational-level focus within PJHQ for the command and control, coordination and development of the operational mounting process. At the start of planning for an operation, the Joint Mounting Cell works with J5/J3 guidance and closely with Defence Support Chain Operations and Movements (DSCOM) and single-Service commands. They plan, refine and direct the joint force's mounting activities during the deployment, sustainment and redeployment phases. In so doing, the cell coheres the joint management of the operational mounting process to deliver capability to operational theatres to meet the Chief of Joint Operations' (CJO) intent. The cell marries the requirement with resources, in the most efficient manner within operational constraints.

b. **J4 Movement Cell.** The J4 Movement Cell coordinates calling forward force elements with single-Service commands and DSCOM Movement Operations. The cell executes the movement plan generated during the operational mounting process. It is also responsible for assisting DSCOM Movement Operations to de-conflict and resource theatre-demanded sustainment requirements alongside sustainment deployment serials.

## Section 2 – Deployment planning

6.4. **Planning and estimate process.** The planning and estimate process, described in Chapter 4, underpins all pre-deployment activity. Estimate outputs define:

- the lines of communication;
- initial support; and
- the required level of sustainment for both initial and full operating capability of the joint force.

The Joint Mounting Cell assumes most of the planning, liaison and directing workload that PJHQ J3/5 would otherwise undertake. The cell's main output is the Detailed Deployment Plan. Figure 6.1 outlines the deployment planning process.

.....  
125 J1-J9 are recognised military branches. J1 – personnel; J3 – operations; J4 – logistics; and J5 – plans.

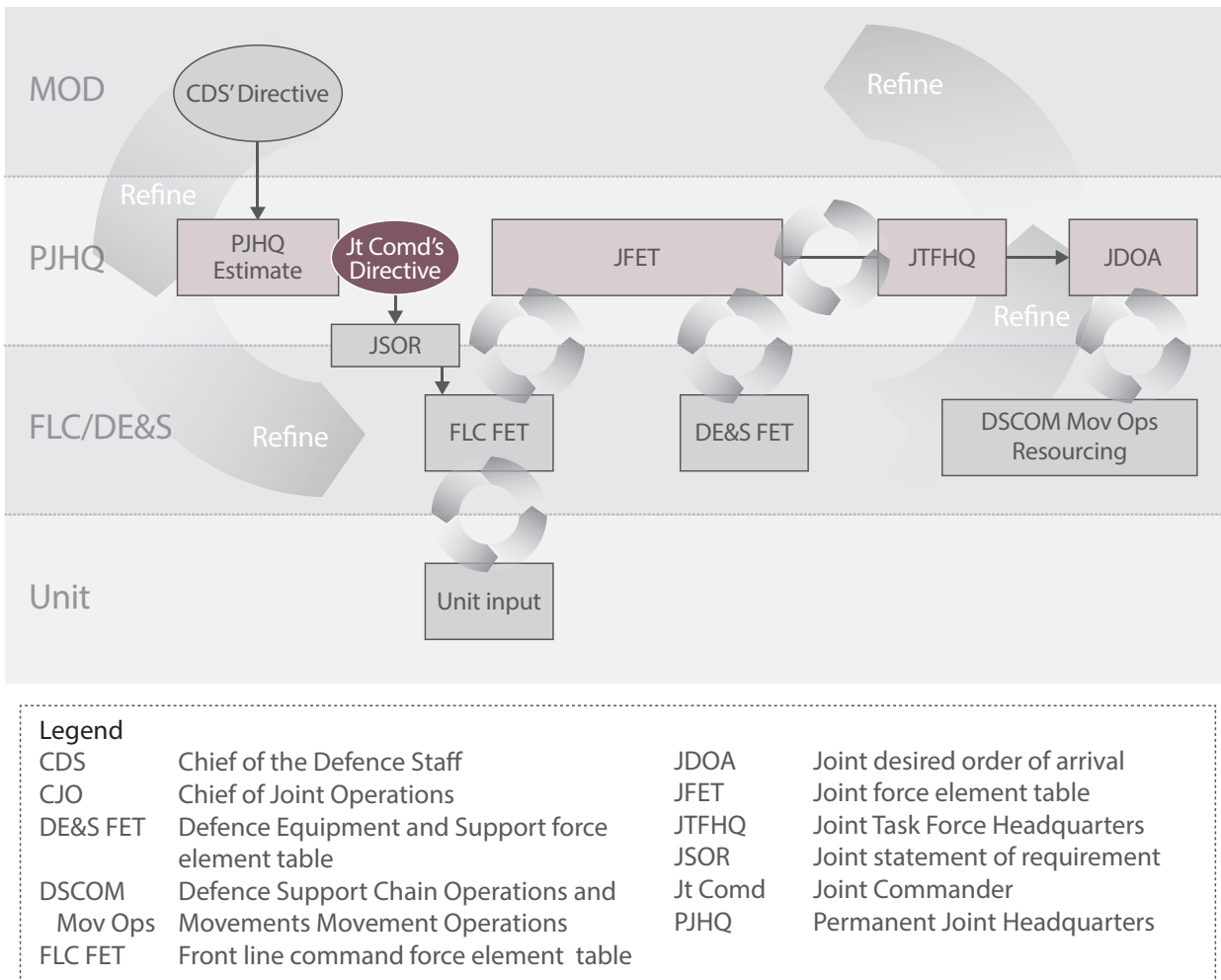


Figure 6.1 – Deployment planning process

6.5. **Detailed Deployment Plan.** The Detailed Deployment Plan exists as a set of dynamic instructions rather than a single document. The plan draws from the Strategic Mounting and Movement Directive (a generic directive that covers the operational mounting process for all operations). Once further details of the operation are confirmed, and depending on their lead time, the following documents are produced.

- a. **Warning order.** The warning order identifies emerging specifics regarding why, who, where and what (resources) might be required.
- b. **Fragmentary order.** A fragmentary order (FragO) directs specific changes to the Joint Mounting Order element of the Strategic Mounting and Movement Directive. The FragO details the 'why, who and what' for the operation and includes the Coupling Bridge annex. That annex details operational specifics of where, when and what is needed to operate the Coupling Bridge. This draws heavily on the Joint Commander's Directive and may (where time allows) be included within it for brevity and coherence. Single-Service commands may

issue subordinate instructions (based on the detail of the FragO) to direct administrative arrangements for their sub-units, supporting the operational mounting process.

c. **Joint Statement of Requirement.** After the Operations Directorate endorses the military strategic estimate, PJHQ issues Commands and DE&S with a list of capabilities required in the operation. This is known as the Joint Statement of Requirement (JSOR). The JSOR details those tasked to provide force elements to the operation and enables single-Service, or organisational, force element tables to be drafted. The personnel element of the JSOR is set out in the operational establishment table, which PJHQ J3 creates and maintains.

d. **Joint force element table.** The J4 Joint Mounting Cell is the focus for force element table submissions and iteratively staffs them for accuracy. The product is consolidated into the joint force element table (JFET) and submitted to PJHQ J3 to be checked against the Joint Statement of Requirement. The final JFET is then issued under PJHQ J3 authority and becomes the authoritative document governing the shape and size of the deploying force. The table comprehensively lists force elements in capability groups but is not as detailed as the staff tables used by individual commands. As well as informing the Joint Task Force Commander (JTFC) of capabilities, equipment and initial operating stocks availability, the JFET highlights capability gaps for PJHQ J3 to resolve. Single-Service commands will be required to consider the contracting footprint needed to support the JFET.

e. **Joint desired order of arrival.** The joint desired order of arrival (JDOA) is the joint force element table with force elements prioritised according to required loading, movement and delivery dates. All JDOA serials are annotated with:

- a ready to move (RTM) date;
- a preferred arrival date (PAD); and
- a required delivery date (RDD).

The JDOA is also produced iteratively and must match the Commander's intent. For example, it should define the force posture required on arrival in theatre to inform:

- the order in which capabilities are deployed;
- how cargo is stowed; and
- shipping plans.

6

As well as informing the Joint Task Force Commander of capabilities, equipment and initial operating stocks availability, the JFET highlights capability gaps for PJHQ J3 to resolve.

Some logistic resources (particularly joint logistic enablers and assets) should deploy early to support in-theatre reception, staging, onward movement and integration and facilitate theatre activation.<sup>126</sup>

6.6. **Speed of deployment.** The duration of the operational deployment phase is a key planning consideration as it determines how soon a commander can deliver the intended operational effect. The speed of deployment largely depends on availability of movement resources and (to a lesser extent) the capacity to receive force elements into the joint operations area.

6.7. **Movement resources.** A combination of strategic air and sea lift is used to deliver the Chief of Joint Operation's deployment intent, although rail or road may also be considered. However, commercial charter is also used for all but the smallest operations and the earliest stages of a deployment.

a. **Shipping.** MOD-owned shipping (for example, Royal Fleet Auxiliary vessels) and MOD-leased roll-on/roll-off ferries may be prepared in advance and pre-positioned if there is sufficient warning time. Deploying MOD-controlled shipping in advance allows materiel to arrive in theatre earlier than would be possible using chartered vessels. The latter ordinarily take at least 30 days to charter on the commercial market and that process cannot begin until there has been a definite decision to deploy. MOD-controlled sealift is limited but, unless the size of load or scale of deployment dictates otherwise, is the preferred option.

b. **Airlift.** Air transport will normally be allocated to personnel and high priority equipment. When considering air in favour of sea or land transport, planners should balance delivery speed against capacity and cost. Commercial airlift charter may be achieved at shorter notice than a sealift charter as enabling arrangements normally allow 14 days to lease/contract large aircraft. Without applying political influence, 14 days is also the standard minimum time needed to obtain diplomatic clearances for access and overflight.

6.8. **Personnel and equipment.** Joint Doctrine Publication (JDP) 1-05, *Personnel Support for Joint Operations* details the personnel issues and Allied Joint Publication (AJP)-4.10(B), *Allied Joint Doctrine for Medical Support* (with UK national elements) details medical preparation factors to be considered during the deployment phase. The detailed deployment plan is used to coordinate the preparation and mounting of personnel and their equipment. The administrative aspects of preparing personnel for deployment include:

.....  
126 Theatre activation is enabled by joint logistic enablers; Chapter 3 provides more detail.

// The duration of the operational deployment phase is a key planning consideration as it determines how soon a commander can deliver the intended operational effect.



- issuing specialist clothing;
- fitness screening; and
- providing force health protection measures tailored to the likely hazards/ threats in the joint operations area, in time to ensure optimal protection when entering theatre.

6.9. **Training.** Pre-deployment training within the strategic base and in-theatre will be mandatory for all personnel deploying to a joint operations area. Detailed training requirements are set out in the Joint Commander's Operational Directive but commands remain responsible for programming and directing individual, collective and specialist training.

## Section 3 – Deployment execution

6.10. **Responsibilities.** Reducing the notice-to-move of deploying force elements requires MOD approval. Once that is obtained, PJHQ issues further coordinating instructions, drawn from the Detailed Deployment Plan. It also distributes the joint force element table and joint desired order of arrival, which are effectively the first set of call-forward coordinating instructions used by the operational mounting process' stakeholders.

6.11. **Load allocation table.** DSCOM Movement Operations creates a load allocation table (LAT) from the joint force element table and joint desired order of arrival. The table assigns personnel, equipment and stores (from an individual through to an entire capability) to specific strategic lift, forming loads suitable to each lift asset. The LAT also allots re-supply and sustainment stocks to strategic lift. During the deployment execution stage, a revised LAT is produced every time a joint force element table or joint desired order of arrival is issued or amended. Producing the LAT is the second part of the call-forward coordinating instructions process and defines a transfer of responsibility within the PJHQ mounting and deployment process.

6.12. **Strategic base movement.** Once the load allocation table has been published, the J4 Movements Cell (with DSCOM) is responsible for moving force elements. After receiving the load allocation table, commands adjust the notice-to-move of their own force elements (as directed by PJHQ). Commands are also responsible for issuing their own call-forward and movement instructions. They then move their formations, units, personnel and equipment from strategic base locations to the points of embarkation.

6.13. Execution process. Executing the Detailed Deployment Plan requires flexibility to cater for changes in circumstances and in the Joint Task Force Commander’s priorities. The PJHQ J3 Operations Team approves all changes to the Detailed Deployment Plan. Commands or the Joint Task Force Commander may request changes to the plan and should seek approval through the PJHQ J4 Joint Mounting and Movements cells. The JFET-JDOA-LAT<sup>127</sup> process is iterative throughout the deployment phase. There are therefore likely to be frequent changes in movement dates, capability requirements and allocation of lift assets. Figure 6.2 shows the deployment execution process.

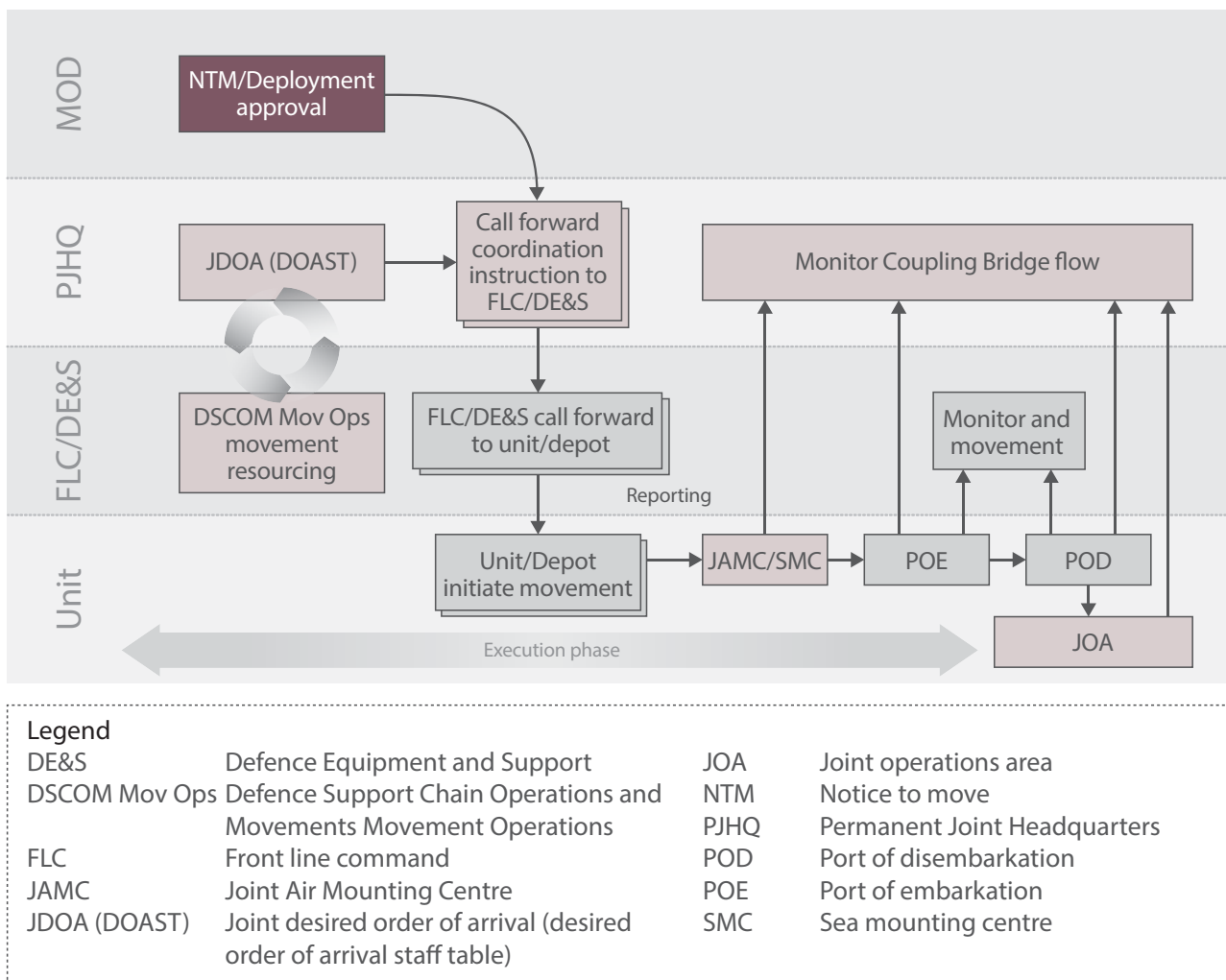


Figure 6.2 – Deployment execution process

6.14. Coordinating strategic movement. Strategic movement is directed by the PJHQ J4 Movements Cell and managed by DSCOM. The Joint Task Force Headquarters Force Movement Control Centre coordinates the theatre end of the Coupling Bridge (including at the forward mounting base, if one is used). This ensures force elements flow smoothly through any Coupling Bridge choke points and maximises route capacities.

127 Joint force element table-joint desired order of arrival-load allocation table.

6.15. **Movement information requirement.** A smooth deployment, particularly effective reception, staging, onward movement and integration, needs accurate information covering:

- departures;
- delays;
- re-routing; and
- arrivals.

Details of the movement information requirement are defined in the strategic movement and consignment tacking instructions (both are issued by the PJHQ J4 Movements Cell). Reliable information on the identity and timings of force elements arriving in theatre can assist with their achieving readiness in theatre. The information allows the Joint Task Force Headquarters to accurately schedule in-theatre training and preparation. That then eases the subsequent burden on the reception organisation. The deployed logistic command and control node<sup>128</sup> has an important role in supplying force element arrival information to both PJHQ and the commands.

6.16. **Sustaining force deployment.** Logistic support to force deployment overlaps the sustainment phase.<sup>129</sup>

- DSCOM provides materiel support to a deploying force from the strategic base, as directed by PJHQ.
- DSCOM and commands identify the sustainment requirements of the deploying force during the initial planning process.
- DSCOM then produces its own force element table for inclusion in the joint force element table.
- Sustainment stocks are factored into the joint desired order of arrival (and afloat support loading lists) and are allocated to strategic lift assets through the load allocation table.
- As the operation develops, there will be a gradual change in emphasis from strategic base-‘push’ (sustaining the initial deployment) to joint operations area-‘pull’ (to meet demands placed by deployed force elements). This may include a significant amount of host-nation support and contractor support to achieve.

128 Options include: Joint Task Force Headquarters J1/J4 team, the Joint Force Logistic Component Headquarters (JFLogCHQ) or a single component headquarters. Chapter 2 provides detail.

129 Chapter 8 covers sustainment in further detail.

//  
As the operation develops, there will be a gradual change in emphasis from strategic base-‘push’ to joint operations area-‘pull’.





- The exact timing of transitions between phases differs for each operation but generally occurs when all force elements and initial sustainment stocks are in theatre.
- As an operation ends, joint operations area-‘pull’ is replaced by joint operations area-‘push’, to assist with returning materiel to the strategic base.

Figure 6.3 outlines the changes in how sustainment demand is influenced across the operational phases.

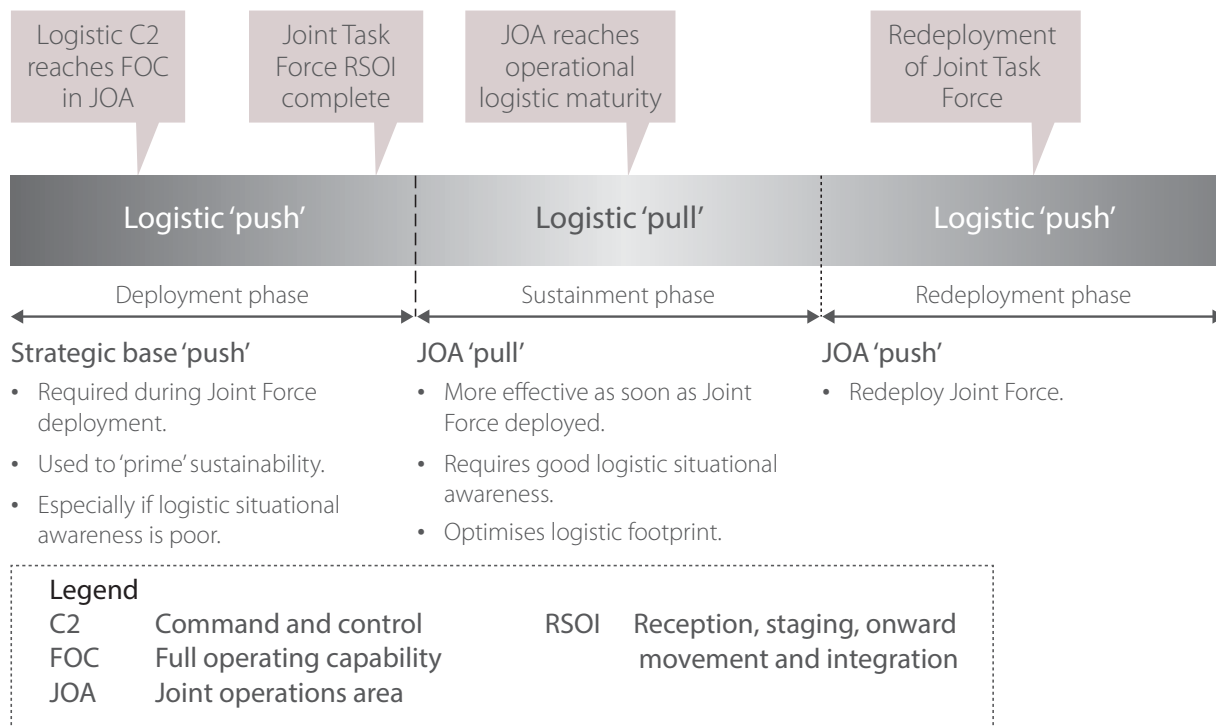


Figure 6.3 – Influences on sustainment demand

## Section 4 – Coupling Bridge

6.17. The Coupling Bridge is the series of activities through which force elements and materiel are delivered from the strategic base to the joint operations area, and returned, in accordance with the Joint Task Force Commander’s priorities. The Coupling Bridge includes all the strategic assets, infrastructure and facilities required to achieve this task. The Coupling Bridge starting point is the strategic base port of embarkation. It ends in the joint operations area when materiel and force elements

// The Coupling Bridge **starting point** is the strategic base **port of embarkation**. It ends in the **joint operations area** when materiel and force elements **physically depart the port of disembarkation**.

6

physically depart the port of disembarkation.<sup>130</sup> This allows the Joint Commander to generate maximum operational effect across its whole length.

6.18. **Coupling Bridge command and control.** The Joint Commander exercises command and control of the Coupling Bridge and the operational directive defines its exact boundaries for the operation. That directive may appoint a coupling bridge commander and outline what support is required from commands and DE&S. The commands and DE&S are supporting commands for the Coupling Bridge and retain operational command of the strategic lift assets it uses. Chief of Joint Operations may need to provide strategic guidance and prioritisation when there is more than one coupling bridge, each supporting geographically dispersed, but concurrent, operations. Using priorities set by the Joint Task Force Commander, the deployed logistic command and control node normally controls the flow of personnel and materiel into theatre. However, the Joint Commander retains the ability to influence the flow of materiel and force elements.

6.19. **The Purple Gate.** The Purple Gate is the conceptual single point of entry from the strategic base into the Defence Support Chain. The Purple Gate regulates<sup>131</sup> materiel flow into the support chain:

- from DE&S project teams;
- through contractor logistic support arrangements; or
- directly from industry.

This also enables materiel flow to be prioritised and tracked across the Coupling Bridge. In reality, the conceptual single point of entry comprises several individually nominated physical locations.

- RAF stations.
- Naval bases.
- Commercial ports (sea and air).
- Supply depots (military or industry).
- Her Majesty's ships, when deployed.

DSCOM Logistic Operations may nominate additional purple gate nodes and they can be located in theatre.<sup>132</sup>

.....  
130 Joint Service Publication (JSP) 886, *Defence Logistics Support Chain Manual*, Volume 1, Part 1, Chapter 1; to be subsumed by the *Defence Logistic Framework* during 2015.

131 As detailed in the Constraints, Standards and Rules within the *Defence Logistic Framework*.

132 JSP 886, *Defence Logistics Support Chain Manual*, Volume 3, Part 3, Chapter 2; to be subsumed by the *Defence Logistic Framework* during 2015.

## Key points

- Mounting is defined as: all preparations made in areas designated for the purpose, in anticipation of an operation. It includes assembly in the mounting area, preparation and maintenance within the mounting area, movement to loading points and subsequent embarkation into ships, craft or aircraft if applicable.
- Permanent Joint Headquarters (PJHQ) J3 directs the mounting process while functional responsibility lies with the PJHQ J4 Joint Mounting and Movement Cells. The cells liaise with Defence Support Chain Operations and Movements (DSCOM), Joint Forces Command and single-Service commands.
- The detailed deployment plan directs the tasks required during the mounting process. The plan includes: warning orders; fragmentary orders; joint statements of requirement (JSOR); operational establishment tables (OET); joint force element tables (JFET); joint desired orders of arrival (JDOA); and load allocation tables (LAT).
- The JFET-JDOA-LAT process is iterative throughout the deployment phase. With the issue of the LAT, functional responsibility for deployment execution shifts from the PJHQ J4 Mounting Cell to the Movements Cell but is still directed by PJHQ J3.
- When allocating loads to strategic lift assets, planners need to balance the speed and availability of air assets with the volume and economy of shipping.
- While strategic movement is managed by DSCOM, the Force Movement Control Centre coordinates the theatre end of the Coupling Bridge and depends on current and reliable movement information.
- The Coupling Bridge is the series of activities through which force elements and materiel are delivered from the strategic base to the joint operations area, and returned. The Coupling Bridge supports the deployment, sustainment and redeployment phases.
- The Purple Gate is the conceptual single point of entry from the strategic base into the Defence Support Chain and the Coupling Bridge. In reality, it may have several nodes at different physical locations.



## Reception, staging, onward movement and integration

Chapter 7 outlines the phased process of reception, staging, onward movement and integration (RSOI). In Section 2, it describes the capabilities required in, and the key elements affecting, the conduct of reception, staging and onward movement (RSOM), acknowledging that integration activities are J3-led.

Section 1 – Reception, staging, onward movement and integration process . . . . .	141
Section 2 – Reception, staging and onward movement capabilities. . . . .	148

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The essence of flexibility is in the mind of the  
commander; the substance of flexibility is in  
logistics.

//

Rear Admiral Henry Eccles,  
United States Navy

# Chapter 7 – Reception, staging, onward movement and integration

## Section 1 – Reception, staging, onward movement and integration process

### Introduction

7.1. Reception, staging, onward movement and integration (RSOI) describes the series of activities that enable force elements arriving in theatre to reach full operating capability in the joint force. The process is complex, often prolonged and frequently dispersed. In coalition or multinational operations, separate national forces may conduct RSOI concurrently. Real estate, resource and facility use therefore needs to be coordinated and de-conflicted. Though usually coordinated by the Joint Logistic Support Group,<sup>133</sup> RSOI remains an individual national responsibility unless specifically directed otherwise (for example, when a logistic lead nation<sup>134</sup> is tasked with delivering RSOI for the multinational force).

7.2. During the reception, staging and onward movement (RSOM) phases, the deployed joint logistic headquarters<sup>135</sup> is likely to be the delegated RSOM headquarters and, as such, would be the supported headquarters. The integration process is J3-led.<sup>136</sup> Figure 7.1 (overleaf) outlines the RSOI process.

