



AUSTRALIAN DEFENCE FORCE PUBLICATION

OPERATIONS SERIES

ADFP 11

OFFENSIVE SUPPORT

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AUSTRALIAN DEFENCE FORCE PUBLICATION

OPERATIONS SERIES

OFFENSIVE SUPPORT

Australian Defence Force Publication 11 (ADFP 11)—*Offensive Support*, is issued for use by the Australian Defence Force and is effective forthwith. This publication supersedes ADFP 11, first edition 1996, all copies of which should be destroyed in accordance with current security instructions.

C.A. BARRIE
Admiral, RAN
Chief of the Defence Force

Australian Defence Headquarters
CANBERRA ACT 2600

May 1999

FOREWORD

1. Australian Defence Force Publication 11 (ADFP 11)—*Offensive Support* describes the nature, principles and mechanisms for planning and conducting offensive support with the Australian Defence Force. The contents of this publication have been derived from established principles and lessons learnt during exercises and operations. ADFP 11 is particularly relevant to those involved in the detailed planning of joint operations. More detailed information on procedures associated with coordinating offensive support is addressed in ADFP 11 Supplement 1—*Offensive Support Procedures*.
2. Every opportunity should be taken by the users of this publication to examine its contents, applicability and currency. If deficiencies or errors are found, amendment action should be taken. Australian Defence Force Warfare Centre welcomes any assistance, from whatever source, to improve this publication.
3. **ADFP 11 is not to be released to foreign countries without the written approval of Head Strategic Command Division.**

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ADFP 2	Withdrawn	
Supplement 1	<i>International Interoperability Arrangements Handbook</i>	7610–66–140–6661
ADFP 3	<i>Rules of Engagement</i>	7610–66–136–3884
Supplement 1	<i>Operational Rules of Engagement</i>	
ADFP 4	<i>Preparedness and Mobilisation</i>	7610–66–139–4137
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Supplement 2	<i>Australia's Maritime Jurisdiction</i>	7610–66–141–6561
ADFP 10	<i>Communications</i>	7610–66–139–4139
ADFP 11	<i>Offensive Support</i>	7610–66–139–4140
ADFP 12	<i>Amphibious Operations</i>	7610–66–139–4141
Supplement 1	<i>Amphibious Operations Handbook</i>	7610–66–141–6920
ADFP 13	<i>Air Defence and Airspace Control</i>	7610–66–139–4142
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ADFP 56	<i>Explosive Ordnance Disposal</i>	7610–66–139–4159

CONTENTS

	Page
Authorisation	iii
Foreword	v
Amendment Certificate	vii
Australian Defence Force Publications—Operations Series	ix
Symbols of Protection	xiii
	Paragraph
CHAPTER 1	
INTRODUCTION TO OFFENSIVE SUPPORT	
INTRODUCTION	
COORDINATION	
JOINT PROCEDURES	
TARGETING	
OFFENSIVE SUPPORT SYSTEM	
Key offensive support agencies	1.10
Artillery tactical headquarters	1.14
Joint Force Air Operations Centre	1.15
Tactical Air Control Party	1.16
Naval support officer	1.17
Electronic warfare officer	1.18
Ground based air defence	1.19
Offensive support coordination	1.21
Airspace control	1.24
LAW OF ARMED CONFLICT CONSIDERATIONS	
ORGANISATION OF AUSTRALIAN DEFENCE FORCE PUBLICATION 11 SUPPLEMENT 1	
CHAPTER 2	
OFFENSIVE AIR SUPPORT	
INTRODUCTION	
BATTLEFIELD AIR INTERDICTION	
CLOSE AIR SUPPORT	
AIR CONTROL SYSTEM	
Joint Force Air Operations Centre	2.9
Air Support Operations Centre	2.11
Control Coordination Centre	2.12
Joint Offensive Support Coordination Centre	2.13
Tactical Air Control Party	2.14
Air liaison officers	2.16
Army Aviation liaison officers	2.17
Forward air controllers	2.18
Air contact officers	2.22
Flying operations facility	2.23
Ground liaison officers	2.24
Supporting Arms Coordination Centre	2.25
AIRSPACE CONTROL	
Airspace Control Authority	2.27
Airspace Control Plan (ACP)	2.28
Airspace control order	2.29
Tactical area of responsibility airspace control	2.30
Annex:	
A. Offensive air support organisation	

CHAPTER 3	NAVAL GUNFIRE SUPPORT	
	INTRODUCTION	
	NATURE OF NAVAL GUNFIRE SUPPORT	
	ORGANISATION FOR NAVAL GUNFIRE SUPPORT	
	Assignment of forces	3.5
	Agencies involved with naval gunfire support	3.7
	Annex:	
	A. Naval gunfire support organisation	
CHAPTER 4	LAND-BASED OFFENSIVE SUPPORT	
	INTRODUCTION	
	TYPES OF FIRE	
	Defensive fire	4.4
	Preparation fire	4.5
	Covering fire	4.7
	Harassing fire	4.8
	Interdiction	4.9
	Counterbattery fire	4.10
	Air defence suppressive fire	4.11
	LAND-BASED OFFENSIVE SUPPORT CAPABILITIES	
	Types of artillery	4.12
	Mortars	4.16
	Armour	4.17
	Direct fire support	4.18
CHAPTER 5	FIRE PLANNING CONSIDERATIONS	
	INTRODUCTION	
	Responsibilities	5.2
	Principles	5.3
	TYPES OF FIRE PLANS	
	Defensive fire plans	5.4
	Offensive fire plans	5.5
	Counterbattery fire plans	5.8
	Interdiction fire plans	5.9
	Fire plans for the advance and withdrawal	5.11
CHAPTER 6	JOINT SUPPRESSION OF ENEMY AIR DEFENCE	
	Threat	6.3
	Component responsibilities	6.4
	Support	6.8
	Theatre joint suppression of enemy air defences	6.9
	Localised joint suppression of enemy air defences	6.11
	Opportune joint suppression of enemy air defences	6.13
	Joint suppression of enemy air defences agencies	6.16
	Glossary	
	Acronyms and Abbreviations	



Symbols of Protection

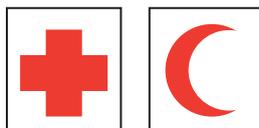


Distinctive Sign of:

Sign

Application/Explanation

Civilian and Military Medical Units & Religious Personnel



International Red Cross and Red Crescent Movement
(Geneva Conventions I-IV, 1949)
(Protocols I & II, 1977)

Used as a symbol to protect medical units including field hospitals, transports, medical and religious personnel.

Protective emblem of ICRC delegates in conflicts.

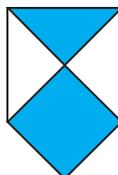
Used to indicate activities of National Societies, such as the Australian Red Cross Society. In times of conflict, a National Society can only use the emblem as a protective sign if they are an official auxiliary to the medical services of the armed forces.

Civil Defence
(Protocol I, 1977)



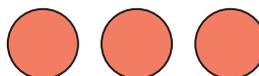
Used as a symbol to protect personnel and equipment engaged in providing assistance to civilian victims of war. The symbol is used by personnel such as firefighters, police and emergency rescue workers.