133 Allied Joint Publication (AJP)-4.6(B), *Allied Joint Doctrine for the Joint Logistic Support Group*, Chapter 4, Section 2 and Chapter 6, Section 2, April 2014.

134 Chapter 2 and AJP-4.9(A), *Allied Joint Doctrine for Modes of Multinational Logistic Support*, Chapter 2, February 2013.

135 See Chapter 2 for further information on deployed command and control.

136 J1-J9 are recognised military branches. J3 – operations.

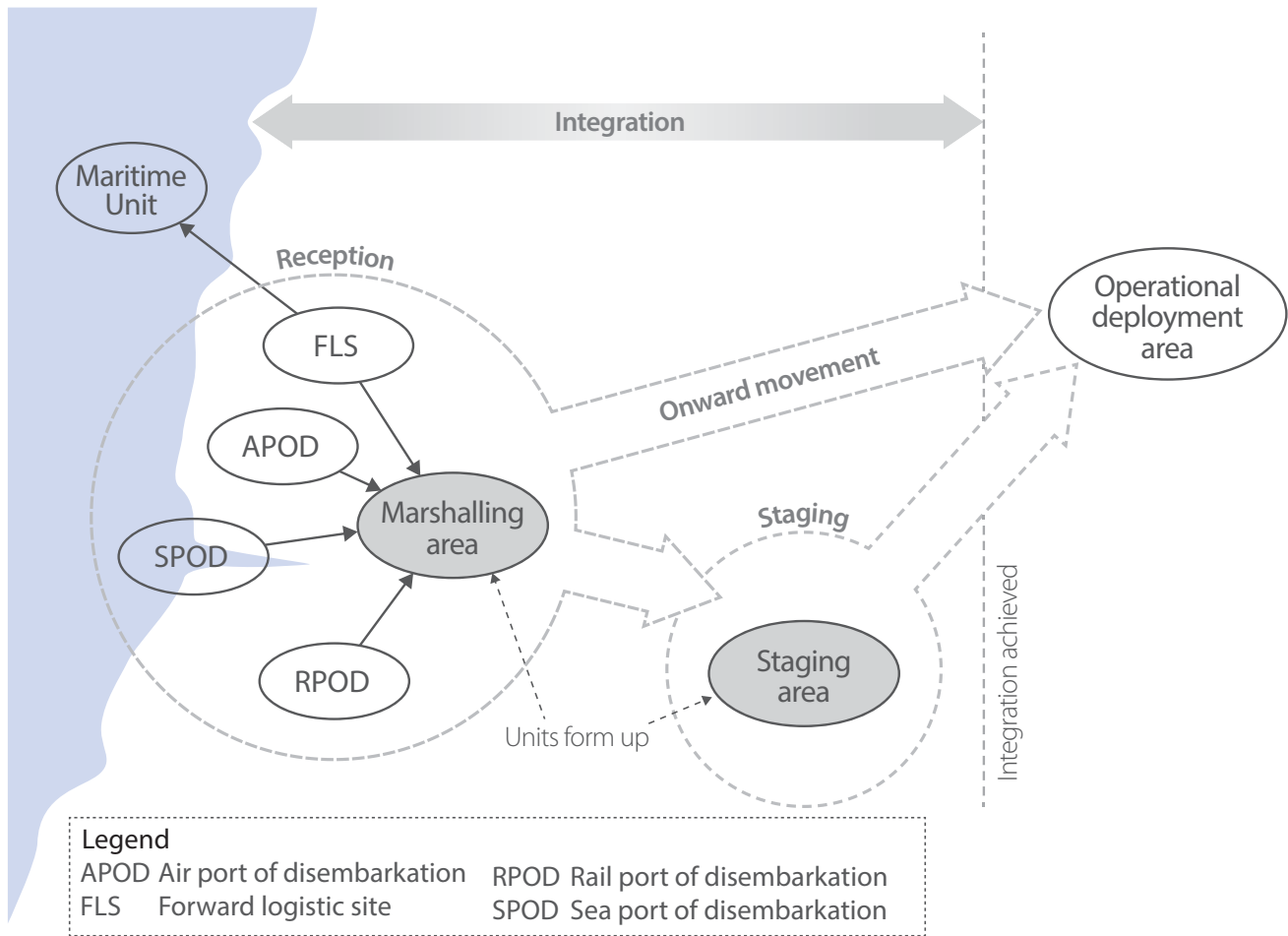


Figure 7.1 – Reception, staging, onward movement and integration process

### Conducting reception, staging and onward movement in a multinational context

7.3. Allied Joint Publication (AJP)-3.13, *Deployment of Forces* provides the NATO context of multinational deployment. AJP-3.13 focuses on command and control which needs to be separately agreed for each operation. Commanders' and RSOM staffs' ability to adapt the arrangements outlined in AJP-3.13 to fit the operational circumstances is key to deploying successfully.

7.4. The Force Commander is responsible for planning and executing RSOM, through the appointed RSOM headquarters. The RSOM plan should be coordinated between the troop contributing nations and the RSOM headquarters.<sup>137</sup>

7.5. The RSOM commander must have sufficient control of the national RSOM-enabling forces deployed in the joint operations area to maintain unity of

.....  
137 AJP-3.13, *Deployment of Forces*, paragraph 0203.



command and unity of effort. The RSOM headquarters should be assigned logistic control of all national support elements (as a minimum).

7.6. Unity of command and unity of effort specify that the RSOM commander has command and control over the entire RSOM operation (from ports of disembarkation until arrival at final unit destination). This implies that the RSOM commander must have the authority and assets to: direct; protect; support; and sustain forces throughout RSOM.

7.7. To support and sustain units during the RSOM process, the RSOM headquarters has command and control over theatre RSOM-enabling assets which are assigned in the Combined Joint Statement of Requirement. In addition, the RSOM headquarters has authority over:

- RSOM-enabling activities in the joint operations area;
- logistic units/agencies supporting the RSOM operation;
- all host-nation support issues relating to RSOM;
- contracting for RSOM;
- real estate management of RSOM infrastructure; and
- coordinating RSOM force protection issues.

Any RSOM functions not carried out multinationally at the theatre level are to be provided by nations through their national support elements.<sup>138</sup>

7.8. In cases where the RSOM headquarters is the first, or only, joint headquarters in theatre, the command and control structure must be defined during the planning process, before deployment. In particular, the RSOM headquarters must have tactical control over units in RSOM. The headquarters maintains situational awareness at the operational level while, at the same time, executing the RSOM operation at the tactical level.

7.9. **Movements communication information systems.** Where RSOM is being carried out multinationally, we require access to the relevant multinational or NATO movements communication and information systems. We must be able to exchange compatible data with relevant allied headquarters to support full RSOM visibility across the joint operations area.

7.10. **Liaison.** Exchanging liaison officers (or liaison detachments) between RSOM headquarters, host-nation authorities, international organisations and non-governmental organisations is essential to a successful RSOM operation. All

//  
The RSOM commander **must** have the **authority** and **assets to: direct; protect; support; and sustain** forces throughout RSOM.

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<sup>138</sup> See Chapter 2 for further detail on national support elements.

// The deployed logistic command and control node must balance the competing demands of RSOM and, as the deployment progresses, of increasing force sustainment. Those demands may require an initial surge in logistic capability.

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formations/units and national support elements should liaise directly with the RSOM enabling units, including:

- sea port of disembarkation operations units;
- personnel reception units; and
- situational awareness operations units.

### Reception, staging and onward movement for UK deployments

7.11. In UK operations, RSOM is usually coordinated by logistic staff in the deployed logistic command and control node, on behalf of the Joint Commander. Logistic staff are responsible for the full range of activities involved in the RSOM process, as directed by the Joint Task Force Headquarters. To make sure the RSOM procedure is efficient and effective, J4<sup>139</sup> staff should be involved in reconnaissance and planning at the earliest feasible stage of the planning process.

7.12. **Operational requirements.** The deployed logistic command and control node must balance the competing demands of RSOM and, as the deployment progresses, of increasing force sustainment. Those demands may require an initial surge in logistic capability.

### Reception

7.13. Reception is the process of: receiving; offloading; marshalling; recording; and transporting personnel and materiel through sea, air or rail ports of disembarkation. Reception is focused on land force elements and those maritime and air force elements that do not self-deploy. Reception involves:

- preparing facilities;
- initial force protection;
- administering and briefing personnel; and subsequently,
- transporting them away from the port of disembarkation.

7.14. In a large joint operations area (where components are often widely separated) reception may offer a significant challenge. The process can also involve time-consuming preliminary activities which need to be completed before the main force deploys, such as building:

- camps or temporary holding facilities;
- medical facilities;
- theatre reception and redeployment centres; and

.....  
139 J1-J9 are recognised military staff branches. J4 – logistics.

- logistic compounds.

7.15. **Deployed joint logistic command and control node.** The joint logistic command and control node must be deployed early enough to support reception activity. The command and control node should already have administrative and logistic systems in place, such as:

- logistic information systems;
- Defence Support Chain processes (including the reverse supply chain);
- personnel and materiel tracking; and
- aeromedical evacuation.<sup>140</sup>

7.16. **Key elements.** Key elements of reception are as follows.

- Activating ports of disembarkation for air, sea or rail. The overall quantity and different types of ports of disembarkation influence the complexity of reception activities, so activities should be synchronised at, and between, each port of disembarkation.
- Reception starts at the point that deploying forces and materiel arrive into a port of disembarkation.
- Reception activities continue until the point from which forces and materiel are moved onward into the deployed operational area. This may be via a staging area.
- Once the deployment has begun, the flow of incoming personnel and materiel should be smooth and continuous to avoid causing a backlog of subsequent arrivals in the reception stage.

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The joint logistic command and control node **must** be deployed **early enough** to **support** reception **activity**.



.....  
140 Including the Patient Evacuation Coordination Cell established within Joint Task Force Headquarters J3.

## Staging

7.17. Staging is the process of assembling, temporarily holding and organising personnel and materiel arriving in theatre, before their onward movement and further activities. Staging may involve both formed units and individuals. It is a life-support function that, at its simplest, feeds and accommodates personnel arriving in theatre.

7.18. Staging can be a significant management task with forces flowing into ports of disembarkation from several locations, possibly requiring long periods in staging areas. However, staging is not always required. Force elements could be moved straight to their operational deployment location. The staging requirement depends on:

- the size of the force;
- the need for integration;
- the speed of deployment; and
- what real estate is available.

Staging can include:

- recording personnel arriving in theatre;
- providing life support while troop levels build up, troops are organised, reconfigured, acclimatised and trained and their equipment fitted with urgent operational requirements;
- holding reinforcements until they are required; and
- carefully sequencing integration activity to produce the required flow of forces into the area of operations.

## Onward movement

7.19. Onward movement is the process of relocating units, personnel and materiel from the reception or staging areas to their operational deployment location. Onward movement may be to any of the components (including vessels at sea) and may use military, host-nation support or locally hired transport assets. Onward movement requires J2<sup>141</sup> and J3 support if it is not taking place in a benign environment.

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141 J1-J9 are recognised military staff branches. J2 – intelligence.

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**Onward movement** may be to any of the **components** (including vessels at sea) and may use **military, host-nation support** or **locally hired transport assets**.



7.20. Onward movement requires the following.

- a. **Coordinated movement control.** Joint movements staff need to be fully aware of the operational situation across all components, to ensure that personnel and materiel are transported to where they are needed, when they are needed. Logistic information systems underpin that operational awareness.
- b. **Effective transport network.** Onward movement should use protected routes. In the land environment this may include establishing convoy support centres. Logistic and medical support must be available (with force protection) and may need to be self-generated from within logistic units.

## Integration

7.21. Integration is the coordinated process of transferring operationally ready units (and contracted capabilities) into the joint force. Integration receives personnel into units and orientates them to the operational area. It includes acclimatisation, training and situational awareness. This process is J3-led and conducted within components. During integration, the deployed logistic command and control node becomes the supporting headquarters.

7.22. The Joint Task Force Commander is responsible for directing integration activity. The deployed logistic headquarters' responsibilities are limited to integrating its own forces and enabling elements of integration training for the whole force. Examples of such enabling activity include providing ranges in reception and staging areas and presenting some theatre orientation briefings. In multinational operations, integrating our forces into an alliance or coalition framework involves additional activity, for example, detaching liaison officers to assist with coordination across nations.

7.23. Integration may be conducted outside the area of operations, or at any stage of the RSOI process. The larger the force, or the greater the number of nations involved, the more demanding it is to achieve. Integration is complete when the commander assesses the joint force to be effective.

// **Integration is J3-led and conducted within components. During integration, the deployed logistic command and control node becomes the supporting headquarters.**

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## Section 2 – Reception, staging and onward movement capabilities

### Command, control and coordination

7.24. Reception, staging and onward movement headquarters. Coordinating RSOM for all but the smallest operations requires a bespoke joint tactical level staff with the necessary expertise and resources to carry out the function. The deployed logistic headquarters normally performs this task. Establishing a headquarters to command the RSOM process:

- provides continuity from the early planning stages of an operation;
- develops relationships between the RSOM commander and the other component commanders and allies; and
- avoids the need to create *ad hoc* headquarters.

7.25. Reception, staging and onward movement reconnaissance group. The RSOM reconnaissance group must assess a number of issues before the RSOM process can commence.

- a. The prevailing tactical situation.
- b. The need for national contingents to cooperate and de-conflict their activity. Where RSOM is being conducted within a multinational operation, there should, ideally, be a combined multinational reconnaissance group.
- c. The location, capacity and suitability of available ports of disembarkation. The reconnaissance group must assess available infrastructure to make sure it meets the operational requirement. The assessment must include comparing the infrastructure to the size of the deploying force and the throughput that planned deployment timelines require at the ports of disembarkation.
- d. The real estate suitability and support infrastructure availability, particularly the capacity, diversity and accessibility of the local transport network. These must be assessed to make sure they are capable of meeting the reception, staging and onward movement activity requirements, including administrative. Staff should consider wider real estate requirements for activities such as range work for deployed weapon systems and driver training.

- e. Access to life support services such as electrical power, compatible equipment, communications, fuel, water, food and waste disposal. If these services are assessed as inadequate, the need to deploy more resources may delay the RSOM process.

7.26. **Reception, staging and onward movement activation group.** The RSOM activation group is tailored to match the requirements of the RSOM process. The size of the group and the trade skills it requires depend on the:

- number and locations of ports of disembarkation;
- in-place logistic infrastructure (including the transportation network); and
- composition and size of the force to be deployed.

7.27. **Enabling capabilities.** The deployed logistic headquarters exercises command and control over a wide range of specialist enabling assets which support RSOM and which may cover functions including:

- engineering;
- infrastructure;
- labour support;
- supply;
- transport;
- medical;
- provost;
- administration; and
- J8/J9.<sup>142</sup>

Such assets may be permanently assigned to the headquarters, for ongoing activities supporting the force, or be allocated for specific phases of an operation. It is essential that RSOM enabling assets feature early in the joint desired order of arrival. If RSOM facilities, particularly ports of disembarkation, are geographically dislocated, additional command and control structures (such as joint logistic units) could be formed around suitable component organisations to aid cohesion.

### Conducting reception, staging and onward movement

7.28. **Operational environment.** How RSOM is conducted depends largely on the operational circumstances, particularly at the point of entry. A secured area in the joint operations area enables a more rapid build up of combat power than in an operation launched from a more remote forward mounting base.

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142 J1-J9 are recognised military staff branches. J8 – resource management; J9 – civil-military cooperation.

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**RSOM-enabling assets may be permanently assigned to the headquarters or be allocated for specific phases of an operation. It is essential that RSOM enabling assets feature early in the joint desired order of arrival.**

7.29. **Movement within the joint operations area.** Coordination and planning is required to best use scarce transport resources for RSOM, both nationally and with other deployed nations. Routes must be carefully planned and their use controlled, including liaison with the civil authorities and with other nations, to ensure freedom of movement and to de-conflict military and civilian use. An essential element of the RSOM process is to make sure transport supporting infrastructure is in place.

- a. Movement within the joint operations area depends mainly on the:
- capacity and condition of the local road and rail networks;
  - availability of road and rail transport assets; and
  - associated force protection requirements.

Routes and capabilities may be limited, particularly in difficult environmental conditions, and engineer operations to improve the situation may take time to complete. Road and rail capacity face their greatest demand as the force deploys. That demand may reach its peak before the full complement of enabling equipment has been discharged from its strategic transport (such as shipping).

b. Tactical air transport and aviation assets provide valuable support to the RSOM transport plan, particularly while ground routes are established or restored. However, in all but the smallest scale operations, their relative capacity and cost prevent them providing a lead role. Air and aviation transport also have infrastructure requirements, focused on their airfields and landing areas.

c. Planners should also investigate options to enhance RSOM transport by using sea routes or inland waterways (which may also have infrastructure implications, at their nodes and along their routes).

7.30. **Transfer of authority.** Transfer of authority for force elements from respective Service commands to the Joint Task Force Commander is a key element of the RSOM process. Nationally, transfer of authority normally takes place for land forces once emplaned or embarked and, for maritime and air forces, on arrival in the joint operations area. However, it is essential that the deployed logistic headquarters, acting with authority delegated from the Joint Task Force Commander, has sufficient authority over force elements to manage the RSOM process as a fully joint operation. For NATO operations, transfer of authority to the Joint Task Force Commander will take place at embarkation. For other multinational operations, the timing of transfer of authority to a non-UK Joint Task Force Commander will be determined by the MOD and communicated through PJHQ and the Joint Commander.

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// For NATO operations, transfer of authority to the Joint Task Force Commander will take place for land forces at embarkation.

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## Key points

- Reception, staging, onward movement and integration (RSOI) describes the series of activities that enable force elements arriving in theatre to reach full operating capability in the joint force.
- Though usually coordinated by the Joint Logistic Support Group in a multinational context, RSOI remains an individual national responsibility unless specifically directed otherwise.
- During the reception, staging and onward movement (RSOM) phases, the deployed joint logistic headquarters (or the Joint Logistic Support Group), as the RSOM headquarters, is the supported headquarters. The integration process is J3-led.
- To make sure RSOM is effective, deployed joint logistic headquarters staff should be involved early in planning the operation.
- The RSOM commander must have sufficient control of RSOM-enabling forces to maintain unity of command and unity of effort.
- When involved in multinational RSOM, we require access to multinational movements communications and information systems.
- An initial surge in logistic capability may be required to meet the competing demands of RSOM and increasing force sustainment.
- Reception is the process of: receiving; offloading; marshalling; recording; and transporting personnel and materiel arriving in theatre through sea, air or rail ports of disembarkation.
- Staging is a life-support function that essentially feeds and accommodates personnel arriving in theatre, before their onward movement and further activities. Staging is not always required.
- Onward movement relocates units, personnel and materiel from the reception or staging areas to their operational deployment location. It requires J2 and J3 support in non-benign environments.
- Integration is the coordinated process of transferring operationally ready units (and contracted capabilities) into the joint force. The deployed logistic headquarters becomes the supporting headquarters.
- RSOM requires the following capabilities: RSOM headquarters; RSOM reconnaissance group; RSOM activation group; and specialist enabling assets.
- The conduct of RSOM depends on three key elements: the conditions in the operational environment; movement within the joint operations area; and transfer of authority.



# Sustain

Chapter 8 discusses the method by which we sustain the deployed force, whether in a national or multinational operation. In five sections it considers:

- logistic sustainment planning;
- in-theatre supply;
- the Defence Support Chain in logistic sustainment;
- the importance of understanding the risk to sustainability; and
- the reverse supply chain.

Section 1 – Logistic sustainment planning . . . . .	155
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Throughout the struggle, it was in his logistic inability to maintain his armies in the field that the enemy's fatal weakness lay. Courage his forces had in full measure, but courage was not enough. Reinforcements failed to arrive, weapons, ammunition and food alike ran short, and the dearth of fuel caused their powers of tactical mobility to dwindle to the vanishing point. In the last stages of the campaign they could do little more than wait for the Allied advance to sweep over them.

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General Dwight D. Eisenhower

# Chapter 8 – Sustain

## Section 1 – Logistic sustainment planning

8.1. Logistic sustainment planning focuses on identifying the logistic requirement that ensures sustainability of the deployed force.

- a. Sustainability is defined as: the ability of a force to maintain the necessary level of combat power for the duration required to achieve its objectives.<sup>143</sup>
- b. Logistic sustainment is defined as: the process and mechanism by which sustainability is achieved and which consists of supplying a force with consumables, and replacing combat losses and non-combat attrition of equipment in order to maintain the force's combat power for the duration required to meet its objectives.<sup>144</sup>

8.2. **Logistic information services.** Logistic information services (infrastructure and data) should be provided to support every element of logistic sustainment. Correctly establishing those is vital to maintaining our full visibility of stocks and locations and generates confidence in the logistic sustainment process. This may require information to be exchanged across several information systems (national and multinational). Effective situational awareness enables collaborative working between deployed nations, for example, to merge multinational supply chains and reallocate stocks. Such collaboration, together with confidence in theatre logistic sustainment, helps reduce the deployed logistic footprint and pressure on the Defence Support Chain. Achieving that logistic confidence and situational awareness across the national or multinational force depends on identifying, planning and implementing both the information exchange requirement and the information systems from the earliest stages of the logistic estimate.

### Sustainability statement

8.3. The Chief of the Defence Staff's Directive contains a sustainability statement (SUSTAT) that is based on factors identified from the military strategic estimate. The SUSTAT confirms the overall logistic requirement and provides authority to commit

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143 Allied Administrative Publication (AAP)-06, *NATO Glossary of Terms and Definitions*.

144 *Ibid.*

and release finance and materiel. It articulates our anticipated demand, as predicted by analysis in the political-military estimate and military-strategic estimate processes.

8.4. Permanent Joint Headquarters (PJHQ)<sup>145</sup> develops the SUSTAT and remains the ultimate authority for any amendments and revisions (although Service commands can, and should, propose these through PJHQ J4). PJHQ modifies SUSTATs in response to experience as the campaign progresses. Individual operations or phases within the campaign may also require their own SUSTAT. This may include our need to sustain multinational partners as part of a pre-agreed memorandum of understanding or in response to the overarching logistic principle of collective responsibility. Annex 4B provides a generic example of a SUSTAT.

8.5. SUSTATs are developed using the '4 Ds' (see Figure 8.1):

- distance;
- destination;
- demand; and
- duration.

Annex 8A details planning considerations underpinning the 4Ds.

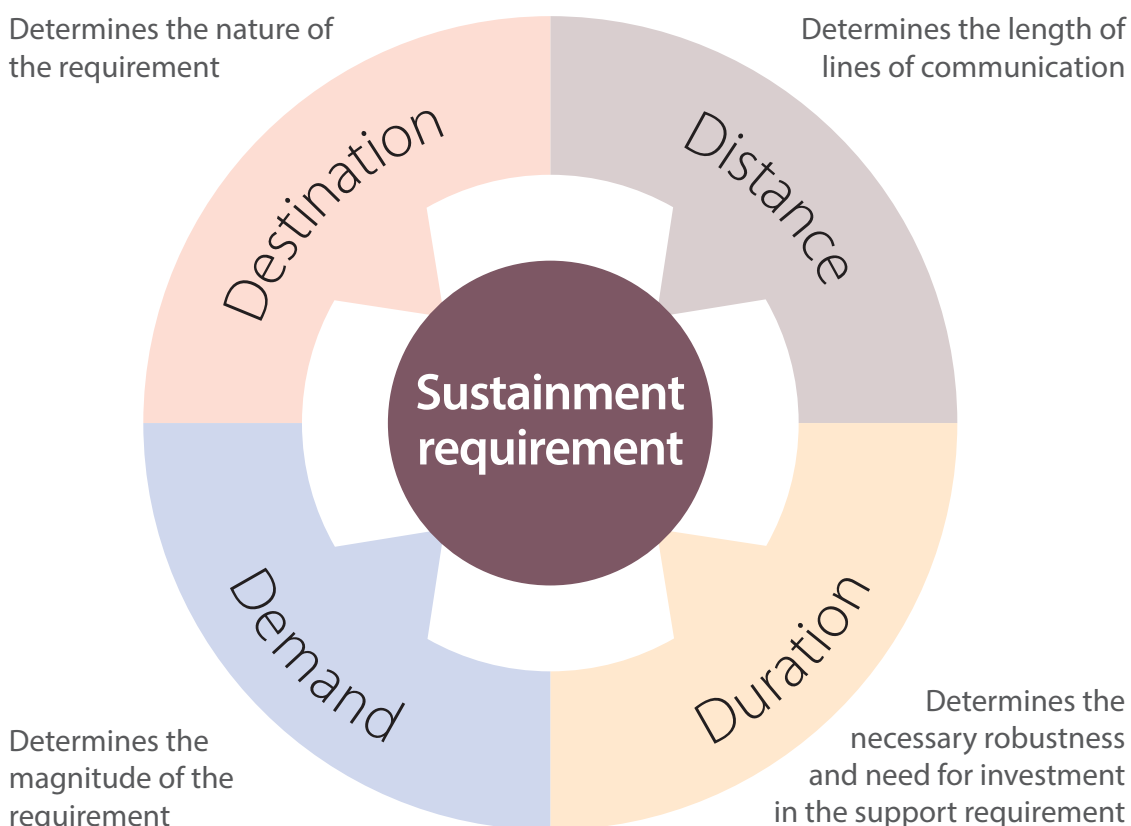


Figure 8.1 – The '4 Ds'

.....  
145 Or Navy Command, for the Response Force Task Group.

## Section 2 – In-theatre supply

8.6. **Supply areas.** The size and complexity of the operation dictates the type of supply area we need to receive, store and distribute stocks and materiel. The three most likely forms are as follows.<sup>146</sup>

- **NATO/multinational operations** – the joint logistic support area which is controlled by the Joint Logistic Support Group and includes national support elements.<sup>147</sup>
- **Bi-lateral operations** – the combined joint support area which is controlled by the Combined Joint Support Group, with national support elements minimised by integrating them into the Combined Joint Support Group.
- **National operations** – the joint supply area which is controlled by the deployed joint logistic command and control node or headquarters.

8.7. **Sources of in-theatre support.** We maintain sustainability through a combination of support from the strategic base, via the Coupling Bridge, and in-theatre supply. By supplying some of the logistic requirement from within theatre, the deployed logistic footprint and Defence Support Chain throughput are reduced. There are a number of in-theatre sources.

- a. **Host-nation support.** Host-nation support is defined as: civil and military assistance rendered in peace, crisis or war by a host nation to NATO and/or other forces and NATO organizations that are located on, operating on/from, or in transit through the host nation's territory.<sup>148</sup> Fuel and infrastructure resources are typical examples of the support offered.
- b. **In-country resources.** In-country resources are similar to host-nation support but are confined to logistic sustainment that is obtained commercially from contractors within the joint operations area. In-country resources are defined as: resources provided to a force from the non-governmental infrastructure of a country.<sup>149</sup> This may include indigenous sources as well as contractors deployed by other nations. When awarding and overseeing contracts, we need to take safeguard measures to check that those local

.....  
146 See Chapters 2 and 3 for more detail on the supply areas.

147 Allied Joint Publication (AJP)-4.6, *Allied Joint Doctrine for the Joint Logistic Support Group*.

148 *Op. Cit.*, AAP-06.

149 Joint Doctrine Publication (JDP) 0-01.1, [United Kingdom Supplement to the NATO Terminology Database](#).

contractors are sufficiently credible and capable for us to be certain that we are not inadvertently funding insurgency.<sup>150</sup>

c. **Contractor support to operations.** Contractor support to operations is described in Chapter 5, Section 2. In multinational operations, contracts can also be established as an Allied contract through the NATO Support Agency.

8.8. **Other support chains.** We may rely on contractors, other government departments, international organisations or non-governmental organisations for certain capabilities or equipment types to support the deployment. Those other organisations may have their own support chains and, depending on the type of arrangement, Defence may not have access to those organisations' support chain information. Our logistic staff must therefore engage with the organisations to understand their logistic sustainment levels and report any key areas of risk<sup>151</sup> (for example, whether there are sufficient spares in theatre for the equipment types under contract). We cannot maintain logistic situational awareness without visibility of this part of the deployed force or the support chains on which they, and the force, depend.

## Section 3 – Defence Support Chain

8.9. **Support from the strategic base.** Deployed logistic elements within the joint operations area (or those alternative sources listed above) may not be able to meet our logistic sustainment requirements. Individual units (or their supporting logistic elements) would therefore raise demands for materiel from the strategic base. Defence Equipment and Support (DE&S) Logistic Commodities and Services and Operating Centre project teams then arrange the supply of items that are available from within the military inventory. The project teams liaise with industry for those items that are not immediately available or which are provided under contractor logistic support arrangements. In both cases, once logistic sustainment items are available, they are processed through the appropriate strategic base supply system and despatched via the Purple Gate for in-theatre delivery across the Coupling Bridge.<sup>152</sup>

8.10. **Sustainment Movement Plan.** The Detailed Deployment Plan<sup>153</sup> is used to allocate strategic movement assets to deploy all personnel and materiel as set out in the joint desired order of arrival. For logistic sustainment purposes, PJHQ tasks Defence Support

150 JDP 3-40, *Security and Stabilisation: The Military Contribution*; expected to be replaced by JDP 05, *Shaping a Stable World* during 2015.

151 See Section 4 for further information on risk.

152 Both the Purple Gate and the Coupling Bridge are described in Chapter 6, Section 4.

153 The detailed deployment plan is covered in Chapter 6, Section 2.



Chain Operations and Movements (DSCOM) to formulate a sustainment movement plan, to be implemented when the deployment phase is complete. The Sustainment Movement Plan acts as a timetable (with regular scheduled departures and arrivals) and includes both air and surface movement means.

8.11. **Managing the Sustainment Movement Plan.** DSCOM Movement Operations negotiates for, and arranges, military and charter assets to move the logistic sustainment stocks planned in the SUSTAT as well as further stocks demanded from theatre. DSCOM also recommends changes to movement schedules to use all available lines of communication efficiently, while still meeting theatre requirements. When operational priorities change at short notice, the theatre-lead uses the theatre priority list process to ask for DE&S support to deliver the new critical requirements earlier. DSCOM issues a daily situation report which summarises planned movement of critical items.

8.12. **Moving logistic sustainment materiel.** DE&S is responsible for ensuring materiel is moved effectively from depots to ports of embarkation within the strategic base. PJHQ makes sure the Commander has adequate resources to move materiel from ports of disembarkation to its final destination in the joint operations area. DSCOM establishes alternative movement means for any force elements operating in the joint operations area which are not easily served by standing lines of communication (for example, by using standing commercial contracts to support maritime force elements).

8.13. **Standard priority system.** Once the Defence Support Chain is established into the joint operations area, the standard priority system (SPS) is used to prioritise materiel flow. When applying the SPS, priorities are assigned to make sure those items that are needed most urgently move ahead of less urgent items. Details of the SPS are set out as constraints, standards and rules within the *Defence Logistic Framework*.<sup>154</sup> The SPS provides the mechanism for processing demands, and for handling and moving materiel, to meet the needs of those that the Defence Support Chain supports. The SPS is a four-tier system of:

- immediate;
- priority;
- routine; and
- forward planning.

It is applicable to both the forward support and reverse supply chains.

.....  
154 The details of the standard priority system are included in Joint Service Publication (JSP) 886, *The Defence Logistics Support Chain Manual*, which will be subsumed by the *Defence Logistic Framework* during 2015.

//  
When operational **priorities change at short notice**, the theatre-lead uses the **theatre priority list** process to ask for **DE&S support** to **deliver the new critical requirements** earlier.  
//

## Section 4 – Risk

8.14. The Joint Task Force Headquarters J1/J4 staff are required to inform the Commander of any areas of sustainability risk to the deployed force, or to specific planned operations. We should understand that risk provides crucial operational value if appropriately and accurately recorded, reported and acted on through the chain of command.

8.15. Risk management policy is set by Joint Service Publication (JSP) 892, *Risk Management*. The policy directs that a risk management process should be used to make sure that risks are:

- identified;
- assessed;
- controlled; and
- raised up the chain of command for mitigating action or for information.

To capture sustainability risks accurately and inform the Commander's logistic sustainment decisions, J1/J4<sup>155</sup> staff need to draw the following from logistic information systems, for deployed contractors and for the military:

- in-theatre stock levels;
- future requirements; and
- Defence Support Chain delivery assurance levels.

## Section 5 – Reverse supply chain

8.16. When sustaining the force, the reverse supply chain is as important as the forward support chain. Unserviceable and surplus items building up in the joint operations area create an unnecessary burden on facilities and stock managers, waste limited MOD resources and may often be in breach of contract (where MOD has an agreement to return items to industry for repair). We must dispose of those items locally or return them to the UK via the reverse supply chain taking into account the implications of discrete reverse supply chains that exist within contracted support arrangements. Correct procedures for operating the reverse supply chain are detailed as constraints, rules and standards within the *Defence Logistic Framework*.

.....  
155 J1-J9 are recognised military staff branches. J1 – personnel; J4 – logistics.

8.17. Logistic staff in the joint operations area identify surplus items and seek disposal instructions from DE&S project teams. Project teams also request that specific items (or ranges of items) are returned from the joint operations area when they are no longer serviceable. Such activity is essential to manage and assist contractor logistic support effectively, particularly when 'contracting for availability' and 'contracting for capability'. Returning items are given a movement priority to meet project teams' requirements.

8.18. DSCOM amalgamates all items into a single DE&S theatre return priority list, with occasional guidance from the Assistant Chief of the Defence Staff (Logistic Operations) and PJHQ. DSCOM negotiates for extra movement resources if there are not enough assets moving materiel to the joint operations area to satisfy reverse supply chain demand. Using the reverse supply chain contributes to minimising the deployed logistic footprint and assists in preparing the force for redeployment.

### Key points

- Sustainability is defined as: the ability of a force to maintain the necessary level of combat power for the duration required to achieve its objectives.
- Logistic sustainment is defined as: the process and mechanism by which sustainability is achieved and which consists of supplying a force with consumables, and replacing combat losses and non-combat attrition of equipment in order to maintain the force's combat power for the duration required to meet its objectives.
- Developed and controlled by PJHQ, the sustainability statement (SUSTAT) confirms the overall logistic requirement and provides authority to commit and release finance and materiel.
- The '4Ds' – demand, destination, distance and duration – are key determinants of the logistic sustainment requirement.
- Logistic sustainment is maintained through a combination of support from the strategic base, via the Coupling Bridge, and in-theatre supply.
- Using in-theatre supply helps reduce the logistic footprint and Defence Support Chain throughput. Sources include: host-nation support; in-country resources; and contractor support to operations.

## Key points (continued)

- We may rely on contractors for certain capabilities/equipment types to sustain a deployment. Many contractors have their own supply chains. Unless logistic staff engage with contractors to understand those supply chains, we cannot maintain logistic situational awareness across the force.
- Managed by Defence Support Chain Operations and Movements, the Sustainment Movement Plan replaces the Detailed Deployment Plan when the deployment phase is complete. It allocates strategic movement assets to move stocks planned in the SUSTAT as well as extra stocks demanded from theatre, into the joint operations area.
- We should understand that risk provides crucial operational value if appropriately and accurately recorded, reported and acted on through the chain of command.
- The reverse supply chain is as important as the forward support chain. Returning unserviceable and surplus items reduces the logistic footprint and helps prepare the force for redeployment.
- Every element of sustaining the deployed force is underpinned and enabled by the logistic information system infrastructure and high quality data. Established effectively and early, it provides a high level of confidence in theatre logistic sustainment and enables logistic collaboration. These, combined with assured delivery by the Defence Support Chain, enable the Commander to operate with a reduced logistic footprint and relieve pressure on the Coupling Bridge.

# Annex 8A – 4Ds aide memoire

4D	Description	Planning considerations
Distance	<p>The distance from the strategic base to the joint operations area dictates the length of strategic lines of communication. Distances between the ports of disembarkation, the joint supply area and component areas of operation dictate the length of other lines of communication within the joint operations area.</p>	<p>The nature of lines of communication may be described in terms of:</p> <ul style="list-style-type: none"> <li>• transit time;</li> <li>• distance;</li> <li>• capacity; and</li> <li>• topography.</li> </ul> <p>These determine the:</p> <ul style="list-style-type: none"> <li>• size;</li> <li>• shape;</li> <li>• structure; and</li> <li>• balance</li> </ul> <p>of required logistic resources.</p>
		<p>When considering the lines of communication, we should also reflect what the medical cold-chain and the reverse supply chain require.</p>
		<p>The operating stock requirement is determined by the volume of resources we require to sustain the operation and those additional resources that must be held to cover the likely resupply times.</p>
		<p>We may require a forward mounting base or intermediate staging bases.</p>

4D	Description	Planning considerations
<p>Destination</p> <p>The destination of an operation determines the nature of the sustainment requirement. The environment (for example, climate and topography) has a significant impact on the logistic support the deployed force needs.</p>	<p>a. Operating conditions influence the pattern of equipment attrition and the physiological demands on personnel.</p> <p>b. The extent the deployed force is dispersed influences how the logistic support elements should be composed to sustain the force.</p> <p>c. The destination helps to define the strategic lines of communication based on knowledge of resources available in the joint operations area or nearby.</p> <p>d. Factors which influence deductions made when considering the other 'Ds' include:</p> <ul style="list-style-type: none"> <li>• language;</li> <li>• culture;</li> <li>• level of available infrastructure;</li> <li>• likely attitudes of host-nation authorities; and</li> <li>• availability of in-country resources.</li> </ul> <p>For example, when balancing a mixture of logistic support options:</p> <ul style="list-style-type: none"> <li>• contractor;</li> <li>• multinational;</li> <li>• coalition; or</li> <li>• host-nation support.</li> </ul>	

4D		Description	Planning considerations
Demand	<p>The demand for logistic support (with duration, below) determines the scale of the sustainment requirement. Demand depends on the mix of the supported force and the rate of consumption. However, demand is also influenced by the likely intensity and duration of the operation and the distance from the strategic base. Rate of consumption changes as operational circumstances dictate and is based on a combination of:</p> <ul style="list-style-type: none"> <li>• the steady-state requirement;</li> <li>• cyclical variations; and</li> <li>• periodic surges in demand.</li> </ul>	<p>a. <b>Steady state.</b> Steady state demand reflects the daily maintenance needs that are unlikely to vary much, such as the consumption of rations or the routine use of services. We can determine steady state demand fairly easily and accurately from historical records; it is the easiest element of demand to pre-plan.</p> <p>b. <b>Cyclical.</b> Cyclical demand is additional demand caused by predictable events such as training activities or seasonal conditions. Cyclical demand varies between resources and services depending on the nature of the activity.</p> <p>c. <b>Surge.</b> Surge demand represents the greatest logistic challenge because it is the most difficult to predict and the most likely to vary (for example, because of our response to an opponent's activity or when we seize operational opportunities). There are peaks as well as troughs and rates of demand often change with little warning time. Our planning should anticipate the possibility of surge demand that stretches the logistic organisation. We should put in place a highly responsive system with access to immediate reserves, rapid delivery means and the ability to switch priorities quickly. Surge demand cannot be met indefinitely.</p>	
Duration	<p>The duration of an operation (with demand, above) determines the scale of the sustainment requirement. It also, indirectly, dictates the resilience needed by the logistic support infrastructure.</p>	<p>a. For prolonged operations, we should make adequate provision for roulement of force elements (personnel and equipment).</p> <p>b. The force commander needs to assess the balance of operational risk in conducting an operation with limited logistic resources and support against a more fully resourced operation (but which would therefore take longer to reach initial operating capability).</p>	





# Restoring combat power

Chapter 9 outlines three of the four activities that form the process of restoring combat power:

- rehabilitation;
- redeployment; and
- recuperation.

The fourth, transition, is not covered as it involves minimal joint logistics.

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“ My **congratulations** are due to the **teams of personnel**, military, civilian and contracted, who have worked over the **past months** to ensure that one of the **largest military operations** of the past decades has been so **professionally discharged**. Having set the plan in train in 2010 that **all combat forces** would be out of the country by 2015 the Prime Minister fixed the **end state**, and whilst we have **revisited** the profile of drawdown **many times**, that you **accomplished** the aim **ahead of time within the challenging budget** agreed with the Treasury, is a **tremendous achievement**.

Chancellor of the Exchequer, George Osborne,  
17 April 2015

# Chapter 9 – Restoring combat power

## Section 1 – Restoring combat power

9.1. Restoring combat power is the overall process that returns units to operational readiness for current or future operations. The UK uses the following terms to describe and distinguish the activities involved in restoring combat power.<sup>156</sup>

a. **Rehabilitation.** Rehabilitating force elements during the course of operations enables them to resume combat within the joint operations area. Rehabilitation is defined as: the processing, usually in theatre in a relatively quiet area, of units, individuals and equipment recently withdrawn from combat operations, to prepare them for further combat operations.<sup>157</sup> The processing involves:

- resting units and personnel;
- restoring equipment and personnel to operational fitness;
- issuing replacement personnel, supplies and equipment;
- undertaking training; and
- generally being made ready for re-employment in combat operations.

b. **Redeployment.** Redeploying force elements from the joint operations area (usually to the strategic base, but it could be via, or to, another joint operations area) is normally separate from their recuperation but is often a precursor to doing so. Redeployment is defined as: the process of preparing and executing the relocation of units and materiel to a new destination. This may be to a new deployment area or to peacetime locations where recuperation will take place.<sup>158</sup>

.....  
 156 NATO is currently developing Allied redeployment doctrine. The Bi-Strategic Commands' Joint Operational Guidance 14/01, *Redeployment* (November 2014) will be reflected in Allied Joint Publication (AJP)-3.13, *Allied Doctrine for the Deployment of Forces* when AJP-3.13 is re-written during 2016.

157 Joint Doctrine Publication (JDP) 0-01.1, [UK Supplement to the NATO Terminology Database](#).

158 *Ibid.*

c. **Recuperation.** Following operations, force elements undergo a process of recuperation to re-establish their 'steady-state' level of readiness to resume other activities (such as training) within the operational planning cycle. Recuperation is defined as: the replacement of resources, including personnel and materiel, following operational activity in preparation for further operations. It includes the training necessary to restore force elements to their normal readiness level (Rx).<sup>159</sup> Recuperation usually takes place in the strategic base as part of the operational planning cycle.

d. **Recovery.** Recovery is the general term used in the context of the force generation cycle to embrace the defined processes of:

- rehabilitation;
- redeployment; and
- recuperation.

e. **Transition.** Transition is the process of restructuring forces during an operation so they are more able to meet changing operational requirements (for example, transition within a campaign from warfighting to stabilisation). Transition is not covered in this Joint Doctrine Publication.<sup>160</sup>

9.2. **Planning.** Planning for restoring combat power must take place concurrently with deployment planning. Figure 9.1 illustrates the place the three elements of recovery have in the operational planning cycle.

//  
Planning for restoring combat power must take place concurrently with deployment planning.  
//

.....  
159 *Ibid.*

160 Transition is discussed in Allied Joint Publication (AJP)-3, *Allied Joint Doctrine for the Conduct of Operations*.

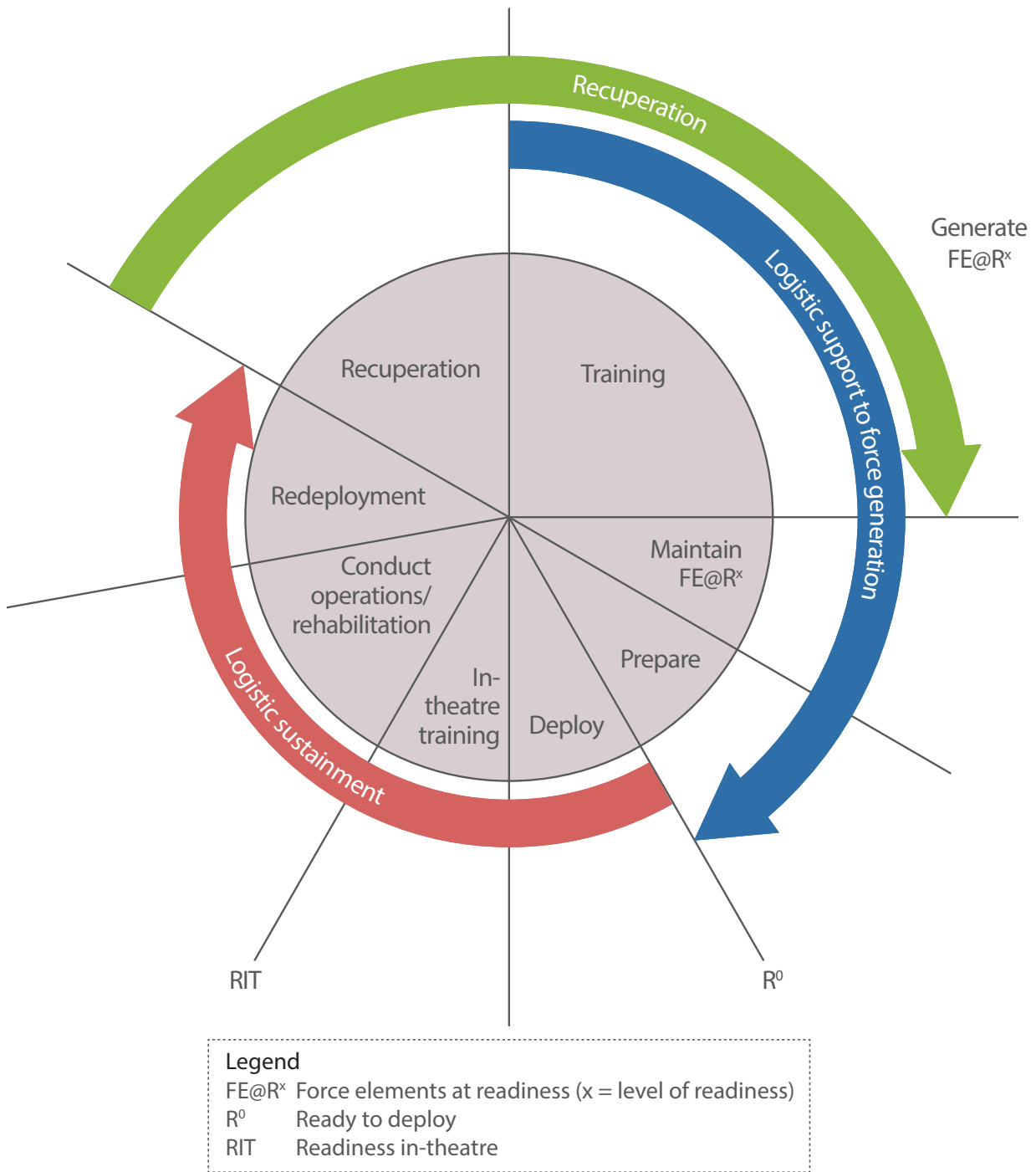


Figure 9.1 – Operational planning cycle: recovery

## Section 2 – Rehabilitation

9.3. Rehabilitation provides flexibility to prepare a deployed force either for:

- continued operations in the current theatre;
- redeployment directly to a concurrent, consecutive or subsequent operation (for example, equipment and force elements redeployed directly from Operation TELIC to Operation HERRICK); or
- redeployment to the strategic base to recuperate for future operations.

Rehabilitation requires planning, including giving sufficient notice to the Defence Support Chain to ensure the required capabilities and supplies are in the joint operations area.

9.4. The following paragraphs describe what can be achieved by rehabilitation in an austere setting. Not every rehabilitation scenario includes all elements. For example, a limited rehabilitation could take place in a forward mounting base only to prepare supplies and equipment for redeployment to the strategic base. Rehabilitation follows the rehabilitating unit's disengagement from combat, combat support or combat service support operations. While the rehabilitation process predominantly involves delivering resources and providing assistance from the strategic base, some provision may also be made available from within the joint operations area. To achieve effective rehabilitation we must consider and plan for the following.

- a. **A stated requirement of the level of combat power that must be achieved or restored**, within a specified timeframe, to calculate and allocate the resources needed to conduct rehabilitation.
- b. **Early engagement of the strategic base, and Defence Support Chain Operations and Movements (DSCOM)**, via the Joint Task Force Headquarters (JTFHQ), to prepare the equipment, materiel and strategic movement necessary to meet rehabilitation requirements.
- c. **Early engagement with industry** to enable maintenance, or replacement, of equipment to be planned.

d. Moving the unit or formation into a permissive environment for rehabilitation. This is a command decision and is determined by:

- risk assessment; and
- the urgency of the return to current operations or redeployment.

e. Assigning a dedicated rehabilitation commander to establish effective command and control of the rehabilitation process. The commander is nominated by the Joint Task Force Headquarters and is unlikely to come from the J4 area. The rehabilitation commander is required to task-organise the elements needed to support rehabilitation (Joint Task Force Headquarters J4 will guide and inform this requirement).

f. Establishing a rehabilitation support organisation. The rehabilitation support organisation provides life support facilities and force protection for both the force elements concerned, and those delivering the rehabilitation services (including any civilian personnel engaged in delivering rehabilitation). Life support facilities in this context include:

- adequate shelter and facilities for resting, sleeping and eating;
- administration and welfare;
- medical care (including, casualty treatment, post traumatic stress disorder assessment, disease prevention and evacuation); and
- suitable berths and port facilities for rehabilitating maritime force elements.

However, if the necessary life support facilities are already established in a main operating base within the joint operations area, we may not require a separate support organisation.

g. Re-establishing unit strength through:

- allocating reinforcement personnel to replace battle casualties and other losses;
- replenishing unit stocks;
- replacing lost materiel; and
- recovering, repairing and servicing equipment.

This may also require heavy engineering support ships or shore capability for maritime force elements.

//  
The **rehabilitation commander** is **nominated** by the Joint Task Force Headquarters and is **unlikely to come from the J4 area.**

//

- h. Personnel reinforcements replacing battle casualties are required to conduct reception, staging, onward movement and integration activities to enhance their operational skills and establish unit and formation cohesion. This is particularly important if rehabilitation is part of a wider redeployment activity involving new task organisations. Integration may require some training elements (for example, check zero of weapon systems) which need to be planned and resourced.

## Section 3 – Redeployment

9.5. Like deployment, redeployment is a J3-led, multi-agency activity, closely supported by J4. Redeployment can be as simple as executing the deployment force element table in reverse, or may involve a highly complex process. Regardless of the level of complexity, it is vital that redeployment is planned and correctly synchronised. J3/J5<sup>161</sup> planners should be considering redeployment from the beginning of initial deployment planning.<sup>162</sup>

### Operation BROCKDALE

Operation BROCKDALE<sup>163</sup> is the operation that extracted British forces not required for the subsequent training and mentoring tasks from South East Iraq between May and September 2009. Operation BROCKDALE was delivered in four phases – Phases 2 to 4 took four months from beginning to end and the need for Phase 4 only emerged once the operation had begun. Command of Operation BROCKDALE was assigned to the Commander Joint Force Logistic Operations due to the scale, complexity and supported nature of the logistic task.

- Phase 1 was undertaken as preparatory activity and involved shaping the force through increasingly aggressive routine housekeeping activities and a shift towards an expeditionary, and therefore more austere, footing. The aim was to reduce the logistic footprint as much as feasible, without risking continued delivery of operational effect.
- Phase 2 involved extracting the force and its materiel through Kuwait.

.....

161 J1-J9 are recognised military branches. J3 – operations; J4 – logistics; J5 – plans.

162 Planning redeployment from the beginning of the operation is particularly important for non-enduring operations.

163 Joint Service Publication (JSP) 904, *Op BROCKDALE: The Redeployment of British forces from Iraq 2009*.



- Phase 3 covered rehabilitation, redeployment and recuperation of the force, predominantly to, and in, the UK, but some resources were diverted to support Operation HERRICK in Afghanistan.
- Phase 4 closed the operation, establishing a position where the only UK forces remaining in theatre were under diplomatic clearance or NATO command.

Operation BROCKDALE introduced the concept of 'proof of good order'. This required the collection, collation and cataloguing of documentary evidence, throughout the withdrawal process, to record and demonstrate compliance with mandated procedures and established best practice. As a result, the Secretary of State was able to confirm, on 10 July 2009, that value for money had been achieved:

'The withdrawal of UK forces from Iraq has been conducted in good order and with consummate skill and I congratulate everyone who has been involved. This is intelligent logistics at its best, ensuring value for money for the tax payer.'

**Secretary of State for Defence, Bob Ainsworth**

9.6. Though redeployment is similar in process to deployment, the critical difference is the need to return equipment and stores built up in theatre over a period of time to the strategic base, or deploy them to another joint operations area. This element of redeployment must include a rigorous audit process to support redeployment governance.

9.7. Early and continued focus on redeployment enables J4 staff to review in-theatre stock levels and materiel holdings with a proactive view. Where possible, we must reduce theatre holdings and inform revision of the theatre sustainability statement. The Permanent Joint Headquarters' (PJHQ's) Operational Planning Group (Redeployment), with representatives from Defence Equipment and Support (DE&S) and front line commands, provides direction on:

- materiel destinations;
- redeployment priorities; and
- condition states.

9.8. Even for simple, non-enduring interventions, we are likely to take a significant time to complete redeployment. Therefore, the redeployment process should start as early as is operationally practical. Depending on the nature of the operation, it is highly likely that additional logistic staff and force elements will be needed to redeploy the force successfully. Before extraction, all force elements should expect to move to an austere, expeditionary footing and reduce to the minimum support compatible with operational requirements.

In the case of Operation BROCKDALE, the proximity of Kuwait to the main operating base<sup>164</sup> simplified the redeployment by reducing the force protection challenges for road movement and provided benign host-nation port facilities. However, the complexity and volume of materiel still required four months to extract the force from Iraq over a relatively short distance.

9.9. **Command and control.** During the redeployment phase of an operation, the logistic headquarters is normally the supported headquarters. To coordinate and execute a complex redeployment, PJHQ may deploy an additional headquarters, for example, a joint force logistic component headquarters or a logistic brigade headquarters.<sup>165</sup> Liaison staff, and embedded specialist teams, should be deployed early in the planning process to assist with internal (UK national, such as, between DE&S and theatre) and external (for example, between coalition partners or with the host nation) coordination.

9.10. **Quantifying the redeployment requirement.** Visibility across the joint operations area is critical to quantifying the redeployment requirement. Visibility is enabled by logistic information systems and depends on recording and analysing high quality data. Developing an accurate redeployment database<sup>166</sup> early on assists planning. To ease access for personnel in the joint operations area (including multinational partners) and in the strategic base, the theatre database should be hosted on the lowest possible classification information system.