Cultural Property
(The Hague Convention of 1954)
(Protocol I, 1977)



Provides general protection to places and object of cultural significance. Special protection for places that are registered with UNESCO e.g. churches, archaeological sites, monuments and museums.

Dangerous Forces
(Protocol I, 1977)



Provides specific protection to works or places that may contain dangerous forces e.g. dams or atomic reactors.

**For further information, please contact the International Humanitarian Law Officer,
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CHAPTER 1

INTRODUCTION TO OFFENSIVE SUPPORT

It is appropriate to refer to two factors, which contributed to the British victory; those were the bombardments provided in the coastal sector by the Navy and our superiority in the air. The naval bombardments caused a great deal of destruction of enemy transport and armoured fighting vehicles on the coast road, engaged with good effect the enemy's guns and caused a considerable deterioration in the enemy morale, without hope of retaliation and little of protection from the gruelling fire from the sea flank.

Lavarack to War Council
1 AUST CORPS SYRIA
3 Oct 41

INTRODUCTION

1.1 Offensive support is applicable to the entire spectrum of conflict and is defined as:

... the offensive measures taken to support a commander in pursuing their tactical aim. Offensive support may be organic to the Service of the supported unit or be provided by another Service, and covers:

- a. naval gunfire support;
- b. offensive support from any ground-based weapon system other than small arms; and
- c. offensive air support.

1.2 This publication describes the types of offensive support and explains the generic control arrangements employed by the Australian Defence Force (ADF). Details regarding agencies and control procedures involved in the employment of ground-based offensive support, offensive air support and naval gunfire support are contained in Australian Defence Force Publication (ADFP) 11 Supplement (SUPP) 1—*Offensive Support Procedures*.

COORDINATION

1.3 Joint offensive support operations require a high degree of coordination to ensure that it is provided rapidly and effectively in its most suitable form. Planning and execution must be conducted by joint control agencies or through established joint coordination arrangements. At the operational level, Commander Australian Theatre will conduct operations or campaigns either directly or through a number of joint force commanders.

1.4 The size of a joint force and its Service components may vary. Therefore the organisation and coordination arrangements must be flexible to meet the needs of a particular joint operation. The control and coordination system for the provision of joint offensive support must be carefully considered and agreed jointly during planning.

JOINT PROCEDURES

1.5 While offensive support requires flexibility, it is supported by procedures, which are standardised and contain specific terminology and message formats. These facilitate and expedite the provision and control of offensive support in what may be a confused combat situation with rapidly changing and conflicting priorities. Procedures applicable to joint offensive support are detailed in ADFP 11 SUPP 1. Departures from joint procedures, while permissible, must be:

- a. jointly agreed,
- b. used sparingly and with caution because of other friendly forces using standard procedures, and
- c. made known to all affected personnel including flank and supporting forces.

TARGETING

1.6 Targeting is conducted to support the commander's plan and is generally aimed at attacking a centre of gravity at the strategic, operational or tactical level. It is defined as the process of selecting and analysing targets, and matching the appropriate response to them with consideration of national strategy, operational requirements and capabilities.

1.7 Targeting is a core ADF activity that supports force application and includes lethal and non-lethal options. Its aim is to apply the most suitable weapon to an appropriate target at a precise time to meet the desired level of effectiveness and be in accordance with the Commander's intent and the Law of Armed Conflict (LOAC).

1.8 At all levels, commanders require staff to provide advice on targeting priorities and coordinate offensive support resources to achieve objectives. At the operational level and below, the staff organisations review target information, develop target guidance and priorities and may prepare and refine target lists. Daily meetings may be required to:

- a. disseminate the commander's targeting guidance, and objectives;
- b. monitor the effectiveness of operations;
- c. approve new target nominations; and
- d. confirm fire support coordination measures which have been implemented in consideration of factors such as:
 - (1) LOAC considerations,
 - (2) special operations in areas of operation, or
 - (3) requirements of current and future operations.

Targeting organisations and procedures at the strategic and operational levels are further developed in ADFP 23—*Targeting*.

OFFENSIVE SUPPORT SYSTEM

1.9 The offensive support system requires a robust but flexible organisation that facilitates an efficient flow of information and effective control of offensive support assets at all levels. Offensive support agencies at all levels must include or have access to all control elements that influence the battlespace.

Key offensive support agencies

1.10 The Joint Offensive Support Coordination Centres (JOSCC) are the key offensive support agencies at the joint force and tactical levels. These centres are collocated with the respective level headquarters (HQ) and implement offensive support in line with the commander's intent. They are based on extant organisations and are augmented by electronic warfare, intelligence and other personnel as required. The complexity of the JOSCC will change from one level to another although the generic responsibilities remain the same. The main functions of the JOSCC are:

- a. offensive support coordination, and
- b. control of assigned airspace.

1.11 The JOSCC at the tactical level is an integral part of a formation HQ. It generally consists of an artillery tactical HQ, the Tactical Air Control Party (TACP), an Army aviation element, a naval support party where required and a Ground Based Air Defence Liaison Officer (GBADLO), normally as part of a Ground Based Air Defence Coordination Cell (GBADCC).

1.12 The JOSCC at the operational level is usually based around the joint HQ joint offensive support staff with an Army aviation element, a naval support party where required, and a GBADLO. Other specialist advisers such as electronic warfare (EW) staff augment the JOSCC as required. It is collocated with the Joint Force Air Operations Centre (JFAOC) to coordinate offensive support with airspace control.

1.13 There may be a requirement to bolster or minimise these organisations, however the requirement to address essential functions remains constant. JOSCC personnel must ensure they understand the commander's concept, the nature of current and planned operations and how joint offensive support coordination and airspace control contribute to the effective conduct of operations.

Artillery tactical headquarters

1.14 Offensive support assets should always be available, either on request or through apportionment or assignment. The artillery tactical HQ coordinates the offensive support assets available to the supported formation to best effect at the tactical level. The HQ must ensure that artillery and mortar assets are always in action within range of operations and provided with sufficient ammunition to support current and planned operations. A reserve of ammunition must be provided for tasks directed by the commander. Ongoing liaison with key operations and logistic staff of the HQ is essential to task achievement.

Joint Force Air Operations Centre

1.15 The JFAOC is collocated with the JOSCC to coordinate air operations with offensive support operations at joint force level. Its functions and organisations are contained in [chapter 2—'Offensive air support'](#).

Tactical Air Control Party

1.16 The TACP is collocated with the JOSCC at the tactical level and is responsible for the coordination of air operations with all offensive support. Its functions and organisations are contained in [chapter 2](#).

Naval support officer

1.17 Naval support officers are collocated with the JOSCC to coordinate naval gunfire support requirements.

Electronic warfare officer

1.18 EW officers are collocated with the JOSCC to provide specialist EW.

Ground based air defence

1.19 Where there may be considerable low-level air activity, such as over forward formations and airfields, the Joint Force Air Defence Commander is unlikely to be aware of all aircraft movements. Local control for weapons within the formation area is effected by positioning local controllers, in contact with their units, within the GBADCC at formation HQ and at air traffic facilities.