9.11. **Redeployment database.** The database should be an end to end tracking tool which also includes information from the initial deployment (what stores, sent to which location, by which cost effective means). Capturing this information during the deployment phase helps to populate the redeployment database and provides the basis of the audit trail that underpins demonstration of proof of good order.

.....

164 During Operations TELIC and BROCKDALE, the main operating base in Basra was referred to as the Contingency Operating Base.

165 For further information on logistic command and control, see Chapter 2.

166 For Operation BROCKDALE the theatre database was known as the Compendium; in Operation HERRICK it became the e-Compendium.

9.12. **Multinational cooperation.** As part of a multinational or coalition deployment, we need to make sure the redeployment database is accessible to all partners and authorised multinational headquarters. We may be required to de-conflict and re-prioritise elements of our redeployment plan to work collaboratively and effectively with multinational partners. By doing so we may reduce the pressure on the reverse supply chain and provide more cost effective redeployment.

## Redeployment planning

9.13. **Outline.** Redeployment operations have four broad sequential phases<sup>167</sup> which usually overlap and develop incrementally. The way we plan for, and conduct, redeployment depends on:

- the threat;<sup>168</sup>
- operational and political imperatives;
- the resilience<sup>169</sup> of redeployment lines of communication and associated infrastructure;
- geographic factors; and
- the level of coalition/host-nation support.

Annex 9A provides a summary of the generic redeployment process and Annex 9B outlines logistic considerations for each of the redeployment phases.

9.14. **Planning.** Due to intervening operational developments, it is highly unlikely that we can use the original deployment logistic estimate to shape redeployment. PJHQ, and the Joint Task Force Commander, must therefore use the Logistic Planning Team to consider redeployment issues, and develop the redeployment plan, throughout the operation. Annex 9C provides an indicative list of planning considerations, which include visibility and maintained awareness of the operational situation.

.....  
167 Shape, extract, redeploy and operation closure.

168 The operational environments for Operation GRANBY (Iraq 1991) and Operation OCULUS (Bosnia Herzegovina) were permissive. Operation BROCKDALE (Iraq 2008/9) was non-permissive but assisted by: a relief-in-place; considerable support from US forces; and the presence of the safe haven in Kuwait at the end of a relatively short line of communication from Basra.

169 Resilience can be established in many ways; for example, multiple lines of communication or levels of sustainment held in theatre, though they, in turn, increase the complexity/scale of the redeployment operation. Resilience is enhanced by a flexible and agile redeployment plan.

//

We may be required to **de-conflict** and **re-prioritise** elements of our **redemption plan** to work with **multinational partners**. By doing so we may **reduce** the **pressure** on the **reverse supply chain** and provide more **cost effective redeployment**.

//

Operation BROCKDALE was undertaken in a non-benign environment, through a friendly neighbouring country, over a relatively short line of communication. A key lesson identified was that the early withdrawal of J2<sup>170</sup> staff from the operation significantly reduced operational awareness through the loss of their contribution to the intelligence picture, and this increased the risk to the remaining force. Intelligence was subsequently provided by a coalition partner.

9.15. **Operational Planning Group (Redeployment).** Depending on the expected duration and size of the deployed operation, PJHQ may need to establish an Operational Planning Group (Redeployment) to provide direction and guidance to the Joint Task Force Commander as the staff develop the redeployment plan.<sup>171</sup> The complexity of the redeployment drives the size of, and range of areas represented at, the Operational Planning Group (Redeployment). For short-duration operations, the group could be formed during the initial planning phase, as part of the PJHQ Logistic Planning Team.

9.16. **Operational Planning Group (Redeployment) tasks.** The Operational Planning Group (Redeployment) performs the following tasks.

a. Approve the treatment of in-theatre materiel holdings. For example, whether equipment or stocks are to be:

- returned to the strategic base;
- deployed to a new operational area;
- disposed of in theatre; or
- gifted to the host nation.

This is commonly known as the sentencing process. Evidence of all sentencing decisions forms the basis of the audit trail that supports proof of good order.<sup>172</sup>

b. Provide direction and, where required, set the treatment and sentencing standards. For example, the Operational Planning Group (Redeployment) sets vehicle theatre-exit standards.

c. Track and monitor all items deploying and redeploying from the operational theatre. This is a key element in informing and maintaining visibility of assets along the reverse supply chain and supports the end-to-end tracking tool.

170 J1-J9 are recognised military branches. J2 – intelligence.

171 The Operational Planning Group (Redeployment) is established in the strategic base.

172 For more detail on proof of good order see paragraph 9.22.

## Operation HERRICK redeployment

Operation HERRICK Redeployment is the phase of operation that extracted, from Afghanistan, those British forces that were not required for the subsequent training and mentoring tasks. Planning for this activity commenced in 2012; the main effort was executed in 2014.

HERRICK Redeployment continued the concept of 'proof of good order' introduced during Operation BROCKDALE. The process was overseen by the Operational Planning Group (Redeployment) and supported by the 'e-Compendium' (the software solution that allowed for joint decision-making). The Operational Planning Group (Redeployment) focused on making value for money decisions, including options such as local gifting, in-theatre disposal or return to UK. The Group was chaired by Defence Support Chain Operations and Movement; Service commands and project teams participated.

Early activity involved aggressive housekeeping, sustainability statement reviews and a shift towards an expeditionary, and therefore more austere, footing. As with Operation BROCKDALE, the aim was to reduce the logistic footprint as much as feasible, without risking operational effect. One example of the housekeeping activity was forward basing an urgent operational requirement small arms ammunition incinerator. 1400 tonnes of unserviceable small arms ammunition was disposed of through the incinerator, greatly reducing the strategic lift burden. Collapsing the forward operating base network took place in a staged manner, drawing the deployed force back to Camp Bastion before its closure as the main operating base at the end of 2014.

From a strategic point of view, significant effort was applied to creating resilience in the lines of communication in and out of theatre. This activity included using fly-sail options through Middle-East bases and ground lines of communication through Pakistan, to the South, and via the Northern Distribution Network.

Strategic base planning was linked throughout to the changes in operational planning. This included using operational analysis to ensure the strategic base did not constrain redeployment. Significant strategic base activity continued into 2015, particularly:

- receiving materiel at key nodes such as Marchwood;
- restocking activity within the Logistic Commodities and Services enterprise; and
- recuperation activity within Service commands.

// The joint desired order of departure takes account of **continuing operational responsibilities and force protection requirements** to set out the **sequence and timescale** in which **personnel and materiel** should be **removed** from the joint operations area.

9

9.17. **Redeployment estimate.** In most cases, planners should carry out a full redeployment estimate at each of the strategic, operational and tactical levels. The estimates should include a logistic estimate and be supported by decision support tools, such as the Coupling Bridge Analysis Tool (COBRAT).<sup>173</sup> The redeployment estimate follows the same format as an estimate for deployment. Deployed components therefore need the capacity to conduct a redeployment estimate and then to plan iteratively to adapt to political or operational changes. For a complex redeployment, the estimates support the following actions:

- PJHQ issues a joint commander’s directive, which would include a logistic annex;
- PJHQ J4 Joint Mounting Cell issues redeployment instructions that would include a joint mounting order, a coupling bridge directive and a strategic movements instruction (similar to those covered in Chapter 6); and
- the Joint Task Force Commander and logistic staff (or the deployed joint logistic headquarters, if established) generate and issue relevant theatre-level orders and instructions to direct and coordinate redeployment activity.

### Joint desired order of departure

9.18. Through the redeployment planning process, PJHQ and the Joint Task Force Commander determine a joint desired order of departure. The joint desired order of departure takes account of continuing operational responsibilities and force protection requirements to set out the sequence and timescale in which personnel and materiel should be removed from the joint operations area. The joint desired order of departure is shaped by:

- priorities at the redeployment destination;
- in-theatre synchronisation; and
- availability of movement assets.

9.19. **Destination priorities.** DSCOM coordinates and de-conflicts the joint desired order of departure. In doing so, it incorporates front line commands’ requirements for returning key equipments and the repair agents’ and base depots’ abilities to receive equipment for repair. The joint desired order of departure is also influenced by any need to conduct follow-on or new operations.

.....  
<sup>173</sup> The Coupling Bridge Analysis Tool (COBRAT) has been developed by Assistant Chief of Defence Staff (Logistic Operations) Operational Analysis Team and allows users to map available resources against supply, movement and handling requirements for a joint force element table.

9.20. **Synchronisation.** Withdrawing capabilities from the joint operations area needs to be synchronised with the departure of:

- personnel;
- materiel; and
- deployed contractors.

J3/J5 normally lead in developing the redeployment synchronisation matrix and the matrix is managed by the deployed logistic headquarters.

- a. Planners must recognise that the force's continuing operational posture requires the redeployment plan to maintain an irreducible minimum capability (which will vary as the operation approaches closure). Therefore the planned and actual flow along the reverse supply chain may not be steady and will inevitably face surges as redeployment activity intensifies.
- b. Consignment tracking along the length of the reverse supply chain helps us to monitor the synchronisation matrix and manage the flow. Consignment tracking relies on logistic information systems. Establishing in-theatre DE&S liaison staff and providing dedicated support chain specialists:
  - aids understanding between theatre and the strategic base;
  - enhances reverse supply chain efficiency; and
  - assists with proof of good order.

9.21. **Movement assets.** The availability of movement assets significantly influences the joint desired order of departure and synchronisation matrix. Planners should therefore build in some redundancy when allocating movement assets to the redeployment plan, particularly if force elements are redeploying directly to another operational location. It is therefore important we understand the size of the redeployment task in relation to the available movement assets and should give high priority to capturing force element table data as early as possible.

### Proof of good order

9.22. Proof of good order (POGO) encompasses a set of processes that demonstrate agreed standards of probity have been maintained throughout the redeployment operation. POGO processes are mandated by regulations and supported by auditable documentation. They are liable to National Audit Office and Public Accounts Committee scrutiny.

// The force's continuing **operational posture** requires the **redemption plan** to maintain an irreducible **minimum capability**; therefore, the planned and **actual flow** along the reverse supply chain may **not be steady** and will **inevitably face surges**.

//  
POGO is **not** a **post-operation** activity. POGO processes must be **conducted** at the **same time** as **redeployment** activities and the **governance structures** should be in place **throughout**.  
//

9.23. POGO requires documentary evidence to be recorded throughout the redeployment process. This evidence includes the rationale for all Operational Planning Group (Redeployment) decisions on expenditure, gifting and disposals, and confirmation that infrastructure and land have been returned to their original owner or appropriate authority. Effective POGO reflects the following four key factors.

- a. POGO is not a post-operation activity. POGO processes must be conducted at the same time as redeployment activities and the governance structures should be in place throughout (including assigned personnel, records database and reporting and audit processes).
- b. POGO should be promoted and supported from the highest level and the necessary resources should be dedicated to the task.
- c. The command should make sure the force fully understands which regulations govern its activities and should rigorously check adherence to those regulations. The command should also provide feedback on POGO progress and achievements.
- d. Engaging early with the National Audit Office, Her Majesty's Treasury and relevant MOD policy teams (Assistant Chief of the Defence Staff (Logistic Operations) (ACDS (Log Ops)) and DE&S) is vital to set the parameters and establish the processes.

### Key redeployment enablers

9.24. **Surge logistic capability.** Specific enablers may deploy to the joint operations area to help close locations, assist with drawing down support activities and provide specialist assets, skills and advice to redeploy personnel and materiel. Contractors may often deliver this function and early planning and integration can enable this. Functions could include:

- port of embarkation activities;
- removing temporary infrastructure;
- repackaging or disposing materiel and ammunition; and
- preparing equipment for onward movement.

9.25. **Returned stores team.** Deploying a returned stores team, generated by DE&S (Logistic Commodities and Services), increases in-theatre stores backload capability with their expertise and technical knowledge. It is known as the ANVIL<sup>174</sup> effect.

.....  
<sup>174</sup> ANVIL is not an abbreviation but derives from the title Op ANVIL which was originally given to the process during Operation BROCKDALE.



The effect is usually delivered through advice and guidance to in-theatre logistic personnel rather than by hands-on packing activity by the team. The outcome is correctly packed and labelled stores, which can be handled quickly and received effectively back into the strategic base. This is particularly important for high priority assets and commodities and also contributes to effective preparation for future operations.

9.26. **Equipment triage.** The theatre materiel database defines the size and scope of the redeployment task. Confirming equipment theatre exit standards (set by the Operational Planning Group (Redeployment)) early, shapes the size and capability of equipment support resources required to complete that task. Operational factors permitting, land-based equipment holders should retain ownership of equipment until the theatre exit standard for each item is met. Triageing equipment forward, in-theatre, to prepare for depth repair by DE&S Logistic Services can reduce the subsequent recuperation times. Triage can be conducted before equipment is loaded on to ships or aircraft. Each item of equipment should be inspected by equipment support force elements (augmented by a theatre equipment returns section).<sup>175</sup> The inspection provides a list of repairs and spare parts required for depth repair by Logistic Services. Having those spares then available for each item of equipment when it arrives in the strategic base reduces the time it is waiting for repair. The list of repairs also allows repair capacity to be prioritised to include support to other commitments. Maritime commanders should seek to exploit operational maintenance and repair capabilities<sup>176</sup> to rehabilitate, recuperate or salvage force elements.

## Roles and responsibilities

9.27. **Assistant Chief of the Defence Staff (Logistic Operations).** ACDS (Log Ops) leads the logistic input to redeployment planning for enduring, large scale or best effort operations. This is due to the significant volumes and value of materiel building up in theatre and the level of resources and investment therefore needed to deliver redeployment. Redeployment from large scale NATO and coalition operations faces increased complexity because the finite resources have to be allocated to the collective benefit of the combined force. Redeployment from multinational operations may be coordinated through a joint logistic support group headquarters, or a combined joint support group headquarters.<sup>177</sup>

.....  
175 Operation BROCKDALE's theatre returns section consisted of vehicle, equipment and stock specialists from DE&S' Defence Support Group and Defence Storage and Distribution Agency. Both have now been replaced within Logistic Commodities and Services.

176 Book of Reference (digital) (BRd) 2002, *Maritime Operational Logistics*, Chapter 11, Operational Maintenance and Repair.

177 See Chapter 2 for further information on the Joint Logistic Support Group and Combined Joint Support Group.

// Operational factors permitting, land-based equipment holders should retain ownership of equipment until the theatre exit standard for each item is met.

//

9

// Service commands are responsible for implementing the plan and providing resources to extract the deployed force to the ports of embarkation. The deployed logistic headquarters may provide additional joint resources. //

9.28. **Redeployment policies.** To guide subsequent activity, ACDS (Log Ops) considers and implements a number of key redeployment policies before formalising the overall redeployment plan.<sup>178</sup> These policies include those:

- pertaining to disposal and gifting of materiel and other assets in theatre;
- covering carriage security measures, for instance for items attractive to criminal and terrorist organisations; and
- that determine the proof of good order requirements of the operation.

This list is not exhaustive but providing such key policies early in the planning process is essential. The redeployment plan is then staffed through PJHQ and Service commands for comment and then refined, before being formally issued for them to implement.

9.29. **Permanent Joint Headquarters.** PJHQ is responsible for planning and executing redeployment from the joint operations area to the ports of disembarkation (in the strategic base or in the joint operations area of a separate operation). Which headquarters is chosen to lead in delivering redeployment from within the joint operations area is influenced by a number of factors including:

- size;
- scale;
- complexity; and
- operational concurrency.

The relevant J4 staff area, or joint logistic headquarters, supports the theatre headquarters that commands the redeployment operation.<sup>179</sup> After cohering the plans, PJHQ issues a redeployment instruction. This includes a logistic annex and clearly articulates the roles and responsibilities of the Service commands and DSCOM.

9.30. **Service commands.** Service commands are responsible for implementing the plan and providing resources to extract the deployed force, its personnel and its materiel to the ports of embarkation. As a part of its support to redeployment, the deployed logistic headquarters may provide additional joint resources. Service commands are also responsible for onward movement from the port of disembarkation to strategic base locations. Figure 9.2 illustrates redeployment flow.<sup>180</sup>

.....

178 Recognising the level of preparation and organisational support necessary to achieve it, redeployment is often given the status of an operation in its own right.

179 See Chapter 2 for further information on the options for deployed logistic command and control nodes.

180 For the maritime environment, the redeployment flow diagram (Figure 9.2) relates to shore-based maritime force elements, personnel and materiel deployed within the joint operations area, including amphibious force elements not recovered aboard task group shipping.

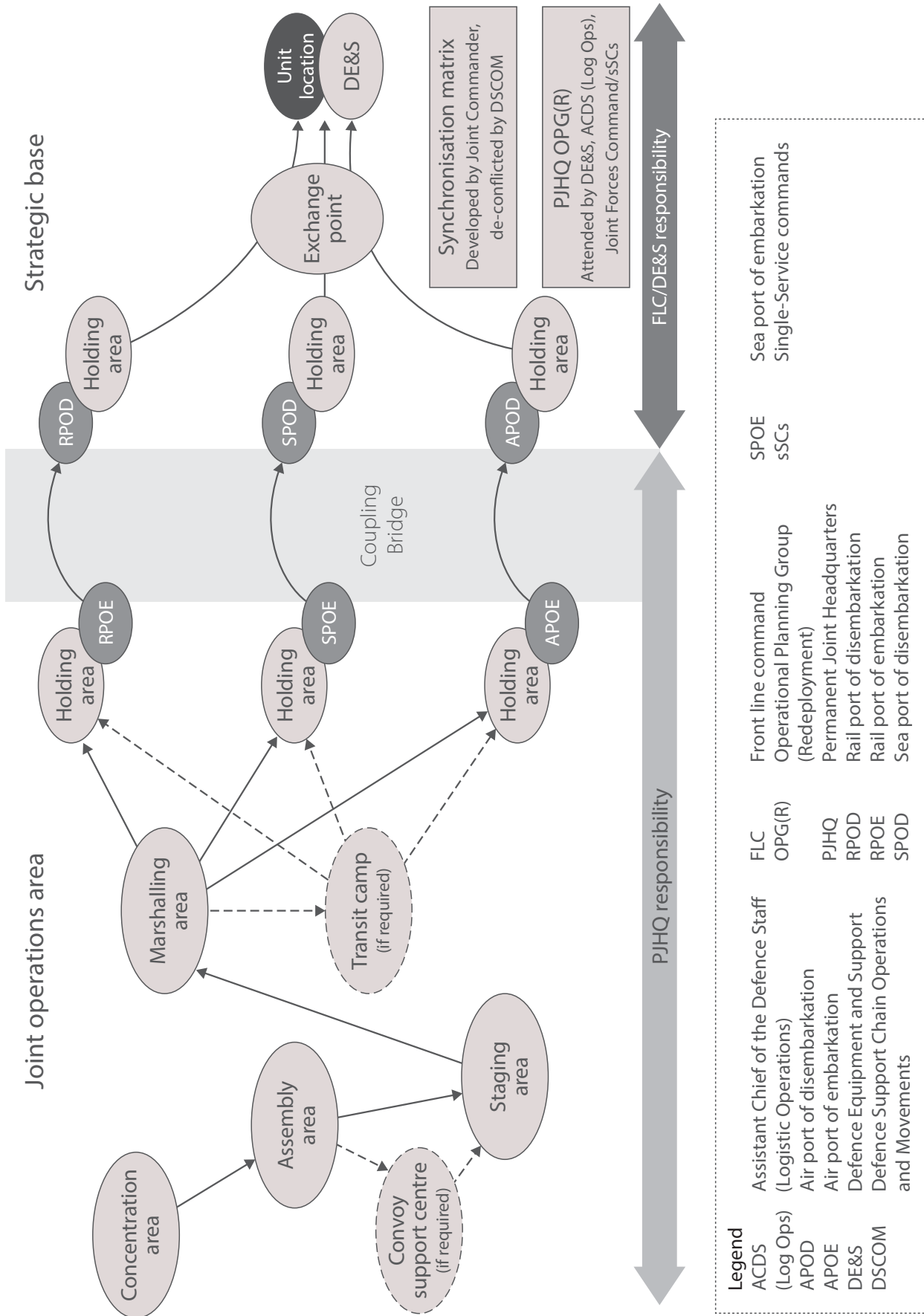


Figure 9.2 – Redeployment flow

//  
Returning personnel efficiently to strategic base locations is a significant J4 movement activity. It should not be interrupted by other priorities, except in the most urgent and important operational circumstances.

9.31. **Defence Equipment and Support.** DSCOM is responsible, acting on PJHQ's behalf, for coordinating and de-conflicting personnel and materiel movement and flow-back into the strategic base or to another joint operations area. Its role is essential to planning and executing PJHQ's redeployment plan effectively. DSCOM, therefore, needs to be involved in redeployment planning from the outset. Defence and commercial resource limitations are an important consideration and may require the plan timelines to be extended. Some considerations within the two key areas are as follows.

- a. **Personnel.** Returning personnel efficiently to strategic base locations is a significant J4 movement activity. It should not be interrupted by other priorities, except in the most urgent and important operational circumstances. There is an additional administration and movement requirement for reserves, individual augmentees and contract personnel.<sup>181</sup>
- b. **Materiel.** The onward movement of materiel from ports of disembarkation is likely to require additional personnel and transport assets, including commercial support. Wherever possible we should try to achieve the following.
  - Vehicles returning from operations should be in a road-legal condition to allow them to be driven on public roads.
  - In-theatre assessment and triage of air and maritime assets should be conducted to identify what operational specific equipment may need to be removed (the resulting removal is usually completed in theatre).
  - International civilian regulations and national security imperatives should be complied with (they dictate what further materiel is to be removed from, or refitted to, maritime, land or air assets).

When extracting from a contested joint operations area, these functions should be conducted at a forward operating base, at a safe haven or in quarantined areas within the strategic base.

9.32. **DE&S specialist support.** DE&S is also responsible for deploying liaison staff and specialist teams to:

- support redeployment planning and execution;
- make sure liaison between theatre, DE&S agencies and industrial partners is effective;

.....  
<sup>181</sup> This requirement is covered more fully in JDP 1-05, *Personnel Support for Joint Operations*. All force elements deployed as part of the Whole Force must be considered and their J1 requirements met.

- assess materiel condition;
- carry out in-theatre reconditioning of materiel; and
- prepare consignments for return to the strategic base.

## Section 4 – Recuperation

9.33. Recuperation mainly takes place in the strategic base and, as previously defined,<sup>182</sup> is designed to bring force elements and materiel back to their pre-operational readiness level (Rx) or to the level required by revised standards.<sup>183</sup> Where resources are attributed to more than one contingent task, force programmers must make sure that those contingencies remain sustainable through other means, or are recognised as unachievable, while those resources are recuperating.

9.34. **Readiness.** Readiness is the time required to fully prepare a force element, from its current state, to carry out the tasks for which it is organised, equipped and trained. Force element readiness is measured by:

- manpower strength;
- equipment state; and
- collective performance training level.

Defence Strategic Direction mandates the readiness levels that force elements should achieve as they recuperate from contingent operations and return to being capable of carrying out the full range of operations demanded of them by Defence Plan concurrency assumptions. These generic targets are only valid if force elements are operating at, or within, routine concurrency levels.

9.35. **Roles and responsibilities.** Recuperation is conducted by Service commands and, where depth repair and replacement materiel is necessary, is supported by DE&S. Recuperation is generally conducted in the strategic base for the land environment but can be conducted elsewhere for maritime and air environments.

9.36. **Planning factors.** Planning for, and reporting on, recuperation must encompass all aspects of force generation and sustainability, specifically:

.....  
182 See paragraph 9.1.c.

183 Allied Procedural Publication (APP)-17, *Retrograde of Materiel* outlines the concepts and principles for NATO forces on the proper return of stores and equipment to rear areas including designated storage, repair, recycling or disposal. UK forces should also refer to JSP 886, *Defence Logistics Support Chain Manual* which is to be subsumed by the *Defence Logistics Framework* during 2015.

- **manpower** – replacing operational losses and achieving harmony guidelines;
- **equipment** – replacing, repairing and servicing equipment;
- **training** – rebuilding individual and collective performance; and
- **sustainability** – replacing logistic resources.

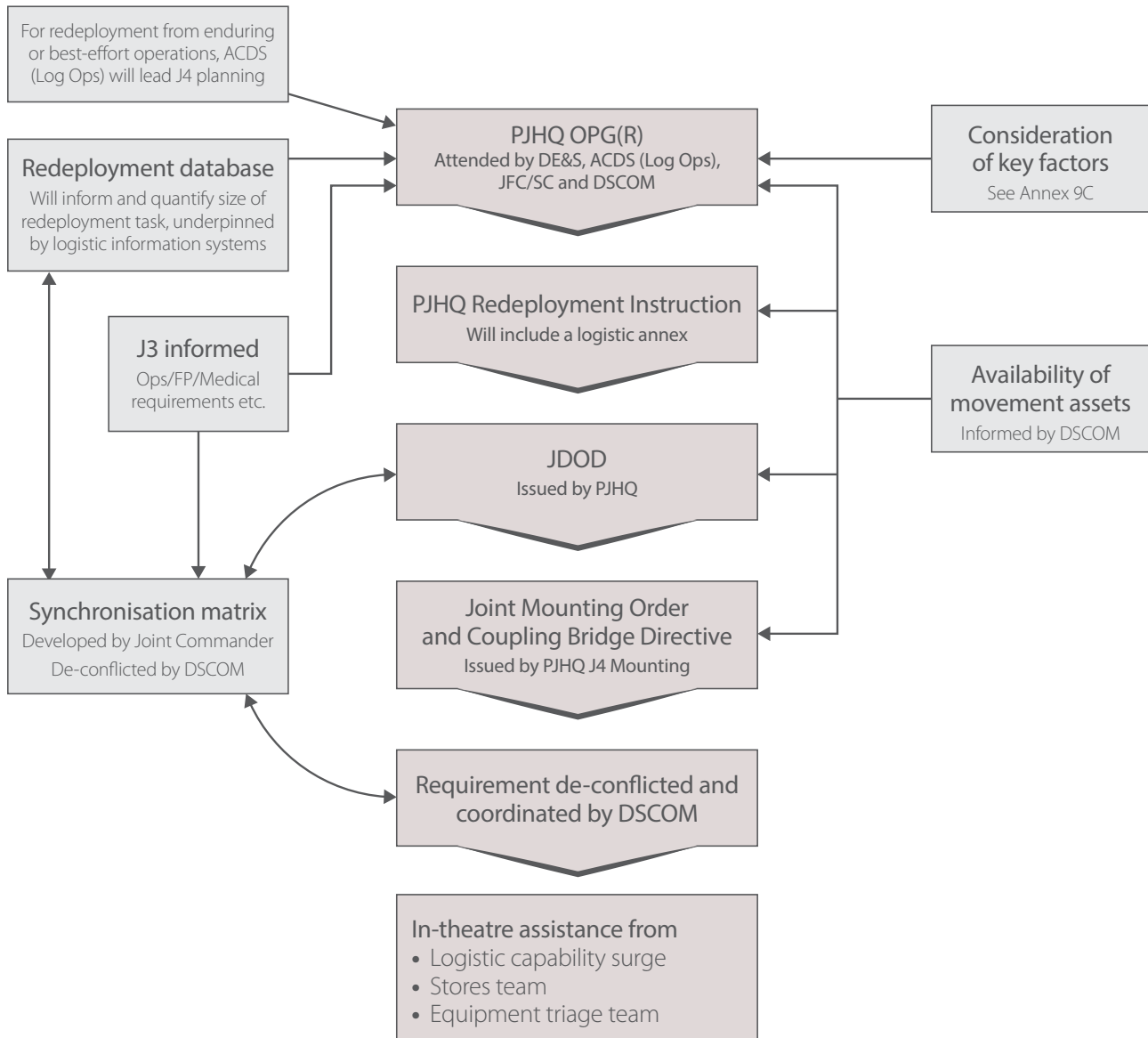
### End state

9.37. Recuperation is a vital process in ensuring all force elements, personnel and equipment are prepared and ready to conduct future contingent operations – with their combat power fully restored. If completed correctly, recuperation delivers the proof of good order-compliant redeployed force in a state ready for operation-specific collective training.

### Key points

- **Restoring combat power** is the overall process that returns units to operational readiness for current or future operations. Activities include rehabilitation, redeployment and recuperation and, more recently, transition.
- **Rehabilitation** provides flexibility to prepare a deployed force, its personnel or equipment following combat operations either for continued operations in the present theatre or for redeployment to the strategic base or to an operation in a separate theatre.
- **Redeployment** is a complete operation involving preparation and relocation of units, personnel and/or materiel to a new destination (the strategic base or a separate theatre) while demonstrating proof of good order. Redeployment can be either a simple or a complex operation, as determined by the scale and nature of the deployment. In the same way as deployment is, redeployment is a J3-led, multi-agency activity, closely supported by J4 and, in particular, logistic assets. J3/J5 planners should be considering redeployment from the beginning of initial deployment planning.
- **Recuperation** primarily takes place in the strategic base and is designed to bring force elements, personnel and materiel back to their pre-operational readiness level or to levels to meet revised standards.
- **Recovery** is the general term used within the force generation cycle to include the three activities of: rehabilitation; redeployment; and recuperation.

# Annex 9A – Redeployment process



Underpinned by POGO and the ANVIL effect

Legend			
ACDS (Log Ops)	Assistant Chief of the Defence Staff (Logistic Operations)	JDOD	Joint desired order of departure Operations
DE&S	Defence Equipment and Support	OPG(R)	Operational Planning Group (Redeployment)
DSCOM	Defence Support Chain Operations and Movements	POGO	Proof of good order
FP	Force protection	PJHQ	Permanent Joint Headquarters

# Annex 9B – Redeployment phases – logistic considerations





# Annex 9C – Redeployments planning considerations

## Redeployment planning principles

- **Exploit.** Use available coalition or alliance support and strengthen liaison capacity and effectiveness.
- **Dispose.** Where authorised, dispose of benign materiel and equipment we do not need to retain as close to the point of use as possible.
- **Embed.** Position key staff well in advance to augment the redeployment planning and execution capacity of the ‘in-theatre’ force.
- **Deploy.** Military and civilian subject matter experts from the UK strategic base organisations and Service commands should be deployed to harness and integrate reachback support effectively and conduct preparatory activities as far forward as possible. Ensure appropriate command and control structures are in place and empowered to command the redeployment plan.

Consideration	Factor
Operational situation	Visibility and understanding of the current operational situation (and its resultant manpower, equipment and sustainment requirements) is essential when the force is to extract from a contested environment.
Key equipment	Joint Forces Command and Service commands need to highlight to the Permanent Joint Headquarters (PJHQ) any equipment which needs to be redeployed as a priority (for the joint desired order of departure). Key equipment could include items required for future tasking.
Redeployment database	Logistic staff must maintain a central asset register when deployed, using either national/allied logistic information systems or, if unavailable, a local solution. A redeployment database makes sure that all materiel is accounted for (and accurate estimates made of quantities and values) to inform the redeployment plan.

Consideration	Factor
Operational requirement	The PJHQ redeployment plan must be led and informed by the Joint Commander’s operational requirements and priorities.
Force protection requirement	The redeployment plan must ensure that the remaining force elements (including the redeployment assets) are provided with adequate force protection.
Aggressive housekeeping	Preparatory aggressive housekeeping is essential for redeployment. Reducing stock holdings, stock re-balancing and reverse supply chain activity, where operationally acceptable, reduce the amount of materiel to be returned with the final force elements.
Enduring sustainment	Logistic sustainability should be maintained throughout the redeployment process. The operational situation in the joint operations area and reliability of lines of communication determine the extent to which sustainment stocks can be reduced to match personnel and equipment departures.
Sensitive equipment	Redeploying sensitive equipment and protectively marked items (including items attractive to criminal and terrorist organisations) requires special attention to make sure handling procedures and operational security are complied with. In addition, support requirements for specific materiel, particularly scarce or specialist items, influence their position in the joint desired order of departure.
Bio-control	Personnel and materiel redeployed from operations must not be permitted to introduce any biological hazard into the UK or any other nation. The responsibility for completing bio-security measures to the requisite standard rests with unit commanders, not with movements staff. The Joint Task Force Commander is responsible for ensuring unit commanders are made aware of and implement, appropriate bio-security measures.
Waste disposal	Planners should not underestimate <sup>1</sup> requirements for waste disposal and remedial work on contaminated sites. Failure to establish the arrangements needed to carry out this activity can significantly delay redeployment.

.....

1 Further detail on waste disposal is contained in Joint Service Publication (JSP) 418, *MOD Corporate Environmental Protection Manual*. This JSP is pending revision.

Consideration	Factor
Memorials	Recovering memorials, especially unofficial ones, is of significant emotive interest and if carried out poorly can attract unwanted media and public attention and criticism. Historical precedence <sup>2</sup> requires this task to be resourced from non-public funds which increases its complexity.
Handover/takeover of infrastructure	Handing over infrastructure and facilities to the host nation (or a follow-on nation) must be considered from the outset of redeployment planning. This includes infrastructure that the UK has built (or put in place) which it does not intend to recover but is prepared to handover. A definitive list of assets and infrastructure needs to be determined as soon as possible. It is therefore imperative that accurate records are maintained from the start of an operation. Planners also need to consider synchronising infrastructure drawdown with continued support to combat force elements. Engineering, estates, finance and contracts capabilities are required in managing handover activities and resolving problems before handover. <sup>3</sup>
Disposal/gifting	Determining what materiel and equipment can be gifted or disposed of in theatre and what must be returned to the strategic base must be considered carefully and early. The decisions should be informed by PJHQ J8 <sup>4</sup> and assisted by the Disposal Services Authority. Policy should be promulgated at the earliest opportunity to direct this process and should include the disposal and recovery of infrastructure that the UK has built or put in place. <sup>5</sup>
Closing accounts and contracts	Closing contracts and accounts requires specialist personnel. They should be deployed as early in the process as possible, preferably before the redeployment estimate is conducted. They should remain in the joint operations area beyond the final contract closure date, even if this requires special arrangements to be made for their life support.
Contractor support to operations	Deployed contractors need to be consulted, and their recovery requirements reflected, during redeployment planning. In several instances, they may be providing niche capabilities which cannot be redeployed before the final phase. Redeploying deployed contractors should be synchronised with the military redeployment plan to ensure a fully coordinated and coherent overall redeployment plan.

.....  
 2 Operations BROCKDALE and HERRICK.  
 3 See Joint Tactics Techniques and Procedures (JTTP) 4-05, *Operational Infrastructure* for detailed guidance.  
 4 J1-J9 are recognised military branches. J8 – resource management.  
 5 Further guidance is given in JSP 886, *The Defence Logistics Support Chain Manual* which is to be subsumed by the *Defence Logistics Framework* during 2015.

Consideration	Factor
Other government departments/ non-governmental organisations	Depending upon the type of operation, other government departments or non-governmental organisations may be in the joint operations area. If other government departments' personnel are deployed, the military redeployment plan should include their personnel and assets. Any non-governmental organisation in the joint operations area should be kept informed of key redeployment timelines and decision points.
Land lines of communication	Land-based lines of communication can be complicated by factors such as: <ul style="list-style-type: none"> <li>• the need for force protection, as redeployment assets can provide high value targets;</li> <li>• crossing multiple borders; and</li> <li>• de-conflicting from other deployed allies' need for finite resources.</li> </ul>
Air lines of communication	Air ports of disembarkation. <ul style="list-style-type: none"> <li>• Air ports of disembarkation should be controlled to ensure inflow does not overwhelm storage area, processing rate and onward movement capacity.</li> <li>• Specialist handling requirements should be understood in advance to ensure materiel is handled correctly.</li> <li>• Alternative options for maintaining velocity (such as freight processing location and unit collect policy) could be considered.</li> </ul>
Port clearance	Clearance from ports of disembarkation is a unit responsibility under the direction of Joint Forces Command and Service commands. Reception and administrative arrangements should be flexible enough to allow personnel and materiel to be administered and processed effectively. Joint Forces Command and Service commands may be required to develop contingency quarantine arrangements and bio-security decontamination procedures.

# Annex A – Logistics in the maritime environment

A.1. **Introduction.** The maritime environment follows:

- all of the basic principles of logistics; and
- adheres to the doctrine and regulations found in joint doctrine publications, joint service publications and other relevant publications.

However, there are some unique characteristics of maritime logistics which can, in turn, generate both freedoms and constraints for the joint force. In this annex we:

- explore those characteristics;
- provide details of the structure of the Navy Command Headquarters logistics and infrastructure staff (positioned at the centre of naval logistic activity); and
- give an overview of the interactions between the Maritime Component Commander's Group Logistic Coordinator (GLC) and the theatre joint logistic command and control node (for example, the Joint Force Logistic Component Headquarters).

A.2. **Navy Command Headquarters – Assistant Chief of Staff Logistics and Infrastructure.** The logistics and infrastructure staff, within the support area of Navy Command Headquarters, is headed by the 1\* Assistant Chief of Staff (ACOS) Logistics and Infrastructure. The headquarters staff manage the current and future logistic sustainability requirement for the maritime environment, including Royal Navy (RN), Royal Marines (RM) and Royal Fleet Auxiliary (RFA) force elements. Headquarters staff also manage the maritime environment infrastructure requirement process and the interface with the Defence Infrastructure Organisation. ACOS Logistics and Infrastructure is:

- 1\* lead for both logistics and infrastructure lines of development (on behalf of the Navy Board); and
- directly responsible for the logistic aspects of maritime and amphibious deployment, sustainment and recovery.

The logistics and infrastructure staff:

- provide assurance across Defence through the force elements at readiness (FE@R) and force elements at sustainability (FE@S) processes;
- produce maritime-specific logistic doctrine;<sup>184</sup>
- contribute to developing logistic policy;
- maintain standards and practices; and
- ensure that new maritime capabilities and platforms meet Defence’s sustainability requirement with effective support solutions.

Figure A.1 shows ACOS Logistics and Infrastructure’s organisational structure.

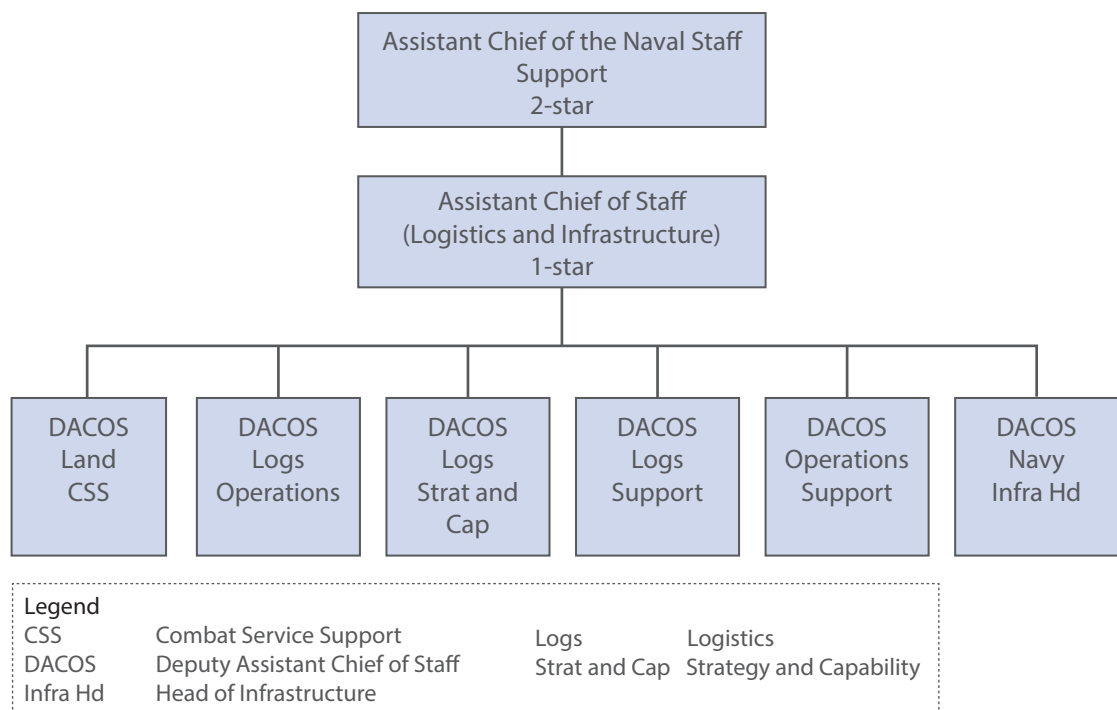


Figure A.1 – ACOS Logistics and Infrastructure organisational hierarchy

A.3. Maritime operational readiness cycle. The maritime operational readiness cycle is implemented in the same manner as the generic operational planning cycle. However, there are elements of the operational readiness cycle exclusive to the maritime environment. Navy Command and Defence Equipment and Support (DE&S) generate and mount maritime forces to a range of readiness states (referred to as 'Rx'). This readiness activity (after completing a combat enhancement and force integration training phase during transit) ensures that maritime force elements are capable of conducting operations immediately on arrival in the joint operations area, without in-theatre training. However, acclimatisation factors may require some force

184 Book of Reference (digital) (BRd) 2002, *Maritime Operational Logistics* and Classified Book (CB) 2002, *Naval Manual of Logistics for Operations*.

elements, such as the landing force, to conduct in-theatre training, particularly in hostile environments.

A.4. **Restoring combat power.** Once individual force elements are no longer required in an operation (those at 'R0+'), they can be directed to a suitable port to restore combat power, before being made available for further operations. Such follow-on tasks may be conducted:

- within the current joint operations area, at a different intensity;
- at another geographic location under different operational control; or
- as an entirely different type of mission.

A.5. **Recuperation.** Once their part in any further operations is complete, maritime force elements will be directed to return to UK, during which transit force elements remain available for contingent tasking. Once in the UK, maritime forces undertake a period of recuperation (including a period of force generation and training) to return them to the required readiness state. Figure A.2 shows the maritime operational readiness cycle.

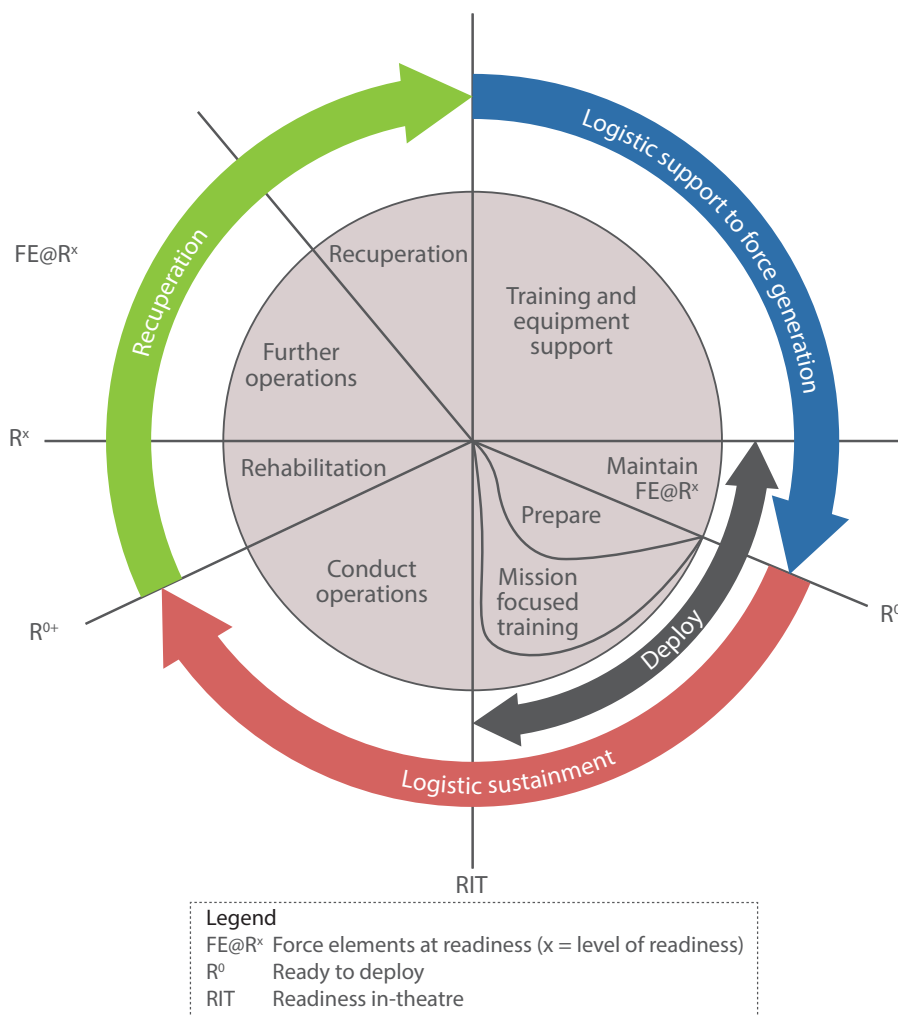


Figure A.2 – Maritime operational readiness cycle

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**A.6. Maritime logistic support.** Defence Strategic Direction directs that RN units and their afloat support (represented by RFA force elements) should be self-sufficient for 28 days on arrival in theatre. Maritime logistics' basic principle is to use overall task group sustainment to provide solutions to logistic requirements from within the group.

- a. Individual units have their own sustainment capability, such as food, stores and ammunition held, and water generated, onboard. However, that is supplemented by task group sustainment held within afloat support platforms.
- b. Moving sustainment between afloat support platforms (the 'warehouse') and warships (the end of the Defence Support Chain) is achieved through replenishment at sea directly between vessels.
- c. In common with other components, high priority stores which are not held organically are demanded from the strategic UK base and forwarded to the platform using the Defence Support Chain via the Coupling Bridge.<sup>185</sup>
- d. Maritime logistic support also encompasses the operational stocks and support elements of the task group and, while these stocks are primarily allocated to the Maritime Component Commander for use, common items may be useful to other components.

**A.7. Types of support.** Maritime force elements access three levels of support to achieve the sustainability needed to meet operational requirements.

- a. **Organic.** Organic support is the logistic support contained within warships, together with that in the accompanying RFA vessels and any commercially contracted shipping.
- b. **Host-nation support.** Where appropriate, the maritime component will use host-nation support for services such as port facilities, accommodation, transport, food and water.
- c. **Re-supply.** Re-supply replaces expended classes of supply neither held organically nor available through host-nation support. Due to the limited availability of air and sealift assets, and because maritime units generally operate over a wide area, this is the most challenging type of logistic support. To meet joint force integration and prioritisation requirements, maritime force logisticians will require direct support from the theatre logistic command and control node.

.....  
185 The Coupling Bridge is described in Chapter 6, Section 4.



A.8. **Task group logistics.** At task group level, the GLC is responsible to the Task Group Commander for coordinating maritime logistics. To maintain a clear recognised theatre logistic picture of logistic capability within the task group, units provide sustainability information to the GLC, including:

- provisions endurance;
- fuel endurance;
- ammunition holdings;
- stores holdings;
- personnel numbers;
- operational defects (OPDEF); and
- any other pertinent information that may affect their operational capability and sustainability.

Such information is refined and coordinated by the GLC into standard reports and returns. The information can be used by the theatre logistic command and control node to enable the best use of stocks across the task force. It also provides the Joint Task Force Commander (JTFC) with sustainability assessment within the maritime environment. For example, depending on the JTFC's priorities, any available stocks of operational ration packs or ammunition held to support a landing force could be transferred ashore to support another component. Figure A.3 (overleaf) shows the GLC's position, and linkages, within the joint logistic command and control structure.

A.9. **Forward logistic sites.** Maritime support sites ashore can receive, store and arrange the movement of personnel, mail and cargo to and from maritime force elements. Before a maritime force deploys into theatre, PJHQ and Navy Command Headquarters will determine the requirement for forward logistic sites. One or more forward logistic sites may be established within, or close to, the joint operations area, although the location, size and type of available facilities will depend on the operational requirement. A forward logistic site is the final point on land where personnel, mail and cargo are held before being transferred to a ship or the first point they are received from a ship. All movements entering or leaving theatre will normally be conducted through an advanced logistic support site<sup>186</sup> at the port of embarkation or disembarkation. Alternatively, it may be more effective to deliver them directly to the forward logistic site.

A.10. **Forward logistic site control.** A forward logistic site team is unlikely to have air assets directly under its tasking authority. Movement by air or road may therefore need transport assets under the control of the logistic command and control node. Close coordination between the GLC, forward logistic site and joint theatre movements staff is required to move personnel, mail and cargo to the right place,

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 186 Allied Logistic Publication (ALP)-4.1, *Multinational Maritime Force Logistics*.

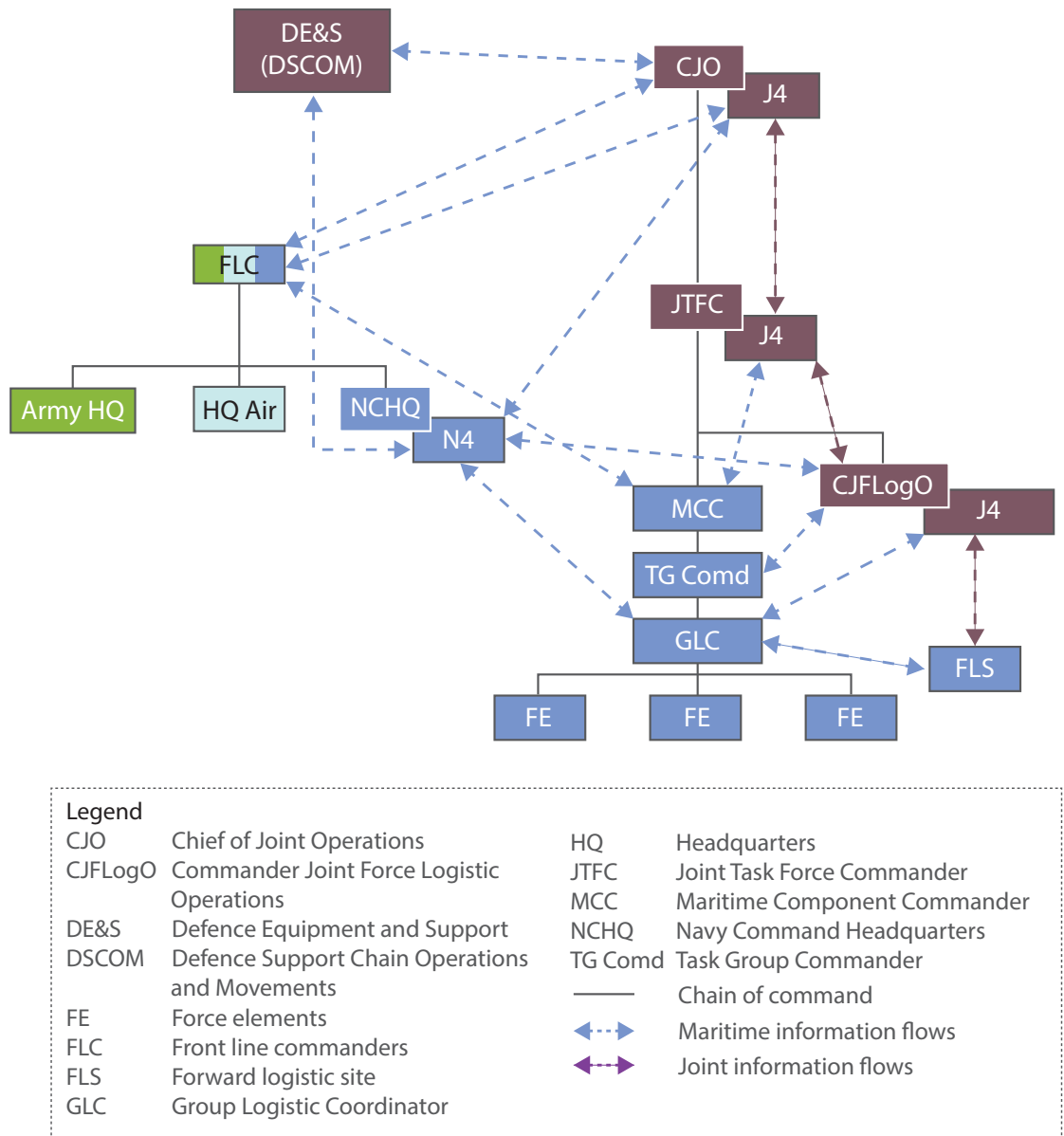


Figure A.3 – Logistic command and control hierarchy

with the priority to meet operational tasking. Forward logistic site staff report their holdings and completed movements to the GLC and liaise with the logistic command and control node to move the items to meet the transport, usually a maritime intra-theatre lift asset which is generated by the GLC. Locating a forward logistic site ashore within the joint operations area can make it difficult for the GLC afloat to provide it with life support and force protection. In such circumstances, the forward logistic site may be placed under operational control of the theatre logistic command and control node but remain under tactical control of the GLC.

A.11. **Afloat support platforms.** The principal role of the RFA<sup>187</sup> is to sustain and support maritime forces at, as well as from, the sea. The RFA currently consists of:

187 A UK, MOD-civilian manned, government-owned support organisation within Navy Command.

- eight vessels with direct afloat support roles;
- three amphibious ships; and
- two specialist support platforms.<sup>188</sup>

All of the RFA assets can integrate with warships as part of a task group. The main roles of these vessels are as described below.

- Auxiliary oiler.** The primary role of the auxiliary oiler (AO) is to replenish warships and other auxiliaries with petroleum and water. They are also able to replenish a limited range of food and stores from solid support packs. The petroleum products supplied are:
  - diesel;
  - aviation fuel; and
  - lubrication oil.<sup>189</sup>
- Auxiliary oiler replenishment.** The auxiliary oiler replenishment (AOR) replenishes warships and auxiliaries with petroleum, oils and lubricants, water, ammunition, food and solid stores. Fitted with four dual-purpose moving highpoint rigs, the AOR can replenish fuel and ammunition simultaneously via two rigs on the same side. A Hudson Reel is also fitted to enable replenishment of a warship astern of the AOR.
- Solid support ship.** The solid support ship (AFSH) replenishes surface warships and auxiliaries with water, bulk ammunition, food and solid stores.
- Landing ship dock (auxiliary).** The landing ship dock (auxiliary) (LSD(A)) carries troops, vehicles (including armour) and other equipments. The LSD(A) has the capability to land them through port installations or from off-shore using assault craft, mexeflotes and support helicopters.
- Forward repair ship.** The primary role of the forward repair ship (FRS) is to provide a mobile, stable platform for the forward repair and maintenance of Fleet units (primarily submarines). The FRS can provide third line maintenance – Fleet Maintenance Unit or Fleet Support Unit support – for planned maintenance periods, operational defect rectification and damage repair.