1.20 The GBADCC is collocated with the airspace coordination element in the TACP and provides the link between formation HQ and the Ground Based Air Defence Command Post (GBADCP). The GBADCP is the senior air defence command post within a formation area and sited where it can achieve best communications with weapon sites. The local controller advises friendly air elements (through the TACP or JFAOC) of the location of ground based air defence assets, their condition and provides timely advice of enemy air activity to the supported HQ in the form of air alert warnings relayed from the GBADCP. Where air defence resources are allocated under operational control or operational command of a formation, the commander of the allocated air defence unit doubles as the ground based air defence commander and provides air defence advice directly to the commander of the JOSCC.

Offensive support coordination

1.21 All assets available for offensive support should be considered in order to meet the commander's requirements with maximum effectiveness. This is possible if alerted by the targeting process at each level. The JOSCC is integral to the targeting process and drives the allocation of offensive support resources on behalf of the commander at both the tactical and operational levels.

1.22 To allocate resources effectively, staff must be aware of all operations in the area of operations and maintain focus on the commander's concept of operations, in particular the concept of offensive support and its inherent target priorities. Joint offensive support staff must ensure that assets are tasked to the maximum extent, consistent with maintenance, repair and resupply requirements.

1.23 Awareness of all airspace users is essential when coordinating offensive support. Clearance procedures must consider all users while minimising delay in the provision of offensive support. The TACP is the component of the JOSCC, which facilitates the coordination of offensive support with other airspace users.

Airspace control

1.24 Airspace control increases combat effectiveness by promoting the safe, efficient, and flexible use of airspace. The primary objective of airspace control in an area of operations is to complement and support the commander's objectives without adding undue restrictions and inflicting under efficiency on the capabilities of any Service to execute assigned tasks.

1.25 Each Service within a joint force must be able to operate aircraft and weapon systems throughout the joint force area of operations with maximum freedom, consistent with the degree of risk acceptable to the Joint Force Commander (JFC). The airspace control function includes the coordination, integration and regulation of airspace users. However, authority to approve, disapprove, or deny combat operations is vested only in the JFC.

1.26 Airspace control involves air defence operations, air traffic regulation, tactical mission control and certain aspects of offensive support coordination. The JFAOC is the focal point for these activities at the operational level. A similar function is met by the JOSCC at the tactical level, and both organisations are inextricably linked with the airspace control function. The airspace control organisation existing within the tactical air control system is described in [chapter 2](#). Airspace control and offensive support coordination measures are described in part 4 of ADFP 11 SUPP 1.

LAW OF ARMED CONFLICT CONSIDERATIONS

1.27 Offensive support coordinators must always be aware of the impact of the LOAC and extant rules of engagement (ROE) on the options that they can legitimately employ to achieve the commander's objectives. LOAC is an important component of international law that regulates the way in which nations conduct armed conflict and must be complied with by the ADF. The issue of ROE imposes further restrictions on options. These directives specify circumstances and limitations for the application of military force.

1.28 There are a number of overriding principles that accompany the lawful application of military force. The first is self-defence; nothing in the LOAC prohibits ADF members from taking appropriate action in self-defence or negates their right to self-defence. Reasonable force is defined as the minimum amount of force necessary to neutralise a threat, and is to be used for self-protection from imminent and immediate threat. The second principle is humanity; it is forbidden to employ arms, projectiles or material calculated to produce unnecessary suffering to either persons or property. The third principle is proportionality; in conducting an operation, military commanders and planners are to ensure that loss of life or property is in proportion to the military advantage to be gained.

1.29 Subject to the above considerations, the ADF may target any legitimate military objective. Combatants and those objectives which by nature, location, purpose or use could make an effective contribution to an enemy's cause and whose total or partial destruction, capture or neutralisation provide an attacker with a military advantage could legitimately be targeted.

1.30 ROE and LAOC are covered in detail in ADFP 3—*Rules of Engagement* and ADFP 37—*Law of Armed Conflict*.

ORGANISATION OF AUSTRALIAN DEFENCE FORCE PUBLICATION 11 SUPPLEMENT 1

1.31 In order to group chapters of related information, ADFP 11 SUPP 1 has been organised in four parts, as follows:

- a. Part 1—Offensive Air Support.
- b. Part 2—Naval Gunfire Support.
- c. Part 3—Land-based Offensive Support.
- d. Part 4—Fire Planning and Offensive Support Coordination.

CHAPTER 2

OFFENSIVE AIR SUPPORT

INTRODUCTION

2.1 Offensive air support (OAS) encompasses Battlefield Air Interdiction (BAI) and Close Air Support (CAS). The organisation required for OAS must be capable of performing the following functions:

- a. planning,
- b. requesting,
- c. tasking,
- d. executing,
- e. liaising, and
- f. mission reporting.

2.2 Aircraft assigned to, or in support of a Joint Force Commander (JFC) may be tasked for OAS in the Joint Force Area of Operations (JFAO) as follows:

- a. BAI beyond fire support coordination lines; and
- b. CAS against hostile targets that are in proximity to friendly forces and requires detailed integration of each mission with the fire and movement of friendly forces.

BATTLEFIELD AIR INTERDICTION

2.3 BAI operations, which may involve maritime strike, are conducted to destroy, neutralise, or delay the enemy's military potential before it can be brought to bear effectively against friendly forces. These operations should be conducted at such distance from friendly forces that detailed integration of each mission with the fire and movement of friendly forces is not required.

2.4 BAI operations are directed at preventing the enemy moving into, within and out of the area of operations (AO). Targets may include troop and vehicle concentrations, shipping, supply trains and convoys, communication centres and headquarters (HQ), bridges, railways, roads and waterways. These targets would normally require penetration of enemy-held territory or, in the case of maritime strike, international waters.

2.5 Aircraft and submarines would normally assume the major role in interdiction operations. However, indirect firepower may also be used. Air forces may represent only a portion of available assets to implement a broad interdiction plan. Depending upon the AO, naval forces may play the major role in interdicting the enemy's sea lanes being used for resupply. When enemy forces are being augmented and supplied using air transport, counter air operations may play a major role in interdiction. Effective interdiction operations should integrate multi-service assets and direct them in a cohesive effort against the enemy's combat and combat support elements and the means by which they are supported and directed.

CLOSE AIR SUPPORT

2.6 CAS is air action against hostile targets, which are in proximity to friendly forces. CAS requires detailed integration of each air mission with the fire and movement of these troublesome forces. The word 'close' does not imply a specific distance; rather, the requirement for detailed integration because of friendly force proximity, friendly fire or planned movement. In addition to concentration through augmenting the fire of land-based weapons, the range and speed of CAS aircraft allow rapid application

of firepower to targets out of range or beyond the capability of land-based weapons. Concentration of all offensive support weapons may be crucial in some circumstances and decisive in others. CAS may be the only fire support available during critical landing stages of airborne and amphibious operations.