**A.12. Other support vessels.** The amphibious shipping provides direct support to a landing force, or acts as an element of a forward mounting base that could be operating some distance away from organic support. The following RN and RFA

<sup>188</sup> The stated Royal Fleet Auxiliary (RFA) numbers were correct as at June 2015.

<sup>189</sup> Lubrication oil can also be provided in drums rather than being pumped across during replenishments at sea.

vessels are also able to support other components ashore, most usually through the joint logistic command and control node.

- a. **Primary casualty receiving facility.** The primary casualty receiving facility (PCRF), RFA ARGUS, is a role 3 medical treatment facility with up to four operating tables and 100 beds.<sup>190</sup> The equipment is maintained at high readiness, while the medical personnel are held at readiness level R2. The capability is ready to accept casualties once medical personnel have embarked and conducted combat enhancement training/force integration training.
- b. **Operational maintenance and repair.** As a secondary role, the Fleet repair ship (RFA DILIGENCE) possesses a limited capability to maintain and repair landing force vehicles. If required, and dependent upon the situation, the onboard workshops could also be used to assist in maintaining and repairing vehicles supporting the land component force elements.
- c. **Landing platform helicopter.** A landing platform helicopter (LPH) such as HMS OCEAN is capable of maintaining and repairing helicopters onboard. This may provide an opportunity to maintain aircraft supporting components ashore but that depends on:
  - the availability of particular aircraft spares;
  - constraints on some aircraft types operating at sea; and
  - the commonality between types of helicopters in the embarked tailored air group and those deployed ashore.

Joint planners need to consider this support when conducting the logistic estimate.

A

A.13. **Operational defects.** The ability of a maritime force to meet the JTFC's operational aims is linked, in part, to the availability of equipment and weapons systems. A single defect in a maritime platform can have a disproportionate impact on the JTFC's ability to deliver effect. A defect on an aircraft carrier's propulsion system may mean that it is unable to launch aircraft, or a defective submarine communications mast may mean that a missile strike has to be cancelled. One of the key roles for the GLC is monitoring platform availability and the progress of OPDEF resolution.

- a. Any defect will be considered in terms of the impact it has on the operating capability of a force element, task group or the whole force. OPDEFs are categorised in accordance with that impact.

.....  
190 Ten intensive care, 20 high dependency and 70 normal ward beds.

- b. Figure A.4 shows the state codes and defect repair categories used to prioritise OPDEFs. This system is similar to the system used by Fleet Air Arm, RAF and Army Air Corps engineers when describing an aircraft state in relation to stores or engineering issues.
- c. Urgent OPDEFs may require movements or technical assistance from beyond the maritime component. The Joint Force Logistic Component Headquarters prioritises and enables such requirements across the joint force.

State code (impact)		Repair category	
A	Major capability inoperative	1	Immediate rectification required to meet a ship's commitments/ programme. Repair will be ship's primary aim and will override existing programme intentions.
B	Major capability significantly downgraded	2	Rectification required as soon as possible to meet the ship's commitments or programme. Repair will be pursued within existing programme.
C	All other OPDEFs	3	Rectification not required until next programmed base port period. Arrangements will be made to complete repair action then.

Figure A.4 – Royal Navy defect and defect repair categories

A.14. Fleet Operations and Maintenance Officer. The Fleet Operations and Maintenance Officer (FOMO) cell at Northwood is part of the Commander (Operations) organisation. FOMO is responsible for ensuring that the chain of command has an accurate and comprehensive appreciation of restrictions in the operational capability of all Fleet units caused by materiel defects. FOMO coordinates support in response to materiel OPDEF signals. There are a number of key tasks which include the following.

- Generating, prioritising and coordinating operational repair plans to meet operational requirements, liaising with relevant output business units as appropriate.
- Advising on the operational implications of materiel defects.
- Directing the Fleet Stores Coordination Cell regarding the availability and movement of OPDEF-related stores.
- Seeking guidance from Fleet Command engineering staffs on matters of engineering policy relating to defects and their repair.

- Attending meetings of the Fleet Command Readiness Group to provide operational engineering input as required.
- Arranging authorisation of out-of-hours cover for priority OPDEF related materiel demands.
- Assessing the need for operational reallocation of assets between units (known as STOROB requests) and authorising resulting action.

A.15. **Host-nation support.** Host-nation support requirements for maritime forces are similar to those of the other components and can include basing, storage facilities and transport. However, the maritime component also requires some unique services including:

- berths;
- port pilots;
- tugs;
- cranes;
- gangways;
- alongside power supplies; and
- refuse and waste oil/fuel disposal.

Other logistic support that may be required, or available, from the host nation includes:

- commercially provided materiel stores;
- food (including fresh provisions);
- water;
- fuel;
- ammunition;
- medical assistance;
- moving Naval Service personnel; and
- force protection assistance.

A.16. **Port agency contract.** If available in theatre, the RN port agency contract can provide support to the Maritime (and other) Component Commanders.<sup>191</sup> The port agency contractor ensures a local agent is nominated to manage and oversee all aspects of a ship's port visit so that the ship can maintain capability to deliver its directed tasking.

.....  
<sup>191</sup> Other components will need to access the port agency contract through Navy Command Headquarters and their use of it may be constrained by the contract terms.



**A.17. Fleet Logistic Coordinator.** Embedded in the Fleet Operations Division in the Maritime Operations Centre at Northwood, the Fleet Logistic Coordinator's team delivers real-time support to all operational Fleet units. The team provides expert maritime logistic advice to current operations (both single-Service and joint). The team acts as the representative of Commander (Operations) in providing full command assurance that units are adequately supported by the Defence Support Chain and that UK support elements are focused on units' operational capability. The Fleet Logistic Coordinator also acts as the sponsor for the port agency contract and is the logistic subject matter expert for provision of fuel to the fleet.

**A.18. Defence Equipment and Support deployable units.** The maritime component may also be supported by DE&S deployable units. These include mine countermeasures vessel forward support units, salvage and marine operations and mobile aircraft salvage units. These can be sited either afloat or ashore, as the operational situation dictates.

**A.19. Class output management.** Class output management provides a one-stop-shop for engineering and support matters and offices are located within each of the three main naval bases. Current class output management organisations cover:

- Type 45;
- Type 23;
- Hunt class;
- Sandown class; and
- RN amphibious vessels.

**A.20. Medical support.** The maritime component is supported by a medical organisation ranging from first aid to definitive specialised care as the patient is evacuated. For medical evacuation, the maritime component requests support from the theatre logistic command and control node to move casualties from the advanced logistic support site or forward logistic site back to the UK or, if necessary, to access host-nation support for urgent role 4 treatment. Clinical capabilities available within the maritime component are described below.

a. **Maritime Operations.**

- (1) Role 1 support is based on medically trained personnel assigned to every maritime platform.

(2) Role 2 support is provided by medical personnel in platforms specifically equipped and designated with a role 2 afloat facility (2/1/2/0)<sup>192</sup> as a secondary capability.

(3) Role 3 support is provided by the primary casualty receiving facility fitted to RFA ARGUS when it is designated as the primary casualty receiving ship. This has expandable capacity from 2/2/5/15/10 to 4/4/10/20/70.<sup>193</sup>

(4) Medical evacuation in the maritime environment is provided by maritime in-transit care teams allocated to assigned platforms (boats or helicopters). Patients will be transferred to shore-based medical facilities and then strategically evacuated to UK.

(5) Command of medical support to the maritime component will be embedded within the maritime battle staff.

**b. Littoral operations – the Lead Commando Group.** The Lead Commando Group is supported by the Commando Medical Group comprising unit aid posts, dental teams, a commando forward surgical group and a medical reception station.

(1) Role 1 support is provided by unit aid posts embedded in combat and combat support forces.

(2) Role 2 support is provided by the medical squadron of the Commando Logistic Regiment which includes the Commando Forward Surgical Group and a medical reception station. The Commando Forward Surgical Group is a role 2 basic capability (2/1/2/0) and has very limited patient holding capability.

(3) Role 3 support is provided by either the primary casualty receiving facility afloat, an army field hospital or host-nation hospital care.

(4) Command of medical support to the littoral is embedded in 3 Commando Brigade Headquarters but it is likely that additional medical staff will be needed in the maritime component headquarters to manage the operational patient care pathway.

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192 The series of numbers under role 2 and 3 medical treatment facilities relates to the number of emergency department bays/surgical tables/intensive treatment unit beds/intermediate care ward beds within a facility (for example, 2/1/2/0).

193 Royal Navy intermediate care ward beds are further split between high dependency and low dependency as the latter are double bunk beds (for example, 2/2/5/15/10).





A.21. **Joint sea basing.** Joint sea basing can deliver effect in the littoral during expeditionary operations. It is not restricted to logistics but may include strike, command and control, close air support and fires. Logistically, using RFAs, or commercially chartered shipping, to support other components may help reduce risk (for example, by reducing the logistic force protection bill ashore). Using maritime basing also allows for superior environmental control of stocks and can assist the land component in providing greater flexibility in the short notice delivery of force elements, equipment and stores, even in the face of changing requirements. Whether joint sea basing is used for logistic support will be determined by the logistic estimate process. Joint sea basing involves a high level of coordination between the maritime component, Joint Task Force Headquarters and, if separate, the theatre logistic command and control node.

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Further details on maritime logistics can be found in:

- Book of Reference (digital) (BRd), 2002 *Maritime Operational Logistics*; and
- Classified Book (CB) 2002, *Naval Manual of Logistics for Operations*.

Notes:

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# Annex B – Logistics in the land environment

B.1. Supporting land forces is a complex activity due to an environment which, by its nature, is highly cluttered, congested and contested while presenting potential threats from multiple directions. Land operations are often prolonged, conducted in arduous conditions and usually at a significant distance from the UK. They consume large amounts of a wide range of materiel whilst using significant numbers of complex, maintenance-intensive, equipment.

## The Army philosophy of land sustainment

B.2. Army capstone doctrine<sup>194</sup> introduces the central ideas of the Army's approach to sustainment using an individual and collective philosophy of five parts.

- a. **Sustainment is central to fighting power.** The Army's ability to conduct operations is derived from its fighting power.<sup>195</sup> Sustainability forms a key element of the physical component of fighting power.
- b. **Sustainment is a means to an end.** Sustainment is a means to an end and should meet the commander's intent. Sustainment should always support the mission, although there may be occasions where it is the mission, for example, in humanitarian assistance operations.
- c. **Sustainment depends on responsibility.** Sustainment is not just the business of logistic personnel. All members of the land force have an individual and collective responsibility for sustainment.
- d. **The agility of the force depends on agile sustainment.** The contemporary operating environment blurs the distinction between the fighting and supporting echelons. To enable the agility of the land force, sustainment in the land environment requires a support network rather than a limited number of linear supply chains; although that network will include a number of those chains.

194 AC 71940 Army Doctrine Publication, *Operations*.

195 Joint Doctrine Publication (JDP) 0-01, [UK Defence Doctrine](#).

- e. **Soldiers first.** The military experts who provide functional sustainment capabilities are highly specialised and, in some trades, are few. Their specialist skills are not usually inter-changeable, so regular employment outside their core discipline is rare. However, to optimise individual, mutual and collective support on operations, all these experts should be ‘soldiers first’ and specialists second.

## Delivering logistics in the land environment

B.3. Logistics is delivered to land forces through lines and levels of support. Figure B.1 shows how these correspond to the level of the formation where that support is delivered.

Line of support	Level of support	Description
1st	Unit support	The unit’s own logistic support (usually held within its echelon).
2nd	Formation support	The logistic support held within a brigade or a division.
3rd	Force support	The logistic support behind the rear boundary of a brigade during medium scale operations or of a division on large scale operations but forward of the theatre point of entry.
4th	Home base	Logistic support provided from the UK strategic base.

Figure B.1 – Lines of support

B.4. Within these lines and levels of support, land combat service support capabilities are usually organised into functional groupings:

- logistic support;
- equipment support;
- medical support; and
- other sustainment functions.

### Logistic support

B.5. Land logistic support links a deployed force to its sustaining nodes using the four lines of support described in Figure B.1. Land logistic support falls under four general headings.

- a. **Supply.** Supply provides materiel through a support network or a supply chain. It includes activities related to procuring, storing, managing, consolidating and configuring supplies.

- b. **Distribution.** Distribution involves moving materiel forward and dispersing it to its end users. The supply and distribution functions will become increasingly integrated as they move further forwards in the supply chain. The distribution function also enables the reverse supply chain.
- c. **Logistic support services.** Logistic support services are those logistic services not directly related to supply or distribution. They include activities such as postal and courier services, catering and operational hygiene.
- d. **Specialist capabilities.** Specialist capabilities include discrete logistic capabilities such as port and maritime operations.

## Equipment support

B.6. Equipment support keeps operational equipment available to the force in the required quantities by actively managing and maintaining the equipment (and equipment components). Maintenance is organised into levels determined by the engineering content of the task.

- a. **Level 1.** Level 1 is the least complex maintenance and is carried out by the equipment user. It is underpinned by equipment care which is a universal responsibility.
- b. **Level 2.** Level 2 tasks require technical tradesmen and are more complicated or time consuming.
- c. **Levels 3 and 4.** Levels 3 and 4 involve complex equipment repair or overhaul by formation-level equipment support organisations or defence contractors.

## Medical support

B.7. The principal task of the medical services is to maintain the fighting strength of the force by preventing disease and other non-battle injuries as well as tending to the sick and wounded. Medical facilities in the land environment are categorised as follows.

- a. **Role 1.** Role 1 provides medical sections and unit aid posts.
- b. **Role 2 light manoeuvre.** Role 2 light manoeuvre facilities conduct triage and advanced resuscitation procedures, up to damage control surgery.

- c. **Role 2 enhanced.** Role 2 enhanced is role 2 light manoeuvre with a primary surgery capability added that includes surgical and medical intensive care assets and beds with nursing support.
- d. **Role 3.** Role 3 medical treatment facilities provide secondary care on operations to high clinical standards.
- e. **Role 4.** Role 4 medical facilities, usually in the strategic base, receive patients from operations. Such facilities also provide access to definitive and specialist care and rehabilitation.

### Other sustainment functions

B.8. Sustaining the land environment also requires a broad range of other functions that are complementary to the three functional groupings above.

a. **Administrative support.** Administrative support encompasses the activities required to manage the manpower of a deployed land force effectively. Activities include:

- personnel support;
- staff support;
- welfare support;
- budget and finance support; and
- civil and policy advice.

b. **Infrastructure support.** Infrastructure support relates to providing and managing operational<sup>196</sup> and indigenous infrastructure. It includes infrastructure and engineering provided through:

- combat support engineering;
- force support engineering; and
- military works areas.

c. **Provost support.** Provost support includes policing the force and police support to the force. It includes:

- support to the Service Justice System;
- detention surety;
- close protection;
- arrest and detention operations;

.....  
196 Operational infrastructure is that which has been introduced into the theatre by the force.

- recovering and recording evidence;
- information gathering; and
- mentoring and monitoring indigenous police forces and detaining authorities.

B.9. Land logistics is delivered from a variety of military and civilian sources. In the land environment, the whole force approach includes the total support force. The total support force comprises a pre-planned mix of military, Civil Service and contracted<sup>197</sup> personnel and capabilities held at readiness to provide progressive levels of support in the strategic base and on operations.<sup>198</sup>

## Land logistic framework

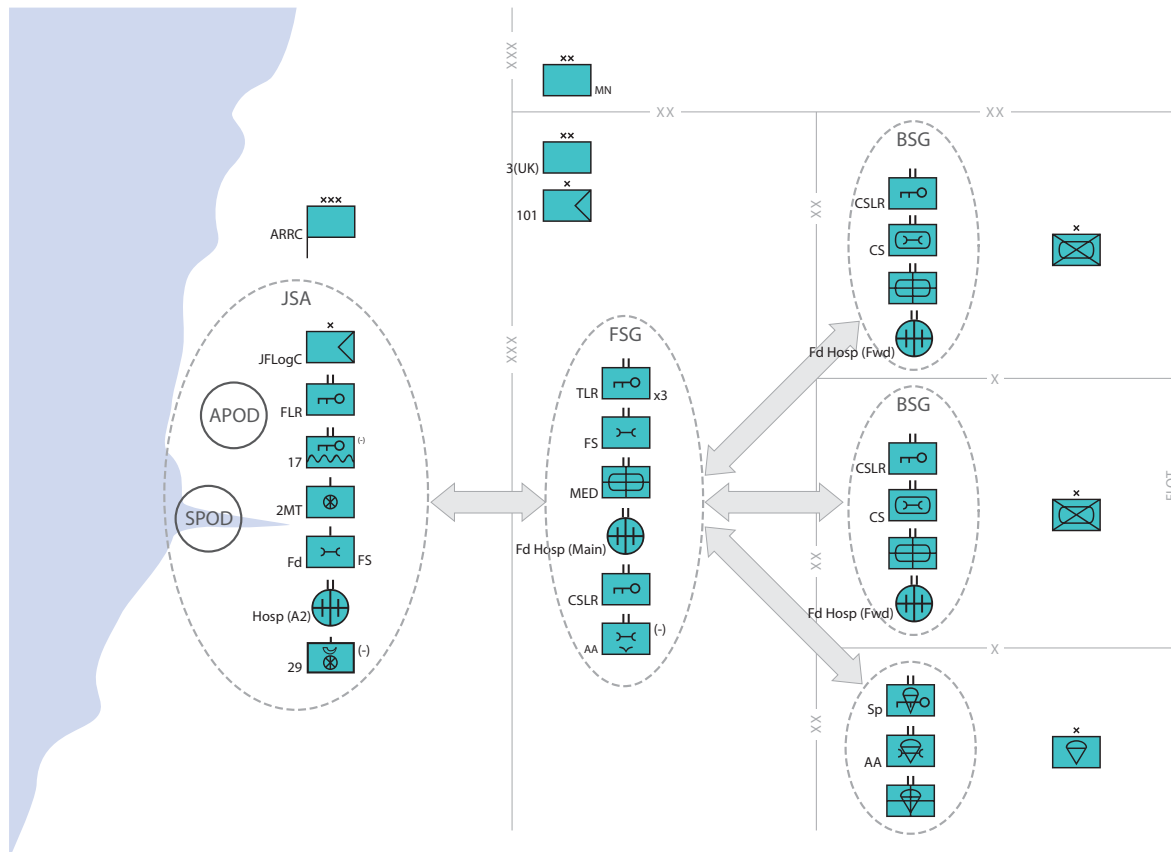
B.10. The deployed land logistic framework will always be driven by the particular needs of the operation, rather than by applying rigid templates. The framework will be formed around a number of logistic nodes and, where appropriate, the infrastructure from where logistic support is provided. The quantity and dispersion of those nodes should be determined by balancing the force's logistic support needs against the associated force protection requirement.

B.11. The land logistic framework balances the need for efficiency and economy with the need for agility and resilience. The structure will reflect the needs of the operation, using options for a 'hub and spoke' logistic network (often suited to more stable, enduring operations) or a more fluid echelon system.

B.12. Support to the force is generally, but not always, split between joint and land organisations, with the latter usually being one of the logistic brigades. In the example shown in Figure B.2, a deployed joint logistic command and control node is responsible for the joint supply area whilst a logistic brigade is responsible for sustainment forward of the Division's rear boundary. In Figure B.3, responsibility for sustaining the whole force lies with a joint logistic command and control node with land logistic capabilities under command.

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197 Including contractor support to operations.

198 For more detail, in the context of the joint force, see Chapter 5, Section 2.



Legend	
ARRC	Allied Rapid Reaction Corps
3(UK)	3(UK) Division
	Armoured Infantry Brigade
	Air Assault Brigade
JFLogC	Joint Force Logistic Component Alternatively 104 Log Bde as the VANGUARD Enabling Group
101	101 Logistic Brigade Also the VANGUARD Support Brigade
FLR	Force Logistic Regiment
TLR	Theatre Logistic Regiment
CSLR	Close Support Logistic Regiment
Sp	Air Assault Support Regiment
17	Port and Maritime Regiment (elements)
2MT	Transport Squadron
29	Postal, Courier and Movement Squadron
FS	Force Support Battalion Royal Electrical and Mechanical Engineers
Fd FS	Force Support Field Company Royal Electrical and Mechanical Engineers
CS	Armoured Close Support Battalion Royal Electrical and Mechanical Engineers
AA	Air Assault Battalion Royal Electrical and Mechanical Engineers
Fd Hosp	Field Hospital
Fd Hosp (Main)	Field Hospital (Main)
Fd Hosp (Fwd)	Field Hospital (Forward)
	Armoured Medical Regiment
APOD	Air port of disembarkation
BSG	Brigade Support Group
FSG	Forward Support Group
JSA	Joint supply area
SPOD	Sea port of disembarkation

Figure B.2 – Illustrative land logistic framework for a NATO Corps operation



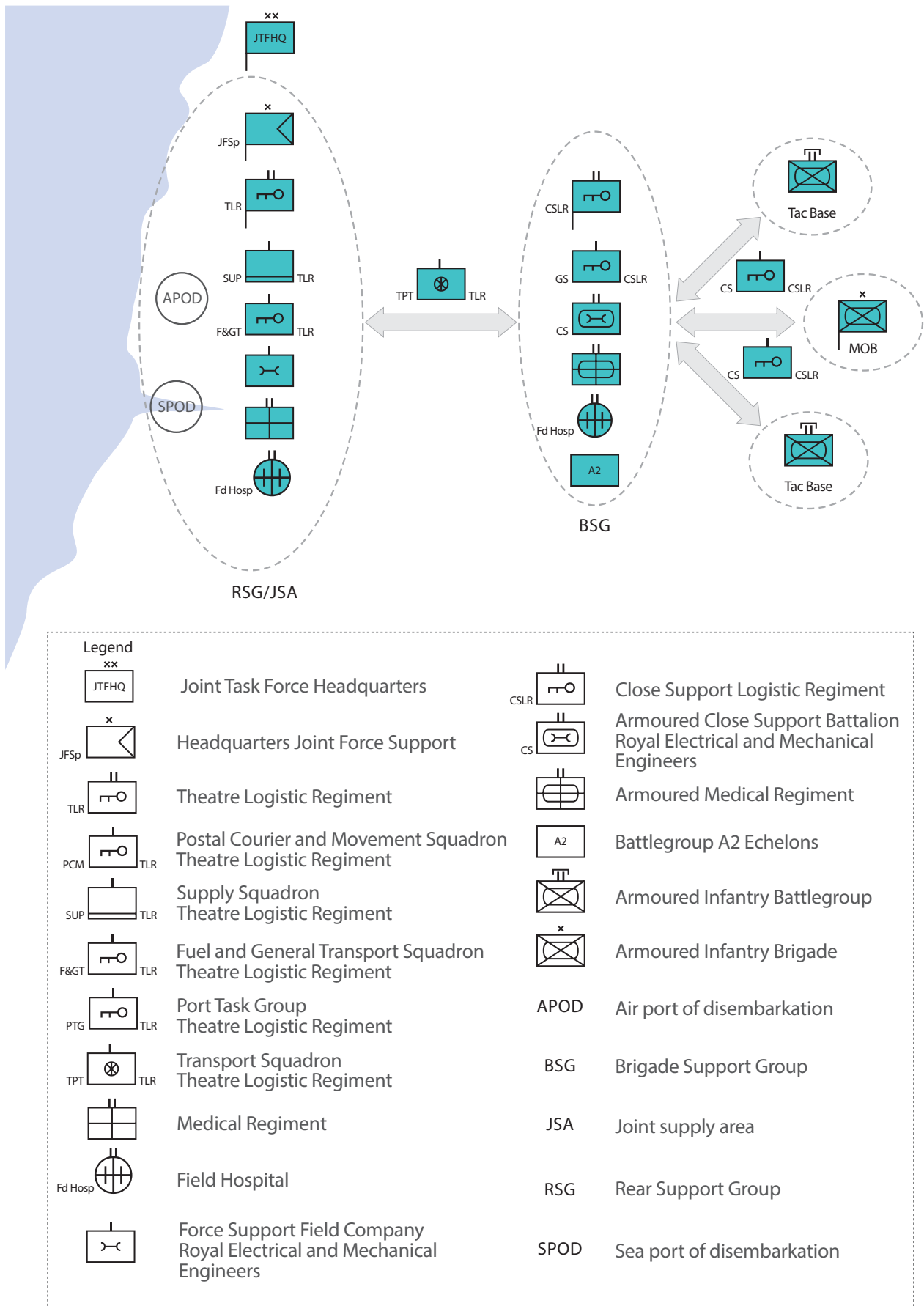


Figure B.3 – Illustrative land logistic framework for a UK enduring stabilisation operation

## Army logistic formations

B.13. The logistic brigade is the Army's primary means of sustaining the deployed land component and conducting support operations on behalf of the Land Component Commander. The logistic brigade undertakes supply and distribution functions as well as providing logistic support services and specialist capabilities. Depending on the logistic framework design, the logistic brigade may also have joint or multinational logistic responsibilities. The brigade headquarters may form the core of a joint logistic command and control node.

B.14. Army logistics at formation level is delivered by three brigades. These also provide a force preparation/force generating headquarters and a tactical, deployable headquarters capable of force and formation-level sustainment planning, manoeuvre and execution.

B.15. **101 Logistic Brigade.** 101 Logistic Brigade is assigned to support 3 (UK) Division. It is a high readiness formation in its designated operational role as the Vanguard<sup>199</sup> Support Brigade. The Vanguard Support Brigade provides formation and force-level support to a land or joint force operating in the land environment. The Vanguard Support Brigade is able to support smaller scale operations by detaching elements, or forming groupings, to support discrete activities. Whilst operating in an integrated theatre, the Vanguard Support Brigade is able to support:

- the full range of Vanguard Division tactical actions;
- framework security;
- security sector reform;
- military capacity building; and
- activities to deliver essential services, governance, economic development and reconstruction.

The Vanguard Support Brigade is capable of operating in a joint, multinational and inter-agency context. It can also deploy and operate independently for certain missions and theatres (for example, to conduct humanitarian relief).

B.16. **102 Logistic Brigade.** 102 Logistic Brigade is assigned to support 1(UK) Division. Its role is to conduct subsequent roulements of an enduring operation (for example, following-on from 101 Logistic Brigade as the Vanguard Support Brigade) or to provide support to concurrent commitments. The Brigade is held at lower readiness than 101 Logistic Brigade which allows it to align itself better for more specific commitments.

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<sup>199</sup> The Army holds a wide range of specified forces at readiness, from specialist teams and field hospitals up to a deployable division. These forces at readiness are collectively referred to as the Vanguard.

**B.17. 104 Logistic Support Brigade.** 104 Logistic Support Brigade provides a range of specialist mounting, enabling and movement support functions held at a range of readiness to provide a variety of capabilities to both the land environment and wider Defence. One of its key roles is to provide the Vanguard Enabling Group which, although able to provide joint enabling functions, is primarily drawn from the Army. The Vanguard Enabling Group provides deployed enabling support<sup>200</sup> to vanguard forces as well as to the Joint Expeditionary Force and forces from the other Services (such as the Lead Commando Group). It is a mission-tailored organisation whose role is to set the conditions for establishing and sustaining a deployed force by providing the full spectrum of enabling and supporting activities. The Vanguard Enabling Group can fulfil the following functions.

- a. **Opening the theatre.** The Vanguard Enabling Group will deploy capabilities before the main force to set up the enabling framework of facilities and infrastructure. In a joint operation, the Vanguard Enabling Group will be under the command and control of the deployed joint logistic command and control node. The Group may, however, be required to form that joint logistic headquarters itself but would be likely to handover that enabling role to an enduring joint logistic headquarters to recuperate for further tasking.
- b. **Activating the theatre.** The Vanguard Enabling Group may activate the Defence Support Chain and operate a joint supply area as well as enabling reception, staging, onward movement and integration<sup>201</sup> for the deployed force.
- c. **Providing force support.** The Vanguard Enabling Group may provide supporting functions to the land or joint force, as appropriate to the operational circumstances, throughout the operation. However, the Vanguard Enabling Group is likely to handover these supporting functions to an enduring force support organisation (for example the Vanguard Support Brigade). In the latter case, the Vanguard Enabling Group would redeploy to the strategic base to recuperate for further tasking.
- d. **Supporting redeployment.** The Vanguard Enabling Group will provide enabling force elements, as required, to support the redeployment operation.

Other elements of 104 Logistic Support Brigade will conduct force mounting and Defence Support Chain opening tasks in the strategic base. These may include some functions that enable the Purple Gate and provide sea and/or air mounting for deploying forces. Capabilities in the strategic base will be provided by a non-deploying element drawn from the wider army.

200 Also referred to as 'far-bank' enabling support.

201 Integration is undertaken by the receiving force, however, the Vanguard Enabling Group will have responsibilities for establishing the reception, staging, onward movement and integration infrastructure.

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Further detail on logistics in the land environment can be found in:

- AC 71940 Army Doctrine Publication, *Operations*, Chapter 9.
- Army/ADOC/04\_02, *The Army Readiness Order*.
- *Army Headquarters Handbook 2014*.
- AC 71877 *Battlefield Equipment Support Doctrine*, Issue 2.
- *RLC Tactical Logistic Support Handbook*.

# Annex C – Logistics in the air environment

C.1. **Introduction.** This annex details the characteristics and structures of air logistics that are unique to the air environment. Agility (scalability, incremental deployment of capabilities and reachback) and host-nation support (including requirements for access, basing and overflight) are particularly pertinent to the air environment.

C.2. **Agility.** Air power's agility stems from a blend of responsiveness and adaptability, enhanced by multi-role, multi-mission and swing-role capabilities.<sup>202</sup> Agile logistics is a fundamental pre-requisite to match the requirement to work with frequently small, often high value, assets which depend on rapid repair loops to meet critical timelines.<sup>203</sup> Also, coordination across a range of logistic support arrangements is vital, given the increasing diversity of contracted support across Defence.

C.3. **Headquarters Air Command planning and operational tasking.** Within Headquarters Air Command (Headquarters Air), the Contingency Action Group (CAG) is responsible for converting the Permanent Joint Headquarters (PJHQ) statement of requirement into deployed RAF force elements, including Expeditionary Air Wings (EAW) and Expeditionary Air Groups (EAG). For deliberately planned operations, A5-Plans will lead the planning process and chair the CAG. The CAG will draw on staff from:

- the A1-A9 divisions;
- role offices with logistic responsibilities for commodities or specific capabilities;
- the Group headquarters responsible for providing the force elements;
- Joint Force Air Component Headquarters; and
- subject matter experts.

Figure C.1 (overleaf) shows its structure.

.....  
202 Joint Doctrine Publication (JDP) 0-30, *UK Air and Space Doctrine*.

203 This is one of the drivers for priming equipment packs, which provide up to ten days of Class 2 spares for operational activity, until resupply can be established (paragraph C.18).

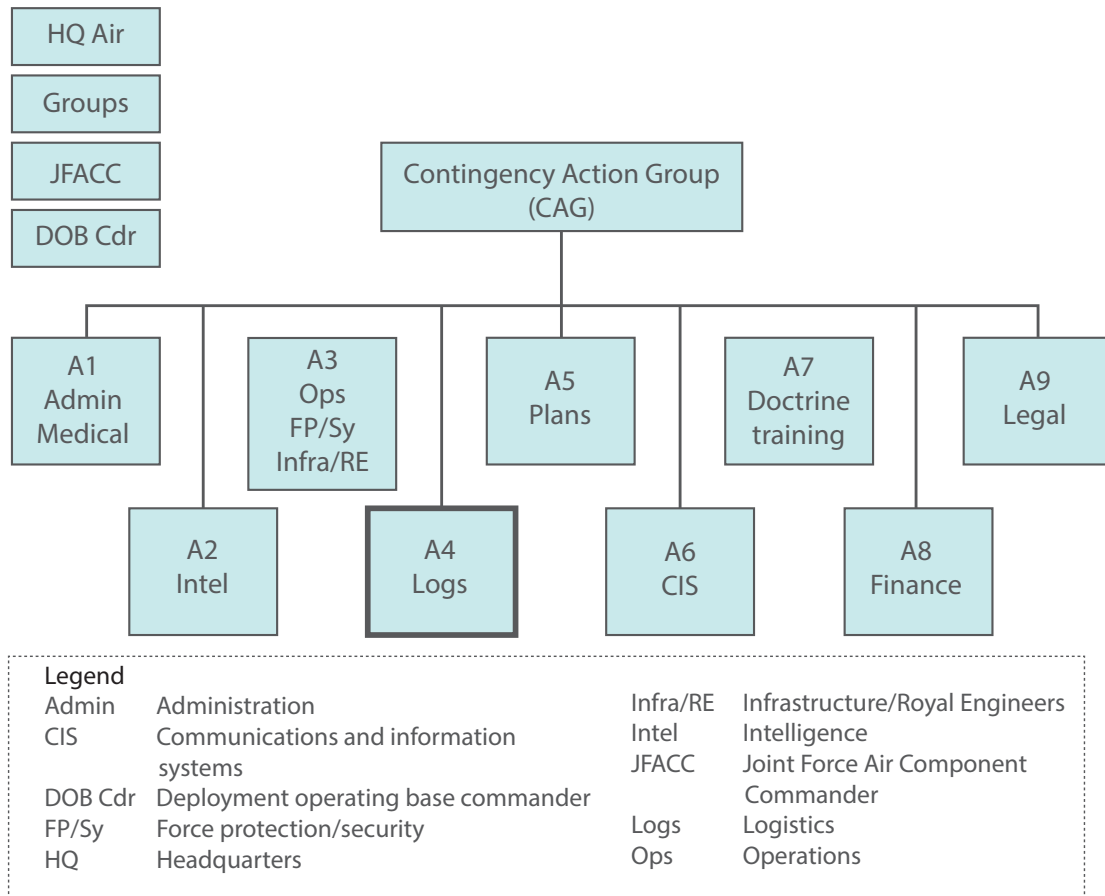


Figure C.1 – Contingency Action Group

C.4. **Logistics within the Contingency Action Group.** There is a permanent logistic subject matter expert presence within A5 to make sure logistic planning factors are considered early. As planning for a deliberate operation approaches the execution phase, ownership of both the operational plan and the CAG process passes to A3-Operations. All contingency operations are led by A3 through the CAG process. The CAG will determine the broad composition of the air contribution to an operation and provide guidance to A4-Operations' Logistic Support Centre (as shown in Figure C.2) for the subsequent:

- scoping;
- tasking;
- mounting;
- sustainment; and
- redeployment of the air component's contribution.

C.5. **Expeditionary Air Wing.** EAW were created to provide readily identifiable structures, improving the ability to deploy discrete units of air power as a functioning formation. Most RAF deployments should be based upon deploying an EAW construct; there are four principal benefits.

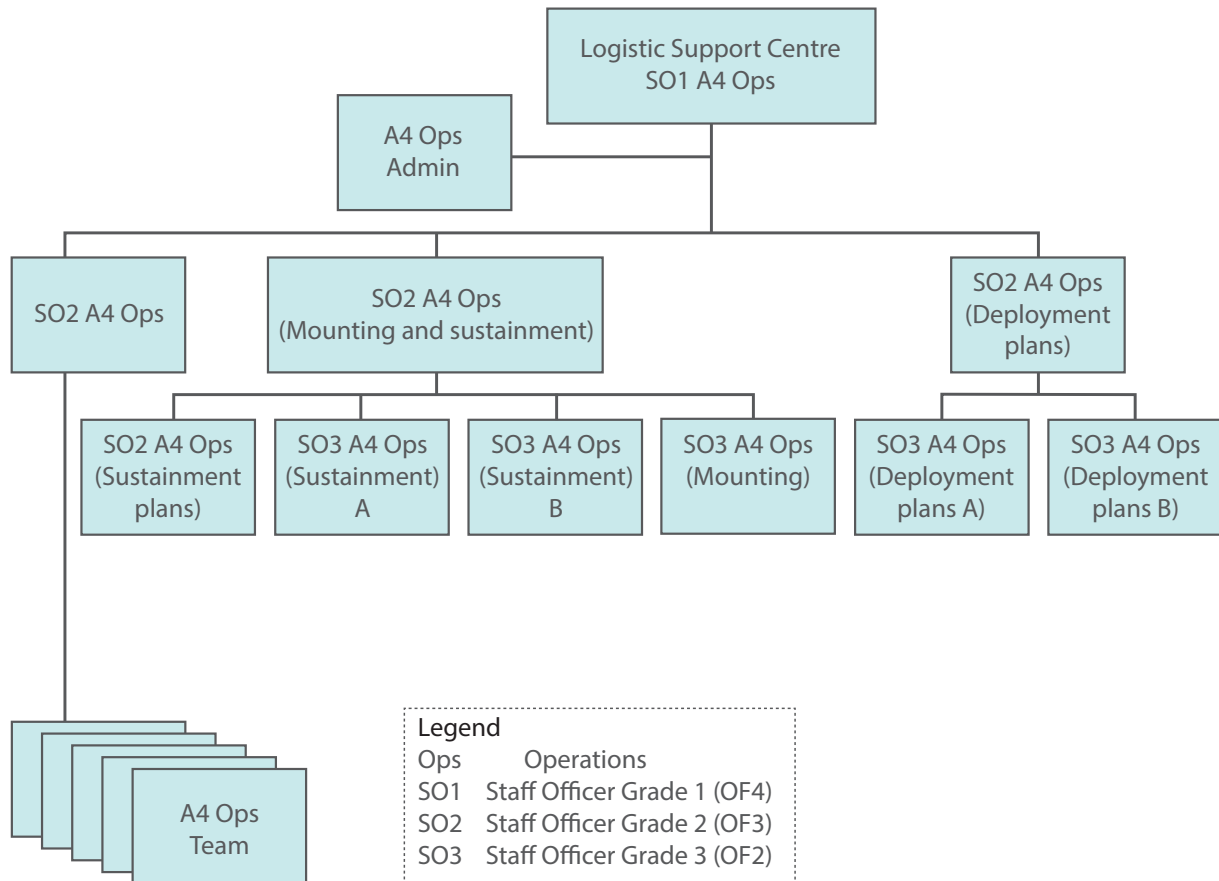


Figure C.2 – A4 Operations Logistic Support Centre

- Delivering a more focused operational effect from the outset of any deployment – enabling more effective support.
- A more cohesively trained body of manpower.
- A broader understanding of air power capability and how it is delivered.
- A more inclusive formation identity at home and on deployed operations, improving ethos and *esprit de corps*.

C.6. Expeditionary Air Group/Air Component Headquarters. To provide a unified structure for conducting operations, RAF force elements deploy within an air component headquarters or EAG construct, with subordinate EAWs. A single headquarters or EAG deploys for each theatre of operation, with the senior RAF officer as its commander.<sup>204</sup> An EAW, or elements of, deploys to each deployment operating base with command and enabling elements tailored to the operational complexity, role and location. For larger scale operations, an EAG may be deployed with the capability to coordinate theatre air logistic assets with other components on behalf of the Joint Force Air Component Commander.

204 As the Joint Force Air Component Commander or UK Air Component Commander.

C.7. **Expeditionary Air Wing deployment.** Main operating base elements that may deploy as EAW elements comprise those personnel and equipment modules needed to support a deployment operating base:

- command, control, coordination and communication; and
- logistic, administrative and infrastructure support.

Force elements at readiness and lodger units deploy separately to the EAW generation process. When an EAW deploys, the residual main operating base operational capability is determined by the base's commander.

C.8. **Expeditionary Air Wing independence.** The air CAG nominates and generates the EAW best able to support the operation. This approach means that an EAW may be selected that is not necessarily the most recently trained EAW, nor the EAW associated with a deploying force element's home base. Force elements, air combat support units and air combat service support units are organised, deploy and operate independently to the EAW, to prevent stove-piping of scarce or unique capabilities. EAW provide the support infrastructure for those elements. The elements are effectively lodger units at the EAW-enabled air port of disembarkation or deployment operating base.

C.9. **Expeditionary Air Wing generation.** Headquarters Air generates EAW that are deployable at very high and high readiness. They are based on existing main operating base personnel and structures. The specific task organisation for an operational deployment is driven by the Headquarters Air estimate process which optimises the deployed footprint while maximising reachback. Figure C.3 illustrates EAW constructs.

C.10. **Operational establishment table.** When an EAW is activated, Headquarters Air works with the EAW and force elements to produce an operation establishment table<sup>205</sup> that meets the operational requirement. EAW command teams are to be at a readiness to match operational requirements and training realities, and comprise a permanent cadre of around 25-45 posts.<sup>206</sup> At least one command team is to be available at any time.

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205 The Modularised Support Force-packaging Information Technology (MSFITS) is the system that currently supports this process. MSFITS will be replaced by the NATO LOGFAS/LOGFS system in due course which is described in more detail in Chapter 2.

206 To illustrate, as at 31 October 2013, 901 Expeditionary Air Wing (EAW) was commanded by a Group Captain who doubled as the Deputy Air Component Commander and was co-located with 83 Expeditionary Air Group (EAG) headquarters. The EAW was split into A, B and C flights, each commanded by squadron leaders. A Flight was under the command of an engineering operations officer. 901 EAW B Flight was commanded by a logistics officer. That, in turn, was divided into three sections commanded by a flight lieutenant flight operations officer, flight lieutenant logistics officer and a detachment warrant officer.





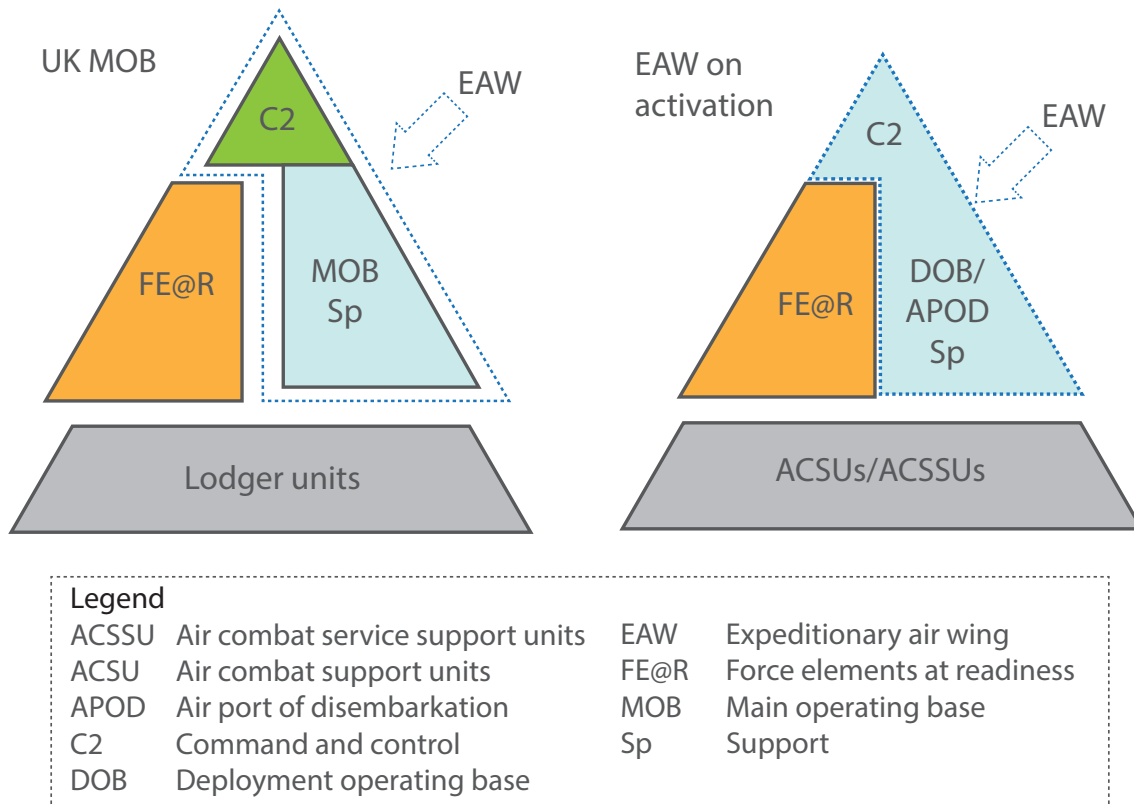


Figure C.3 – UK and deployed Expeditionary Air Wing constructs

C.11. **Force element table.** A representative template for the Air force element table is set by the EAW working group as planning for the operation matures.

C.12. **Theatre enabling.** Once A4-Operations staff have received planning guidance from the CAG, they use the Modularised Support Force-packaging Information Technology System (MSFITS) to scope and task support packages to enable and sustain the deployment operating bases and air ports of disembarkation from which the EAW or EAG will operate. This includes any:

- staging airfields;
- forward mounting bases; and
- support areas needed for the deployment.

The Joint Force Air Component Commander’s preliminary aim is to achieve an initial operating capability at each location. Air operations may then commence, followed by incremental enhancements in capability to reach full operating capability. Full operating capacity is the point from which deployed force elements receive full first and second line support. Reachback and host-nation support is fully exploited.

C.13. **Deployed air logistic command and control.** A4 personnel within the Air Component Support division of the Joint Force Air Component headquarters deploy



to provide logistic direction. This includes subject matter expert support to all air component force elements during the deployment, sustainment and recovery phases of more complex operations. The deployment from the Air Component Support division also provides the logistic interface with other deployed components. For simpler operations, if a Joint Force Air Component headquarters has not deployed, the senior logistics officer deployed with the EAW implements A4 staff direction and leads on air logistic issues and priorities. Other functions that may require representation in the Air Component Support division include:

- medical;
- engineering;
- personnel support; and
- infrastructure.

However, for operations with greater span of control requirements, an EAG may be deployed to coordinate theatre air logistic assets with other components, on behalf of the Joint Force Air Component Commander.

**C.14. Air combat support units.** Air combat support units are A3 force elements which provide operations support and force protection to the primary air component force elements. Operations support air combat support units may include:

- the Mobile Meteorological Unit;
- in-theatre air traffic controllers and battle space managers; and
- the Tactical Imagery/Intelligence Wing.

Force protection air combat support units may include:

- RAF Force Protection Wing headquarters;
- RAF Regiment field squadrons; and
- 3 (Tactical) Police Wing.

**C.15. Air combat service support units.** Air combat service support units (ACSSU) provide the air component's specialist deployable logistic support. That support includes the key capabilities to enable deployed locations and also sustains those functions beyond the scope of EAWs. Land capabilities may support ACSSU to provide functions such as:

- deployment operating base infrastructure;
- fuel;
- water; and
- postal and courier support.

Figure C.4 shows ACSSU and their roles.

ACSSU	Role
No 85 (Expeditionary Logistics) Wing	Deployable air logistic headquarters.
1 (Expeditionary Logistics) Squadron	Spearhead element of deployed supply organisation (supply control team, fixed wing aviation fuel support, air/rail/port liaison team).
2 (Mechanical Transport) Squadron	Heavy lift surface transport capability that can operate on behalf of all environments. Movement of materiel along intra-theatre surface lines of communication between sea/air ports of disembarkation, joint operating bases, rear explosive storage areas and petroleum supply depots.
Joint Aircraft Recovery and Transport Squadron	Worldwide UK military aircraft recovery capability.
No 71 (Inspection and Repair) Squadron	Non-destructive testing and expedient repair.
No 93 (Expeditionary Armaments) Squadron	Expeditionary air armament.
No 5001 (Expeditionary Airfield Facilities) Squadron	Installation, maintenance and removal of airfield facilities for expeditionary operations. Specifically: technical working environments, air separation units and portable aircraft arresting gear.
3 (Mobile Catering) Squadron	Deployable collective catering support and accommodation management.
No 5131 (Bomb Disposal) Squadron	Air operations explosive ordnance disposal.
90 Support Unit	Communications and information systems and tactical air traffic control.
1 Air Movements Wing (1 AMW)	In the deployed space, 1AMW is a key enabler, providing continuous support to operations by facilitating the operational air bridge, providing the aerial port element of the theatre opening capability and maintaining a presence at each of the key air ports of disembarkation in theatre.

ACSSU	Role
Tactical Medical Wing	<p>Deployed medical support, including deployment operating base medical support and aeromedical evacuation and escorts. Their task includes providing equipment to support FE@R 0-2:</p> <p>Medical treatment facility role 1/role 1(5).</p> <p>Medical treatment facility role 2(10)/role 2 (25).</p> <p>Forward aeromedical evacuation and critical care air support teams (CCAST).</p> <p>Tactical and strategic aeromedical evacuation and CCAST.</p> <p>Deployed headquarters staff.</p> <p>Deployed aeromedical command and control staff.</p>
Tactical Supply Wing	<p>First and second line fuel support to Joint Helicopter Command rotary assets.</p>

Figure C.4 – Air combat service support unit roles

C.16. **Reachback.** Reachback is the most significant factor in providing logistic support to deployed air combat force elements. Reachback allows logistic planning staffs to achieve a reduced optimum logistic footprint in-theatre (underpinned by logistic advice to deployed staffs and timely materiel re-supply, from the home base). Except for routine demands which are met automatically, joint operations area reachback requests are coordinated by air logistic staff within A4-Operations, respective Groups and commodity role offices. Those staff input their priorities for movement through the Defence Support Chain to the theatre logistic command and control node. That node liaises with Defence Support Chain Operations and Movements staff to achieve a coherent, prioritised theatre ‘pull’ that meets the overall operational plan. Reachback support includes:

- specialist air engineering and other advice to deployed air force elements and the deployed logistic command chain;
- processing real-time demands for re-supply;
- coordinating provision of sustainment and additional capability requirements; and
- providing logistic planning support to the air component commander’s staff.

C.17. **Host-nation support.** Host-nation support provides supplies and service support in, and en route to and from, the theatre of operations. Air may seek the following types of host-nation support:

- access facilities;
- basing facilities;
- overflight for both deployment and operations; and

- supply of materiel, medical assistance and security assistance.

However, when deploying as part of a coalition, the UK force may need to compete for limited resources. Host-nation bases may be described as:

- **well-found** – where the host nation provides most of the facilities and services;
- **austere** – where the host nation provides a significant minority of the facilities and resources; or
- **bare base** – where the host nation provides none, or a relatively insignificant amount, of facilities and services.

The levels of host-nation support significantly affect the scale and composition of the EAW at an air port of disembarkation or deployment operating base.

C.18. **Priming equipment packs.** Sustainment of Class 2 materiel is achieved by providing priming equipment packs for each deployed platform or capability. Priming equipment pack scaling is calculated to sustain operational activity for up to ten days until re-supply can be established. The scaling assumes:

- no aircraft attrition;
- force protection measures are sufficient to secure strategic and in-theatre lines of communication; and
- air and surface re-supply is established from the start of an operation.

Based on these assumptions, priming equipment packs are normally predicated on a notional five-day transit time and five-day buffer stock. Replenishment is provided through supply from the UK strategic base, contractor logistic support arrangements as far forward as possible, or deploying off-aircraft test and repair facilities in air-portable workshops and air-portable avionics workshops.<sup>207</sup>

C.19. **Contractor support to deployed force elements.** Providing logistic support to deployed force elements increasingly integrates organic capability with that provided by:

- other Services individually;
- other Services jointly;
- other government departments;

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<sup>207</sup> Instead of priming equipment packs, Joint Helicopter Command supports its aircraft with deployed spares packs which are scaled for 15 days flying in the land environment and 28 days in the maritime.

- allies; and
- civilian partners.

The extent of partnered, or contractor logistic support, arrangements includes contractor support to operations, sponsored reserves and field service representatives providing logistic and maintenance support.<sup>208</sup>

**C.20. Reverse supply chain.** A4-Operations staff monitor the reverse supply chain and provide input to the theatre logistic command and control node, which manages the theatre end of the reverse supply chain. The timely return of items subject to partnered support and contractor logistic support arrangements is particularly important. Many contracts have a mandated return period which may attract contractual penalties. If return timescales are not achieved, repair turn-round times may be extended and assets in theatre remain unserviceable for longer.

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Further details on air logistics can be found in:

- Air Publication (AP) 100C-72 *Air Operations Logistic Doctrine and the Air Logistic Concept of Operations*;<sup>209</sup> and
- AP 100C-75 *Royal Air Force Support for Operations*.<sup>210</sup>

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208 For more detail, in the context of the joint force, see Chapter 5, Section 2.

209 Under revision 2014/15.

210 Under revision 2014/15.

# Annex D – Defence Equipment and Support

D.1. The Defence Support Chain (DSC) is key to enabling all phases of an operation. Defence Equipment and Support (DE&S) staff, mainly from within the Inventory Management and Logistic Commodities and Services Operating Centres, contribute to developing the logistic estimate that informs the sustainability statement.<sup>211</sup> Industry providers must be involved at each stage of operational logistic planning to ensure full value is delivered coherently to the Defence Support Chain.<sup>212</sup>

D.2. DSC refers to the end-to-end process of the entire logistic support system and, in addition to DE&S, incorporates a broad range of stakeholders, including:

- Permanent Joint Headquarters (PJHQ);
- industry;
- the Coupling Bridge<sup>213</sup> providers;
- single-Service commands deployed in the joint operations area;
- other nations;
- other government departments;
- non-governmental organisations; and
- host-nation support providers.

The DSC depends on effective and secure logistic information services, provided from the strategic base all the way forward to deployed force elements. The DSC also needs to use agreed standardised procedures. The strategic base encompasses all UK contributors (MOD, industry and contractors) and is a component of the Defence Support Network.<sup>214</sup> The strategic base is a key enabler for achieving integrated logistics.

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211 Chapter 4 provides more detail on the sustainability statement.

212 Chapter 5 provides more detail on support from industry.

213 The Coupling Bridge is described in Chapter 6, Section 4.

214 The Defence Support Network is discussed at Chapter 1, Section 3.

# Organisational roles and responsibilities

## Defence Support Chain delivery

D.3. The former Joint Support Chain Operating Centre has been restructured to form two operating centres, the:

- Inventory Management Operating Centre (IMOC); and
- Logistic Commodities and Services (LCS)<sup>215</sup> operating centre.