2.7 Effective CAS is more likely in an environment where there is some distance between friendly forces and significant targets. Such targets may include troop concentrations, enemy fire support assets and armoured vehicles. Close contact between friendly and enemy forces limits the application of CAS due to weapon delivery limitations. CAS in this environment may result in the reduced effectiveness of strikes and possible friendly casualties.

AIR CONTROL SYSTEM

2.8 The air control system is a Royal Australian Air Force (RAAF) sponsored, jointly staffed structure of organisations and communications that plans, directs, controls and coordinates OAS. The following is a non-hierarchical list of organisations involved in the air control system and is diagrammatically represented in [annex A](#). These organisations should not be regarded discretely, but as combinations to satisfy specific functions in the overall system:

- a. Joint Force Air Operations Centre (JFAOC);
- b. Air Support Operations Centre (ASOC);
- c. Control Coordination Centre (CCC);
- d. Joint Offensive Support Coordination Centre (JOSCC);
- e. Tactical Air Control Party (TACP);
- f. air liaison officers (ALO);
- g. Army Aviation liaison officers (AAVNLO);
- h. Airspace Coordination Element (ACE);
- i. forward air controllers (FAC);
- j. air contact officers (ACO);
- k. carrier operations room or flying operations facility;
- l. ground liaison officers (GLO);
- m. Supporting Arms Coordination Centre (SACC); and
- n. Airspace Control Centre.

Joint Force Air Operations Centre

2.9 The JFAOC is the jointly manned operations centre of air component HQ within a joint force headquarters. It is formed by the collocation of an Airspace Control Centre, ASOC, Air Transport Operations Centre and Air Defence Operations Centre or Air Defence Liaison Cell (whichever are formed). The JFAOC is directed by air staff officers appointed by the air component commander (ACC). Subordinate agencies perform the tasks of liaison, planning, coordination and execution of air operations. Through the facilities of the JFAOC, the ACC plans, directs, controls and coordinates tactical air operations. Where an air component is not formed, JFAOC functions are met by air staff of the joint HQ.

2.10 When collocated with an Army formation HQ, the JFAOC subsumes the transport and offensive support element functions of that formation's TACP. When the JFAOC is not collocated with the formation HQ, the formation TACP retains its responsibilities.

Air Support Operations Centre

2.11 The ASOC is an element of JFAOC. It is a RAAF agency that includes Army and, if appropriate, allied representation. In amphibious operations, before an ASOC has been established ashore, its functions are undertaken by a SACC, as described in Australian Defence Force Publication (ADFP) 12—*Amphibious Operations*. The ASOC plans, controls, and coordinates offensive air operations including air reconnaissance in accordance with priorities set by the ACC.

Control Coordination Centre

2.12 The CCC is a RAAF sponsored jointly manned agency that provides the interface between the Joint Force Air Defence Operations Centre and control elements. The CCC exercises tactical control over all assigned air defence assets and uses the composite air picture to coordinate and control activity according to the Joint Force Air Defence Commander's plans. Control elements may belong to RAAF, Royal Australian Navy (RAN) or allied formations working within a sector. The CCC therefore becomes the focal point for integration of control activity of these different elements. There is only one CCC in an air defence sector.

Joint Offensive Support Coordination Centre

2.13 The role of the JOSCC is to coordinate all forms of offensive support at joint force and tactical level respectively. Further detail is found in [chapter 1—'Introduction to offensive support'](#).

Tactical Air Control Party

2.14 Manned and equipped to coordinate airspace, provide air liaison and control aircraft, a TACP is the forward component of the tactical air control system. RAAF sponsored and jointly manned, TACPs are a component of Army tactical formation HQ and are normally placed under operational control of the supported formation commander. Tasking of air assets assigned to the formation commander is coordinated through the TACP. A TACP is a component of the JOSCC and can consist of up to four elements:

- a. offensive support element which requests, controls and coordinates tasking of RAAF OAS;
- b. transport support element which requests, controls and coordinates tasking of RAAF air transport support;
- c. Army Aviation Cell which requests, controls and coordinates tasking of Army aviation support; and
- d. Airspace Coordination Element which coordinates formation airspace.

2.15 TACP personnel and equipment requirements will vary depending upon the tactical situation and the extent to which execution of tactical air support and airspace control is decentralised. The composition of TACP should be determined jointly during pre-deployment planning and may vary during the conduct of operations.

Air liaison officers

2.16 ALO, as part of the JOSCC staff, provide advice on air support and airspace coordination matters to the commanders of forward Army formations, under whose operational control they are assigned. An ALO should be a pilot experienced in offensive air operations, tactical air transport operations or helicopter operations and should be from the Service providing the majority of air support. They are given a title indicating the formation to which they are allotted, eg joint force ALO. ALO are responsible for:

- a. advising on capabilities and employment of all forms of air support;
- b. assisting the Army staff to prepare requests and plans for air support;
- c. providing advice on the construction, suitability and serviceability of forward airstrips and landing sites;
- d. commanding the staff of TACP located at formation HQ;

- e. coordinating the tasking of RAAF or naval aircraft assigned in support of the formation to which they are attached;
- f. coordinating aircraft movement in the airspace above the formation's AO; and
- g. receiving and relaying target intelligence obtained from pilot debriefs to formation operations and intelligence staffs.

Army Aviation liaison officers

2.17 AAVNLO, as part of the JOSCC staff, provide advice on Army aviation matters to the commanders of forward Army formations, under whose operational control they are assigned or supporting. An AAVNLO should be a pilot experienced in Army helicopter operations, and tactical airspace management. AAVNLO are responsible for:

- a. ALO duties if Army Aviation assets are the majority of air support for the particular formation,
- b. advising on capabilities and employment of all forms of Army Aviation,
- c. assisting the Army staff to prepare requests and plans for Army Aviation support,
- d. providing advice on suitability and serviceability of landing zones for Army Aviation assets, and
- e. assisting the ALO.

Forward air controllers

2.18 A FAC is a specialist officer who may plan OAS missions and may assume tactical control of aircraft engaged in those missions. A FAC may be ground based (FAC(G)) or airborne in a variety of air platforms available and appropriate to the mission. Airborne FAC options include rotary wing (FAC(H)), light fixed-wing aircraft (slow FAC) and fast jet platforms (fast FAC). The prime function is to integrate air power with ground operations through specialist knowledge of aircraft tactics, air-to-ground weapons selection, aircraft performance and airspace management. A FAC may facilitate BAI, CAS and air reconnaissance missions. An airborne FAC provides the supported unit with specialist air reconnaissance capability.

2.19 Primary duties of the FAC are to:

- a. assist planning and integrating the OAS mission in accordance with the requirements of the supported commander and JOSCC; and
- b. control aircraft tasked for CAS missions by:
 - (1) coordinating CAS missions to avoid conflict with other offensive support in the immediate area of the target;
 - (2) accepting responsibility for the safety of friendly forces being supported;
 - (3) where possible, marking of targets for the delivery of air ordnance;
 - (4) control selection and delivery of ordnance in the target area to achieve maximum effectiveness;
 - (5) control the selected attack tactics to achieve maximum effectiveness while ensuring safety of assets under their control from enemy forces; and
 - (6) assessing the mission results.

2.20 Secondary duties of the FAC are to:

- a. provide visual reconnaissance, if airborne; and
- b. adjust artillery and naval gunfire support.

2.21 Slow FAC are usually allocated to Army formations as part of a TACP and are deployed with their aircraft to a forward airfield. FAC(G) will be present in some Army formations but probably employed in other duties until required to perform FAC functions. Fast FAC and FAC(H) will normally be employed in other roles until specifically allotted to a TACP by the ACC. All FAC may be deployed below task force level to meet particular tactical situations.

Air contact officers

2.22 If a FAC is not available, ACO can provide an advisory service for CAS missions. An ACO can be an officer or noncommissioned officer from any Service who has qualified at an approved course to indicate target locations to OAS aircraft. An ACO has a limited capability in airspace coordination.

Flying operations facility

2.23 The flying operations facility is established to support air operations. It is a focal point for information flow between the tactical air control system and flying units who staff the facility. The facility fulfils the functions of an operations room and provides flying units with the means to:

- a. receive and process aircraft tasking messages,
- b. brief and debrief aircrew,
- c. dispatch information relating to the status of air resources,
- d. dispatch friendly air movement messages and tasked aircraft details, and
- e. receive and process mission information.

Ground liaison officers

2.24 GLO represent Army's requirements to RAAF units supporting operations and training activities. GLO are usually allocated under operational control of the supporting ACC or officers commanding wings involved in joint operations. Army provides GLO at RAAF airfields, ship-borne ground liaison officers (SBGLO) in RAN ships operating aircraft capable of providing offensive support to land operations and a ground liaison (GL) Group HQ at Air Force HQ. Responsibilities of GLO and SBGLO are to:

- a. provide the operational link between supporting and supported forces by notifying:
 - (1) concepts of operations;
 - (2) current and projected operational situations;
 - (3) current enemy situation and activity in the task area; and
 - (4) fire support coordination line, forward line of own troops and friendly force locations;
- b. act as advisers to RAAF operations staffs and aircrew by:
 - (1) interpreting Army requests;
 - (2) providing information about Army organisations, weapons, equipment, tactics and techniques; and
 - (3) assisting with aircrew training in those subjects;
- c. extract information from plans, operation orders, situation reports, location statements and intelligence summaries to assist in the provision of tactical and intelligence details to squadrons and intelligence and operations staff;
- d. assist operations and intelligence staffs to brief aircrew flying support missions, including the provision of marked maps, photographs and other briefing material specific to the task from Army sources;
- e. assist staff to debrief aircrew;

- f. report mission results to operations and intelligence staffs;
- g. assist in aircrew training on aspects of enemy weapon and equipment identification and employment, including tactics and techniques;
- h. supervise the functions of GL sections, particularly:
 - (1) maintenance of a master operations map,
 - (2) operational staff work associated with GL duties, and
 - (3) administration; and
- i. provide advice and information to formations and units on air support matters.

Supporting Arms Coordination Centre

2.25 The SACC provides the commander of an amphibious force with services similar to those provided to the commander of a land formation by a JOSCC. Information on SACC manning, layout, procedures and individual responsibilities can be found in part 2 of ADFP 11 Supplement 1—*Support Procedures* and in ADFP 12.

AIRSPACE CONTROL

2.26 Airspace control enhances the effectiveness of air operations by promoting the safe, efficient and flexible use of airspace. It involves air defence operations, air traffic control, tactical mission control and certain aspects of fire support coordination. Control may be effected by positive or procedural methods, or by a combination of both, depending on tactical needs and system capability.

Airspace Control Authority

2.27 The JFC provides the broad policies to be applied in the use of airspace after considering the requirements of all airspace users. The JFC may assign overall responsibility for the operation of the airspace control system to a subordinate commander who becomes the Airspace Control Authority (ACA). The ACA develops and implements the JFC policy using appropriate facilities, equipment, and personnel. The JFC resolves conflicts between joint force elements over the use of airspace that cannot be resolved through coordination with ACA. The responsibilities of the ACA are detailed in ADFP 13—*Air Defence and Airspace Control*.

Airspace control plan

2.28 The airspace control plan (ACP) is developed by the ACA in consultation with component commanders and approved by JFC. It provides the basis for a viable airspace control system. The ACP summarises the JFC guidance on airspace control, defines the airspace control organisation, outlines the management process, and explicitly defines any authority delegated. The ACP should be promulgated widely in an easily understood format. It may be issued as a stand-alone document or an annex to a supporting plan or operation order.

Airspace control order

2.29 The airspace control order is developed and distributed on a cyclic basis and institutes airspace control procedures for specified time periods. The airspace control order contains modifications to guidance and/or procedures in the ACP, promulgates procedural control measures, and updates positive control measures, including identification, friend or foe codes.

Tactical area of responsibility airspace control

2.30 Airspace is a crucial dimension providing commanders with a medium to manoeuvre, conduct reconnaissance and project firepower. Accordingly, commanders require the flexibility to employ organic and supporting assets in the airspace above a tactical area of responsibility (TAOR) within limitations set by JFC and commensurate with that commander's mission and capabilities. In planning for TAOR operations, a commander must address the effective utilisation of airspace within that TAOR. Airspace

control responsibilities are addressed by a TAOR commander's existing HQ organisation, supplemented where necessary, by air control elements and liaison staff. Where a HQ is not supplemented, relevant aspects of TAOR airspace control remain the responsibility of JOSCC.

2.31 Delegation of authority. The JFC, after consultation with ACA, may delegate control authority to a TAOR commander for airspace control within that commander's TAOR. In recommending delegation, the ACA considers that commander's requirements and capability to integrate, coordinate and regulate airspace within that TAOR. Upon delegation, the ACA retains overall authority for airspace control. The ACA and the TAOR commander agree on procedures for coordinating and integrating air defence, offensive support, air traffic and other air activities within the specified area into the wider AO.