## Inventory Management Operating Centre

D.4. The IMOC is broken down into three core areas; Supply Chain Process, Supply Chain Information Services and Support Chain Engagement. The IMOC is a customer-facing organisation focusing on what the front line commands and other DE&S operating centres need. The IMOC is currently building the professional 'Inventory Management' pillar across DE&S and will continue to raise standards of this capability to ensure the inventory meets Defence needs. IMOC's capability is provided by people, processes and supporting systems, tools and measures.

D.5. **Supply Chain Process.** Supply Chain Process is the lead authority for designing, delivering and deploying fit-for-purpose support chain management policy, processes and procedures and delivering effective support chain specialist enabling services within DE&S. The Supply Chain Process portfolio includes:

- integrated logistic support;
- inventory policy;
- material accounting;
- support chain and inventory modelling and analysis; and
- other inventory services.

D.6. **Supply Chain Information Services.** Supply Chain Information Services is responsible for commissioning, through-life management and supporting logistic information services to support Assistant Chief of the Defence Staff (Logistic Operations) in the Senior Responsible Owner<sup>216</sup> role for the Logistic Information Services programme. This includes the support chain, engineering and managing information exchanges both within MOD and across MOD boundaries with industry

.....

215 Logistic Commodities and Services was formed from the existing Logistic Commodities, Provider Management and Joint Support Chain Services (British Forces Post Office and Disposals Services Authority) structures.

216 The Senior Responsible Owner is the individual responsible for ensuring that a programme meets its objectives and delivers the projected benefits.



and other government departments. Supply Chain Information Services achieves its mission through a strategic delivery partnership to deliver effective and efficient end-to-end logistic information services, which are fully integrated with industry.

**D.7. Support Chain Engagement.** Head Support Chain Engagement delivers outputs to customers by deploying suitably qualified and experienced personnel (SQEP) across the DE&S domains to deliver IMOC products and services. By deploying Support Chain Engagement SQEP in this manner, the organisation optimises required products' and services' delivery and also identifies any internal SQEP shortfalls, allowing management action to be taken.

### Logistic Commodities and Services operating centre

**D.8.** The LCS operating centre provides a vital link in the Defence Support Chain and in the global supply and provision of commodities. LCS is configured primarily as a provider organisation, taking Defence requirements and providing logistic commodities and services to meet prescribed Defence capabilities. The LCS operating centre consists of two core areas, Logistic Commodities and Logistic Services.

**D.9. Logistic Commodities.** Logistic Commodities comprises a number of teams that are currently responsible for procuring contracts for, and managing the inventory of, a range of services and products for the MOD. These include:

- general commodities and supplies;
- Defence clothing; and
- medical supplies.

Logistic Commodities' primary mission is to ensure that commodities and services are effectively and efficiently available to equip and support the Armed Forces, now and in the future.

**D.10. Logistic Services.** Logistic Services provides a materiel storage, processing and distribution service within the Defence Support Chain to sustain the fighting power of our Armed Forces worldwide. Logistic Services also includes the British Forces Post Office and the Disposal Services Authority. It considers these three elements as a whole, optimising effective, efficient and common use of capabilities, people's skill sets and MOD owned infrastructure. Logistic Services:

- maximises opportunities to share best practice;
- plans on an integrated basis;
- consolidates functional support; and
- reduces duplicated effort.

## Defence Support Chain Operations and Movements

D.11. Defence Support Chain Operations and Movements (DSCOM) provides the single operational focal point for coordinating DE&S support to plan, configure and execute the strategic deployment, sustainment and recovery of materiel. DSCOM sits at the heart of the Defence Support Chain, delivering supply chain operations and movements support to operational and training theatres around the globe. In doing so, it has very close relationships with MOD Head Office, PJHQ and the front line commands. DSCOM is a three-pillar structure comprising Operations, Movements and Plans.

D.12. **DSCOM Operations.** DSCOM Operations provides an around-the-clock operational focus to coordinate and direct pan-DE&S support to operations, training and routine support world-wide. The DSCOM Operations:

- coordinates the execution of the Defence Outload Plan and the Whole Fleet Management Breakout Plan, from the strategic base to the point(s) of embarkation;
- plans, executes and monitors the movement of deploying force elements and materiel across the Coupling Bridge;
- programmes and tasks UK military strategic air transport and surface assets (acquiring and tasking lift assets from the commercial sector or other nations to meet shortfalls); and
- provides the MOD focus for contractors on deployed operations mounting.

D.13. **DSCOM Movements.** DSCOM Movements:

- ratifies the statement of movement requirement for passengers and freight movements supporting operations, training and routine support world-wide;
- provides a Defence passenger reservation service to optimise strategic air lines of communication capacity; and
- operates an around-the-clock compassionate movements cell.

D.14. **DSCOM Plans.** DSCOM Plans:

- leads the DE&S input to strategic and operational level planning to support PJHQ-led current and contingent operations;
- provides oversight and visibility of all urgent operational requirements being procured and delivered by DE&S; and
- seeks continual performance improvement opportunities to optimise how the Coupling Bridge is operated.

# Lexicon

The Lexicon contains acronyms/abbreviations and terms/definitions used in this edition of Joint Doctrine Publication (JDP) 4-00 and is not intended to be exhaustive. Definitive and more comprehensive details are to be found in JDP 0-01.1, *UK Supplement to the NATO Terminology Database*, Allied Administrative Publication-06 (AAP-06), *NATO Glossary of Terms and Definitions* and AAP-15, *NATO Glossary of Abbreviations*, respectively.

## Part 1 – Acronyms and abbreviations

AAP	Allied Administrative Publication
APOD	air port of disembarkation
APOE	air port of embarkation
ACDS(Log Ops)	Assistant Chief of Defence Staff (Logistic Operations)
ACO	Allied Command Operations
ACOS	Assistant Chief of Staff
ACSSU	air combat service support unit
AJP	Allied Joint Publication
ALP	Allied Logistic Publication
AMW	air movements wing
AO	auxiliary oiler
AOR	auxiliary oiler replenishment
AP	Air Publication
APP	Allied Procedural Publication
ASSESSREP	Assessment Report
BRd	Book of Reference (digital)
BWIMS	Base Warehouse Inventory Management System
C4I	command, control, communications, computers and information
CAG	Contingency Action Group
CB	Classified Book
CBRN	chemical, biological, radiological and nuclear
CDM	Chief of Defence Materiel
CDS	Chief of Defence Staff
CJEF	Combined Joint Expeditionary Force
CJO	Chief of Joint Operations

CJSG	Combined Joint Support Group
CJSG HQ	Combined Joint Support Group Headquarters
CJSOR	Combined Joint Statement of Requirement
CLS	contractor logistic support
COA	course of action
COBRAT	Coupling Bridge Analysis Tool
CONDO	contractors on deployed operations
COPD	Comprehensive Operations Planning Directive
COSTR	capability, operations, standing tasks and recuperation
CSO	contractor support to operations
DCDC	Development, Concepts and Doctrine Centre
DCR	daily consumption rate
DE&S	Defence Equipment and Support
DEFCON	Defence condition
DI	deliberate intervention
DII	Defence Information Infrastructure
DOS	days of supply
DSC	Defence Support Chain
DSCOM	Defence Support Chain Operations and Movements
Dstl	Defence Science and Technology Laboratory
EAG	Expeditionary Air Group
EAW	Expeditionary Air Wing
ECI	expeditionary camp infrastructure
EHR	extremely high readiness
ES	equipment support
EU	European Union
FE	force elements
FE@R	force elements at readiness
FE@S	force elements at sustainability
FMB	forward mounting base
FOMO	Fleet Operations and Maintenance Officer
FP	force protection
FragO	fragmentary order
FRS	forward repair ship

GLC	Group Logistic Coordinator
GS	general service
HIC	high intensity combat
HR	high readiness
IMOC	Inventory Management Operating Centre
ITT	in-theatre training
JAMES	Joint Asset Management and Engineering Solutions
JDOA	joint desired order of arrival
JDOD	joint desired order of departure
JDP	Joint Doctrine Publication
JFC	Joint Force Commander
JFET	joint force element table
JFLogC	Joint Force Logistic Component
JFLogCHQ	Joint Force Logistic Component Headquarters
JLSG	Joint Logistic Support Group
JMC	Joint Mounting Cell
JSOR	Joint Statement of Requirement
JSP	Joint Service Publication
JTFC	Joint Task Force Commander
JTFHQ	Joint Task Force Headquarters
JTTP	Joint Tactics, Techniques and Procedures
JWP	Joint Warfare Publication
LAT	load allocation table
LCS	Logistic Commodities and Services
LEC	locally employed civilians
LOC	lines of communication
LOGFAS	Logistic Functional Area Services
LOGFS	Logistic Functional Services
LPH	landing platform helicopter
LR	low readiness
LSD(A)	landing ship dock (auxiliary)

MJDI	Management of Joint Deployed Inventory
MOD	Ministry of Defence
MR	medium readiness
MSFITS	Modularised Support Force-packaging Information Technology System
NATO	North Atlantic Treaty Organisation
NC3A	NATO Consultation, Command and Control Agency
NSE	national support element
NSPA	NATO Support Agency
OET	operational establishment table
OGD	other government department
OLRT	operational liaison and reconnaissance team
OPDEF	operational defect
ORBAT	order of battle
OSCC	Operational Support Capability Contract
PAD	preferred arrival date
PCRF	primary casualty receiving facility
PE	peace enforcement
PJHQ	Permanent Joint Headquarters
PK	peacekeeping
POGO	proof of good order
PUS	Permanent Under Secretary
QASR	Quarterly Assessment of Sustainability Risk
QPRR	Quarterly Performance and Risk Report
RDD	required delivery date
RFA	Royal Fleet Auxiliary
RFA 96	Reserve Forces Act 1996
RFTG	Response Force Task Group
RM	Royal Marines
RN	Royal Navy
RSOM	reception, staging and onward movement
RSOI	reception, staging, onward movement and integration

RTM	ready to move
SACEUR	Supreme Allied Commander Europe
SCPT	supply chain processing time
SDSR	Strategic Defence and Security Review
SFA	Strategic Fuels Authority
SHAPE	Supreme Headquarters Allied Powers Europe
SPC	standard priority code
SPOD	sea port of disembarkation
SPOE	sea port of embarkation
SPS	standard priority system
SQEP	suitably qualified and experienced personnel
SS	steady-state
SUSTAT	sustainability statement
UK	United Kingdom
UOR	urgent operational requirement
VHR	very high readiness
VLR	very low readiness
WIA	wounded in action

## Part 2 – Terms and definitions

### **administration**

The provision and implementation of regulations and procedures related to the management of an organization in support of the accomplishment of its mission. (AAP-06)

### **area of operations**

An operational area defined by a joint commander for land or maritime forces to conduct military activities. Normally, an area of operations does not encompass the entire joint operations area of the joint commander but is sufficient in size for the joint force component commander to accomplish assigned missions and protect forces. (AAP-06)

### **asset tracking**

Generic term used in industry to refer to the tracking of assets in the supply chain. Within NATO, the capability to maintain visibility of a specific asset, normally serially numbered or otherwise uniquely identified, throughout the support chain. (JDP 4-00)

### **civil-military cooperation**

The coordination and cooperation, in support of the mission, between the NATO Commander and civil actors, including the national population and local authorities, as well as international, national and non-governmental organisations and agencies. (AAP-06)

### **combat service support**

The support provided to combat forces, primarily in the fields of administration and logistics. (AAP-06)

### **consignment tracking**

Consignment tracking is the process of providing visibility of materiel as it is moved through the Defence Support Chain. (JSP 886)

### **contracting for availability**

A contract where industry is incentivised to provide a specified level of equipment availability. (JSP 886)

### **contracting for capability**

A contract where industry is incentivised to deliver MOD-specified capability in the most cost effective manner. (JSP 886)



**contractor logistic support (CLS)**

Contractor logistic support is a range of support options that involves the transfer of responsibilities for delivering an agreed level of equipment availability to a contractor. (JSP 886)

**contractors on deployed operations (CONDO)**

Contractors on deployed operations encompasses contractor logistic support, where in-service equipment is maintained under contract with the equipment provider, and the use of contractors on operations engaged through the PJHQ Operational Support Capability Contract. (JDP 0-01.1; proposed modification)

**contractor support to operations (CSO)**

Contractor support to operations encompasses all support provided to UK military operations by non-regular forces. It includes sponsored reserves, contractors on deployed operations and private military and security companies. (JSP 567)

**Coupling Bridge**

The series of activities through which force elements, equipment and materiel are delivered from the strategic base to the joint operations area, and returned, in accordance with the Joint Task Force Commander's priorities. It extends from air and sea ports of embarkation to air and sea ports of disembarkation and includes all the strategic assets, infrastructure and facilities required. (JDP 0-01.1)

**daily consumption rate (DCR)**

A unit or quantity of supplies estimated to be the average consumed within a 24 hour period for a specified activity. (AC 71845)

**days of supply (DOS)**

A calculated quantity of combat supplies each formation can be expected to consume on a daily basis, dependent upon the theatre of operations.. (JDP 0-01.1)

**Defence Industrial Strategy**

The Defence Industrial Strategy promotes a sustainable industrial base that retains in the UK those industrial capabilities, including infrastructure, skills, knowledge and capacity, needed to ensure the appropriate level of industrial support for Defence. (JDP 0-01.1)

**Defence Support Chain (DSC)**

The Defence Support Chain encompasses the end-to-end process of the entire logistic support system, including stakeholders beyond MOD and UK. (JDP 4-00)

**Defence Support Chain Operations and Movements (DSCOM)**

Defence Support Chain Operations and Movements provides the operations focus for Defence Equipment and Support by coordinating movement support activity to operational and training theatres around the globe. (JDP 4-00)

**Defence Support Network**

A flexible set of supply chains connecting points of production and use, ensuring the most appropriate and efficient use of resources across the Whole Force, maximising information and technology to assure logistic support to operational commanders. (JDP 4-00)

**deployment operating base**

A base, other than the peacetime base, having minimum essential operational and support facilities, to which a unit or part of a unit will deploy to operate from in time of tension or war. (AAP-06)

**Detailed Deployment Plan**

The plan encompasses all orders and directions that allocate strategic lift assets and detail the embarkation of personnel and cargoes to mount an operation. (JDP 0-01.1)

**equipment**

All non-expendable items needed to outfit/equip an individual or organisation. (AAP-06)

**force generation**

The process of providing suitably trained and equipped forces, and their means of deployment, recovery and sustainment to meet all current and potential future tasks, within required readiness and preparation times. (JDP 0-01.1)

**force protection (FP)**

The coordinated measures by which threats and hazards to the joint force are countered and mitigated in order to maintain an operating environment that enables the Joint Commander the freedom to employ joint action. (JDP 0-01.1)

**forward mounting base (FMB)**

A base (also deployment operating base) established within the operational area to support tactical operations at forward operating bases. It will be resourced to a greater level than a forward operating base, including command and control, logistics and administrative support elements. (JDP 4-00)

**host nation**

A nation which, by agreement:

- receives forces and materiel of NATO or other nations operating on/from or transiting through its territory;
- allows materiel and/or NATO organisations to be located on its territory; and/or
- provides support for these purposes. (AAP-06)

**host-nation support**

Civil and military assistance rendered in peace, crisis or war by a host nation to NATO and/or other forces and NATO organisations which are located on, operating on/from, or in transit through the host nation's territory. (AAP-06)

**host-nation support arrangements**

Those documents which detail the support, political, legal and/or financial arrangements agreed upon by national and NATO authorities and which are necessary to provide host-nation support to operations and exercises. (AJP-4.5(B)/ NATO MC 334/2)

**in-country resources**

Resources provided to a force from the non-governmental infrastructure of a country. (JDP 0-01.1)

**infrastructure**

The static buildings, facilities and other permanent installations required to support military capabilities. (AAP-06)

**interoperability**

The ability to act together coherently, effectively and efficiently to achieve Allied tactical, operational and strategic objectives. (AAP-06)

**Joint Force Logistic Component (JFLogC)**

The Joint Force Logistic Component provides a single joint focus for all theatre-logistic activity in support of a deployed joint force and its headquarters commands the theatre end of the Coupling Bridge. It has particular responsibility for the reception, staging and onward movement of force elements in the joint operations area and the sustainment of the operation. It ensures that force elements and sustainment stocks arrive in theatre in accordance with the Joint Task Force Commander's priorities and are deployed to components as required. (JDP 0-01.1; proposed modification)

**joint logistic enablers**

Those force elements and capabilities that deliver the joint logistic effects necessary for: the successful mounting, deployment, reception, staging and onward movement and integration of a force; the sustainment, recovery and redeployment of a force across the Coupling Bridge and within theatre; and the opening, operation and closing of ports of disembarkation/embarkation. (JDP 4-00; proposed addition)

**joint operations area**

An area of land, sea and airspace, in which a designated Joint Task Force Commander plans and conducts military operations to accomplish a specific mission. A joint operations area including its defining parameters, such as time, scope and geographic area, is contingency/mission specific. (JDP 0-01.1)

**joint sea basing**

Use of the sea as a base within joint operations in order to contribute to an optimum footprint ashore. (JDP 0-01.1)

**lead Service**

Analogous to logistic lead nation, it is where a Service undertakes the procurement and provision of a range of materiel and services for the benefit of all, e.g. fuel, rations, common user equipment. (JDP 4-00)

**lines of communication (LOC)**

All the land, water, and air routes that connect an operating military force with one or more bases of operations, and along which supplies and reinforcements move. (AAP-06)

**logistic efficiency**

The achievement of the maximum level of support for the least logistic effort, making the most efficient use of finite resources, transportation assets and lines of communication.

Note: Logistic efficiency ultimately determines the most appropriate organisational structures and necessary resources to support an operation, in some cases employing alternative, possibly non-military, support arrangements. (JDP 0-01.1)

**logistic footprint**

The impact of logistic activity in the joint operations area. It identifies the utilisation of real estate and the consumption of resources, including manpower, equipment, infrastructure, supplies and host-nation support that logistic activity in support of an operation will require.

Note: It includes those resources that are deployed along lines of communication, where they are required for logistic activity, and any liability for additional force protection assets. (JDP 0-01.1)

**logistic functional control**

The authority to direct the method and processes employed to conduct logistic functions in order to ensure commonality and efficient use of resources. (JDP 0-01.1)

**logistic information management**

A discipline that directs and supports the handling of logistic information (knowledge such as facts, data or opinions) throughout its life-cycle, ensuring it becomes the right information in the right form and of adequate quality to satisfy the demands of an organisation.

(NATO MC 319/3; NATO Military Committee agreed, North Atlantic Council pending)

**logistic lead nation**

A nation that assumes overall responsibility for organizing and coordinating an agreed broad spectrum of logistic support for all or part of a multinational force, including headquarters, within a defined geographical area for a defined period.

(NATO MC 319/3; NATO Military Committee agreed, North Atlantic Council pending)

**logistic planning team**

A PJHQ J1/J4 team that is formed at the outset of planning and meets as necessary either physically, through video teleconferencing or virtually.

Note: It acts as the vehicle for coordinating all logistic planning activity for contingencies or operations, depending on the scale of the operation. (JDP 0-01.1)

**logistic role specialist nation**

A nation that assumes the responsibility for providing or procuring a specific logistic capability and/or service for all or part of the multinational force within a defined geographical area for a defined period.

(NATO MC 319/3; NATO Military Committee agreed, North Atlantic Council pending)

**logistics**

The science of planning and carrying out the movement and maintenance of forces. In its most comprehensive sense, the aspects of military operations which deal with:

- design and development, acquisition, storage, movement, distribution, maintenance, evacuation and disposal of materiel;
- transport of personnel;
- acquisition or construction, maintenance, operation and disposition of facilities;
- acquisition or furnishing of services; and
- medical and health service support.

Note: Though it is included in the ratified NATO definition of logistics, Belgium, Czech Republic, Germany, Hungary, Slovakia and the United States do not consider medical and health service support to be a logistic function. (AAP-06/NATO MC 319/3)

**logistic sustainment**

The process and mechanism by which sustainability is achieved and which consists of supplying a force with consumables and replacing combat losses and non-combat attrition of equipment in order to maintain the force's combat power for the duration required to meet its objectives. (AAP-06)

**maintenance**

All actions taken to retain equipment in or to restore it to specified conditions until the end of its use, including inspection, testing, servicing, modification(s), classification as to serviceability, repair, recovery, rebuilding, reclamation, salvage and cannibalisation. (AAP-06)

**materiel**

The stores and equipment (as opposed to personnel) available or required for an undertaking. (JDP 4-00)

**memorandum of understanding**

A written overarching bilateral or multilateral agreed document which implies an intent or responsibility to support allied forces and organisations. (JDP 0-01.1)

**mounting**

All preparations made in areas designated for the purpose, in anticipation of an operation. It includes the assembly in the mounting area, preparation, and maintenance within the mounting area, movement to loading points, and subsequent embarkation into ships, craft, or aircraft if applicable. (AAP-06)

**movement**

The activity involved in the change in location of forces, equipment, personnel and stocks as part of a military operation. Movement requires the supporting capabilities of mobility, transportation, infrastructure, movement control and support functions. (NATO MC 319/3; NATO Military Committee agreed, North Atlantic Council pending)

**multinational integrated logistic unit**

A Unit formed by two or more nations which agree, under the operational control of a force commander at joint force or component level, to provide logistic support to a multinational force.

(NATO MC 319/3; NATO Military Committee agreed, North Atlantic Council pending)

**national support element (NSE)**

A national support element provides the national logistic focus to a joint commander within a multinational operation. It delivers a logistic coordination and liaison function between that nation's forces, other deployed coalition forces and the Joint Commander. National support elements draw their operational control from national authorities. (JDP 0-01.1; proposed modification)

**onward movement**

The process of moving units, personnel and materiel from the reception area, or staging areas if required, to their operational deployment location.

Note: Onward movement may be to any of the components, including to vessels at sea and may utilise military, host-nation support or locally hired transport assets. (JDP 0-01.1)

**operational command**

The authority granted to a commander to assign missions or tasks to subordinate commanders, to deploy units, to reassign forces, and to retain or delegate operational and/or tactical control as the commander deems necessary.

Note: It does not include responsibility for administration. (AAP-06)

**operational control**

The authority delegated to a commander to direct forces assigned so that the commander may accomplish specific missions or tasks which are usually limited by function, time or location; to deploy units concerned, and to retain or assign tactical control of those units. It does not include authority to assign separate employment of components of the units concerned. Neither does it, of itself, include administrative or logistic control. (AAP-06)

**operations security**

The process which gives a military operation or exercise appropriate security, using passive or active means to deny the enemy knowledge of the dispositions, capabilities and intentions of friendly forces. (AAP-06)

**pre-position**

To place military units, equipment or supplies at or near the point of planned use or at a designated location to reduce reaction time, and to ensure timely support of a specific force during initial phases of an operation. (AAP-06)

**Purple Gate**

The single point of entry into the Defence Support Chain to ensure the regulation of materiel flow into the Defence Support Chain for the sustainment of operational theatres. (JDP 0-01.1)

**readiness**

The period of time measured from an initiation order to the moment when the headquarters or unit is ready to perform its task from its peacetime location (permanent or forward deployed) or ready for deployment. (MC 317/1)

**reception**

The process of receiving, offloading, marshalling and transporting personnel and materiel from strategic or operational lift through sea, air or land transportation ports of disembarkation. It involves the preparation of facilities, initial administration and briefing of personnel and their subsequent transport away from the point of disembarkation. (JDP 0-01.1)

**reception, staging and onward movement (RSOM)**

The intra-theatre deployment phase in which units, personnel and materiel arriving in a secured joint operations area are transferred from a port of disembarkation to their final destination on the commander's required date.

Note: During reception, staging and onward movement the deployed joint logistic headquarters will be the supported commander. (NATO Terminology Database)

**reception, staging, onward movement and integration (RSOI)**

The series of activities that enable force elements, on arrival in theatre, to attain full operating capability as part of a joint force. Integration is the synchronised transfer of operationally-ready units and contracted capabilities into the joint force.

Note: The integration process will be J3-led and conducted within components; the deployed logistic headquarters becomes the supporting headquarters. (JDP 0-01.1)

**recognised theatre logistic picture**

The aggregation of logistic data on quantities, location, condition and transit status to provide a near real time disposition of logistic resources, which can be compared with rates of demand and replenishment to inform logistic planning. (JDP 0-01.1)

**recuperation**

The replacement of resources, including personnel and materiel, following operational activity in preparation for further operations. It includes the training necessary to restore force elements to their normal readiness level (Rx). (JDP 0-01.1)

**redeployment**

The process of preparing and executing the relocation of units and materiel to a new destination. This may be to a new deployment area or to peacetime locations where recuperation will take place. (JDP 0-01.1)



**rehabilitation**

The processing, usually in theatre in a relatively quiet area, of units, individuals and equipment recently withdrawn from combat operations, to prepare them for further combat operations. (JDP 0-01.1; proposed modification)

**relief-in-place**

An operation in which, by direction of higher authority, all or part of a unit is replaced in an area by the incoming unit. The responsibilities of the replaced elements for the mission and the assigned zone of operations are transferred to the incoming unit. The incoming unit continues the operation as ordered. (AAP-06)

**reverse supply chain**

The returning of unserviceable and surplus items from the joint operations area. Note: Logistic staff in the joint operations area will identify surplus items and seek disposal instructions from Defence Equipment and Support. Project Teams will request that certain specific items or ranges of items be returned from the joint operations area when no longer serviceable. (JDP 0-01.1)

**sponsored reserves**

Sponsored reserves are civil servants or civilian personnel who agree, in relation to a contract between MOD and their employer, to become special members of a Reserve force. Following acceptance into the Reserve force, they have a legal obligation to undertake military training and be called-out to be members of the military force in order to continue to provide an assured service into an joint operations area. (JSP 567)

**staging**

The process of assembling, temporary holding, and organising of arriving personnel and materiel into formed units, as they prepare for onward movement and further activities.

Note: Staging is a life support function which, at its simplest, feeds and accommodates arriving personnel in a benign or protected environment. (JDP 0-01.1)

**strategic base**

Comprises military assets, industrial capacity both national and international, civilian contractors and National Health Service hospitals.

Note: Military assets include elements owned by the three single-Services, Joint Forces Command and Defence Equipment & Support. (JDP 0-01.1)

**supplies**

All materiel and items used in the equipment, support and maintenance of military forces. (AAP-06)

**supply chain processing time (SCPT)**

The time that it will take for demanded materiel to reach the demanding unit. This is based on the standard priority code of the demand, the time it takes for the demand to be processed in the strategic base, the capacity and speed of the Coupling Bridge and the time required for onward distribution within the joint operations area. (JDP 0-01.1)

**sustainability**

The ability of a force to maintain the necessary level of combat power for the duration required to achieve its objectives. (AAP-06)

**tactical control**

The detailed and, usually, local direction and control of movements or manoeuvres necessary to accomplish missions or tasks assigned. (AAP-06)

**technical arrangement**

A follow-on bilateral arrangement for a specified NATO military activity. It details the responsibilities and procedures for the provision of host-nation support by the host nation to the NATO Commander and sending nations. (AJP-4.5(B))

**transfer of authority**

Within NATO, an action by which a member nation or NATO Command gives operational command or control of designated forces to a NATO Command. (AAP-06)





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