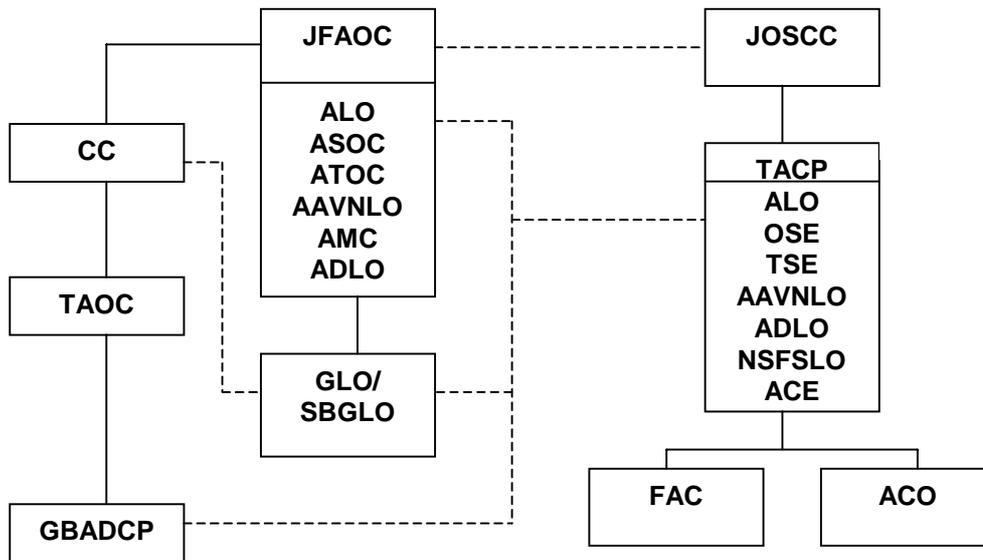
2.32 TAOR airspace control organisation. The organisation providing airspace control within a TAOR will be determined by the scope and intensity of operations and may vary during the conduct of operations. A TAOR airspace control organisation typically includes those elements that comprise a JOSCC. The primary tasks of a TAOR airspace control organisation include:

- a. developing and coordinating airspace control standing operating procedures, plans and annexes;
- b. coordinating and integrating airspace user requirements within the TAOR and with adjacent or superior organisations;
- c. identifying and resolving airspace user conflicts;
- d. approving and forwarding airspace requests in accordance with the airspace control plan; and
- e. maintaining appropriate airspace control information displays and maps.

2.33 ADFP 13 provides further detail on airspace procedures and TAOR operations.

Annex:

- A. [Offensive air support organisation](#)

OFFENSIVE AIR SUPPORT ORGANISATION

TAOC—Tactical Air Operations Centre

ATOC—Air Transport Operations Centre

CC—Command Centre

AMC—Airspace Management Centre

TSE—Transport Support Element

NSFSLO—Naval Surface Fire Support Liaison Officer

ACE—Airspace Control Element

CHAPTER 3

NAVAL GUNFIRE SUPPORT

INTRODUCTION

3.1 Naval Surface Fire Support (NSFS) is the concept that encompasses surface gun, missile, and electronic warfare systems in support of a unit or units tasked with achieving the commander's objectives. Extant Australian Defence Force (ADF) capabilities are limited to the provision of Naval Gunfire Support (NGS) which is primarily used for area neutralisation. This can be either for general support for friendly troops or interdiction. NGS may complement other means of offensive support and is of particular value in the early stages of an amphibious landing when artillery organic to the landing force has not yet been deployed. Notwithstanding the relevance of NSFS to combined operations, this chapter discusses ADF doctrine applicable to the employment of NGS. Many of the principles, controlling organisations and coordinating measures described are relevant to the employment of all elements of NSFS.

NATURE OF NAVAL GUNFIRE SUPPORT

3.2 Naval guns differ from artillery in that they are high velocity, flat trajectory, fixed charge weapons. These characteristics require consideration during the planning and conduct of fire missions. Particular advantages of NGS are mobility, high rates of fire and capability for sustained effort.

3.3 The following considerations apply to the application of NGS:

- a. **Zone of the gun.** High velocity and flat trajectory cause a large range dispersion relative to artillery.
- b. **Reverse slopes.** Flat trajectory will increase the zone of the gun when firing on to reverse slopes.
- c. **Crests.** Flat trajectory may cause crest clearance problems. Close liaison between the allocated ship and the forward observer is recommended to determine crest clearance planning factors.
- d. **Navigation.** Navigation inaccuracies can result in a corresponding inaccuracy of the initial ranging round. Integration of global positioning system equipment into NGS—capable units will substantially reduce navigation-induced imprecision. Incorrect estimation of the tidal stream can also create a drifting effect on the fall of subsequent rounds.
- e. **Angle ship-target-spotter.** A rapid change in the bearing of the line of fire during the mission tends to increase errors in the application of spotting corrections, as the spotter ceases to appreciate the range and line zone components affecting fall of shot.
- f. **Weather.** High sea states can limit or preclude the use of NGS.
- g. **Enemy maritime operations.** Ships providing NGS may come under attack by shore, sea or air units. In these circumstances ships will have to take self-defence measures which may inhibit or preclude the provision of NGS. Guided Missile Destroyers can operate in the NGS split mode and conduct single mounting bombardment and anti-aircraft or surface firings simultaneously.

3.4 Types of NGS are:

- a. direct fire at on-shore targets visible from the ship, with observation and corrections from the ship;
- b. indirect fire on targets not visible from the ship, where fire is observed and corrected by a forward observer or air observer; and

- c. predicted fire, a form of indirect area fire without benefit of observers, which is normally used for harassment or interdiction missions as part of a fire plan.

ORGANISATION FOR NAVAL GUNFIRE SUPPORT

Assignment of forces

3.5 In amphibious operations, or other operations near a coast, NGS may be provided by destroyers or other combatants assigned to the amphibious task force or allocated to support land forces already ashore.

3.6 NGS ships may be assigned by:

- a. Maritime Commander Australia,
- b. naval component commander of a joint force, or
- c. commander of an amphibious task force (CATF).

Agencies involved with naval gunfire support

3.7 A Joint Offensive Support Coordination Centre (JOSCC), based on the tactical headquarters (HQ) of the artillery commander and incorporating the Tactical Air Control Party and naval representation, may be formed at a land formation HQ. The role of the JOSCC is to plan and coordinate all offensive support available to the formation.

3.8 When more than one ship is providing NGS to a land formation, a Naval Gunfire Operations Centre (NGOC) is established, normally in the senior officer's ship. The NGOC controls the processing of requests, tasking and execution of NGS. In amphibious operations NGOC is incorporated in the Supporting Arms Coordination Centre (SACC) until a JOSCC and, when required, an Air Support Operations Centre (ASOC) have been established ashore.

3.9 NGOC is normally staffed by the:

- a. Naval Gunfire Operations Centre Gunnery Officer (NGOC-GO), and
- b. Naval Gunfire Support Liaison Officer (NGSLO).

When NGS operations are expected to be neither intense nor sustained the duties of NGOC-GO may be performed by the ship's gunnery officer. NGOC staff should include two to four sailors for the manning of communications nets and maintenance of stateboards and records.

3.10 Where an amphibious operation requires offensive support a SACC will be established, normally in the ship carrying CATF and the Commander Landing Force (CLF). This joint agency has the task of planning, allocating and coordinating offensive support for the operation. The SACC incorporates the functions of the Naval Support Officer (NSO), ASOC and JOSCC until CLF has moved ashore and established a JOSCC. Appointments for a SACC comprise:

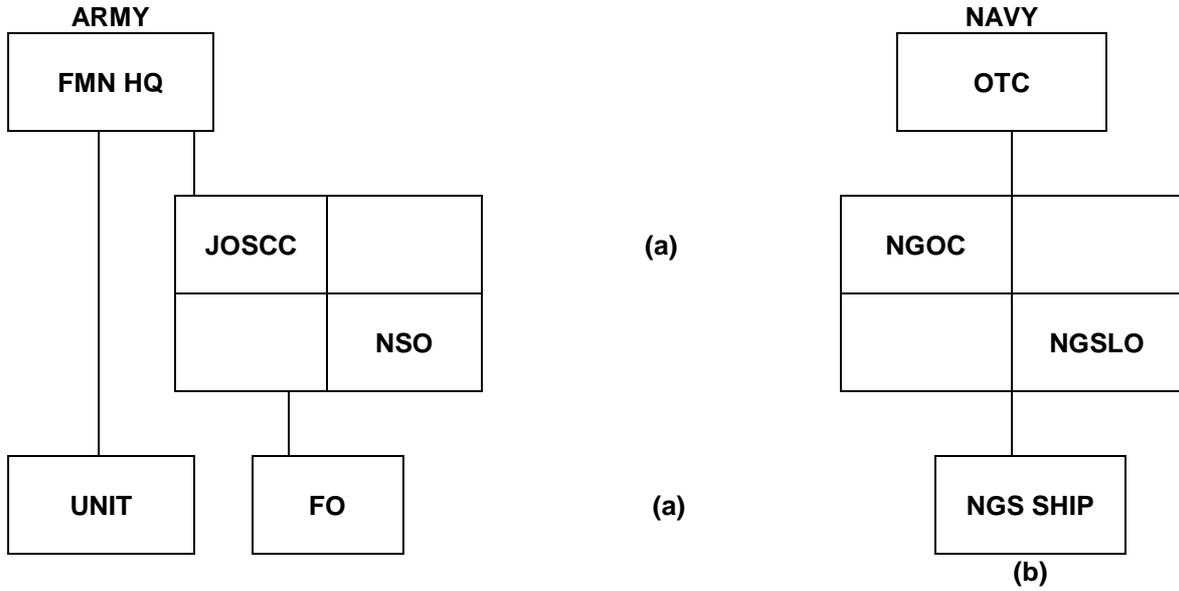
- a. SACC coordinator—CLF senior artillery officer;
- b. SACC gunnery officer—a naval gunnery officer, who is NSO of the supported force ashore;
- c. SACC air liaison officer—an Air Force aircrew officer; and
- d. sailors to maintain SACC stateboards and communications.

3.11 An example NGS organisation is contained in [annex A](#). Details of manning, layout and equipment of SACC are contained in Australian Defence Force Publication 12—*Amphibious Operations*.

Annex:

- A. [Naval gunfire support organisation](#)

NAVAL GUNFIRE SUPPORT ORGANISATION



Legend:

Command _____

Coordination (a)

Notes

- (a) Coordination includes requesting, tasking, liaison and transmission of fire orders.
- (b) NGSLO may be allocated to other naval gunfire support ship as required.

CHAPTER 4

LAND-BASED OFFENSIVE SUPPORT

INTRODUCTION

4.1 The purpose of offensive support is to establish such fire supremacy on the battlefield that the enemy can neither interfere with friendly operations nor effectively develop their own. Land-based offensive support consists of indirect and direct fire support. Indirect fire is directed at a target that cannot be seen by the aimer of the weapon system. Army indirect fire support consists of artillery, mortars and general support machine guns. Direct fire support resources, which include tanks and other armoured fighting vehicle (AFV), infantry machine-guns and anti-armour weapons, can be used to augment indirect resources.

4.2 The control of land-based offensive support is implemented through the joint system described in [chapter 1—‘Introduction to offensive support’](#). The joint procedures used to coordinate land-based offensive support are described in part 3 of Australian Defence Force Publication 11 Supplement 1—*Offensive Support Procedures*.

TYPES OF FIRE

4.3 Types of support required in tactical land operations include:

- a. in defence:
 - (1) defensive fire, which includes counter preparation fire, and close defensive fire including final protective fire; and
 - (2) covering fire, as part of the counterattack;
- b. in attack:
 - (1) preparation fire,
 - (2) covering fire, and
 - (3) defensive fire to cover reorganisation; and
- c. in all phases of war:
 - (1) harassing fire,
 - (2) interdiction,
 - (3) counterbattery fire, and
 - (4) joint suppression of enemy air defences.

Defensive fire

4.4 The aim of defensive fire is to disorganise enemy preparations for an attack or counterattack and to break up their assault. Defensive fire will inflict both personnel and equipment casualties on the enemy and it may be divided into the following:

- a. **Counter-preparation fire.** The aim of counter-preparation fire is to disrupt enemy preparations for an attack or counterattack and to inflict casualties on their reserves during the assault. It is used to engage targets such as assembly areas, routes from assembly areas to the forming-up place, headquarters (HQ) and reserves. Targets are selected, usually at formation level or higher, on likely enemy approaches to defensive positions.

- b. **Close defensive fire.** The aim of close defensive fire is to break up enemy attacks by engaging the enemy when they are forming up or assaulting. Subsequently, defensive fire is adjusted to continue engaging them during their assault until they are forced to break off the attack. Targets are initially selected by the supported commander. Further coordination will occur at higher levels in order to prevent duplication of targets, for example, near unit or formation boundaries. When selecting close defensive fire tasks the following factors are paramount:
- (1) likely enemy approaches;
 - (2) characteristics and capabilities of weapons employed or available for use;
 - (3) location of friendly forces;
 - (4) location on the ground at which the enemy is likely to be first detected when attacking;
 - (5) location on the ground at which friendly forces wish to first engage the enemy on any approach;
 - (6) location of obstacles;
 - (7) areas defilade to friendly direct fire weapons;
 - (8) likely enemy forming-up places (for attacks); and
 - (9) use of defensive fire tasks as reference points for subsequent adjustment of fire.
- c. **Final protective fire.** The close defensive fire task covering the most likely enemy approach is selected by the supported commander as the final protective fire (FPF) task. In general, the FPF should be sited on the most likely enemy approach at the point at which initial detection of enemy forces is likely. FPF tasks are requested at each level of the defensive fire planning process until selected by the appropriate HQ responsible for the final coordination and issue of the defensive fire plan. The commander may decide to concentrate available resources onto one FPF on the most likely approach to the formation vital ground, or may select a number of FPF tasks based on likely approaches to subordinate formation, unit, or sub-unit vital grounds. Fire units allotted to these targets remain laid on them with the guns loaded when not otherwise engaged, and can then provide immediate response. It should be noted that:
- (1) only one FPF task should be given to each fire unit (it should be noted however that historically, batteries have been separated into sections and allocated separate FPF to satisfy operational necessity);
 - (2) a single FPF task will often require more than one fire unit to ensure its effectiveness;
 - (3) the maximum number of artillery FPF tasks on a unit or formation must be within the capabilities of the number of gun groups available to that unit or formation; and
 - (4) FPF tasks may be changed to conform with a changing threat (including from day to night).

Preparation fire

4.5 Preparation fire is employed in support of an assault and aims to:

- a. weaken the enemy's resistance by disrupting, disorganising or neutralising their defence; or
- b. demoralise the enemy so that they will offer little or no resistance to the assault.

4.6 Preparation fire is planned by the commander planning the attack and is usually fired before H-hour. In most cases the quantity of ammunition required to demoralise the enemy is prohibitive, therefore demoralisation will rarely be achieved. Intense preparation fire, especially using medium, heavy or rocket artillery, naval gunfire or close air support on carefully selected targets, is likely to be effective. It is important to consider the balance between the advantage gained by preparation fire and the advantage gained by surprise. In some circumstances preparation fire may compromise surprise, in others, advantage may be gained by disrupting command and control systems and reaction capabilities.

Covering fire

4.7 Covering fire is employed during the attack and counterattack to protect assaulting troops by neutralising enemy direct fire weapons that can engage them. Neutralisation is achieved when the enemy is prevented from manoeuvring, observing and using weapons effectively. Covering fire should be potentially lethal, intense and continuous. Covering fire for an attack should always be planned in advance by the commander planning the attack, and may include:

- a. a timed program, capable of modification, including planned timings for individual targets to cover the period of the attack;
- b. targets on call are arranged in detail less their timings to ensure a quick response if called for at any time; and
- c. targets of opportunity accommodate occasions in an attack when covering fire is needed on targets that have not been planned. Fire can be called for by forward observers, air observers, mobile fire controllers, naval gunfire support forward observers, forward air controllers/air contact officers supporting the attack and assaulting troops. All arms officers and noncommissioned officers should also be trained to call for and adjust fire support in accordance with 'all arms call for fire' procedure.

Harassing fire

4.8 Harassing fire is delivered on positions and lines of communication in order to interfere with movement and preparation, force early deployment, and prevent rest. It is normally planned and coordinated at formation level or higher.

Interdiction

4.9 The aim of interdiction is to isolate the battlefield by the destruction of reserves, routes, bridges and supplies. Interdiction fire is delivered to deny unrestricted use of an area or point. It may be combined with harassing fire and is normally planned and coordinated at joint force level or higher.

Counterbattery fire

4.10 The aim of counterbattery fire is to destroy, neutralise or force the redeployment of enemy indirect fire weapons systems. To achieve lasting neutralisation large numbers of guns and ammunition are necessary. An efficient all arms target acquisition system is required and counterbattery fire should be controlled at the highest appropriate Joint Offensive Support Coordination Centre (JOSCC) capable of ensuring the timely engagement of hostile batteries.

Air defence suppressive fire

4.11 The aim of air defence suppressive fire is to destroy or neutralise known air defence weapons immediately before operations by friendly aircraft along the approach and egress corridors and in the target engagement area. The fire is normally planned and coordinated at joint force level or higher.

LAND-BASED OFFENSIVE SUPPORT CAPABILITIES

Types of artillery

4.12 Field branch artillery comprises:

- a. close support artillery,
- b. general support artillery, and
- c. locating artillery.

4.13 The primary role of close support artillery is the engagement of targets of immediate concern to units of the joint force, and the provision of timely intimate, offensive and defensive fire to those units. Close support artillery is equipped with field and medium guns.

4.14 General support artillery provides additional support including close fire support and depth fire support, for formations at all levels. It may include any type of gun regiment, but normally consists of medium and heavy guns, and rocket launchers. The fire of these units is used:

- a. to supplement the fire of close support artillery by adding extra weight of fire; and
- b. on depth fire tasks such as interdiction, counterbattery and air defence suppressive fire.

4.15 Locating artillery consists of locating batteries equipped to locate enemy indirect fire resources, produce combat intelligence from the enemy employment of their indirect fire support assets, provide survey and meteorological data and adjust friendly indirect fire.

Mortars

4.16 Mortars are integral to an infantry battalion. They have limited range but are quick to respond and provide guaranteed indirect fire support to achieve tactical unit objectives. They are a capability that enhances the flexibility of fire planning particularly when offensive support assets are unable to cover all objectives simultaneously. Mortars are generally used to supplement the fire support provided by close support artillery.

Armour

4.17 Provision of indirect fire support is a secondary role for some armoured units. Both tank and reconnaissance regiments have AFV that can provide indirect fire support, although they are best used in the direct fire role where indirect fire assets are allocated. In the context of a fire plan, the planning, coordination and control of fire is the responsibility of the Joint Offensive Support Coordination Team or JOSCC.

Direct fire support

4.18 Direct fire resources, which include tanks and other AFV, infantry machine guns and anti-armour weapons, can be used to augment indirect resources. The accuracy of direct fire makes it particularly valuable when indirect covering fire has lifted due to troop safety requirements. Fire planning ensures that direct fire assets are coordinated with all other offensive support capabilities to support tactical objectives.

CHAPTER 5

FIRE PLANNING CONSIDERATIONS

INTRODUCTION

5.1 A fire plan uses available offensive support capabilities to best contribute to the success of the battle. The commander responsible for the operational plan is also responsible for the fire plan that supports it. The fire plan may include land-based offensive support, offensive air support (OAS), naval gunfire support (NGS) and electronic warfare resources.

Responsibilities

5.2 Responsibilities for the production and execution of a fire plan are as follows:

- a. On the advice of the commander of the Joint Offensive Support Coordination Centre (JOSCC) or Joint Offensive Support Coordination Team the supported commander selects the targets and states the required effect to be achieved.
- b. The artillery commander (who will be the officer-in-charge of the JOSCC) at joint force and formation level, coordinates all offensive support resources, by:
 - (1) allotting resources and subsequently coordinating and issuing consolidated fire plans;
 - (2) implementing modifications on behalf of the commander; and
 - (3) circulating the fire plan to all involved offensive support elements.
- c. The air liaison officer produces air request/task messages from the detail in the fire plan, briefs forward air controllers and passes the fire plan to the Air Support Operations Centre or flying operations facility.
- d. The naval support officer passes the fire plan and any modifications to the Naval Gunfire Operations Centre (NGOC) and NGS ships.
- e. NGS liaison officers assist NGOC and NGS ships in interpreting the fire plan.
- f. Ground liaison officers brief pilots on the conduct of the fire plan and the tactical situation.

Principles

5.3 The following are principles of joint fire planning:

- a. **Cooperation.** Cooperation is necessary between all Services in preparing and implementing a fire plan.
- b. **Concentration.** There will always be more targets than available offensive support assets. Support should be concentrated on priority targets at the strength necessary to achieve the required effect.
- c. **Flexibility.** A flexible plan that involves superimposed fire units and a practical, well-practised procedure for modifications is essential in responding to unforeseen changes in the tactical situation.
- d. **Simplicity.** A plan must be simple to facilitate easy control and modification.
- e. **Surprise.** Surprise is achieved if preparations are concealed and stereotyped methods avoided.

TYPES OF FIRE PLANS

Defensive fire plans

5.4 A defensive fire plan is required to support forces holding a defensive position. The following are characteristics of a defensive fire plan:

- a. Targets are recorded on likely enemy approaches as on-call. Targets should include likely enemy forming-up places, assembly areas, routes, headquarters (HQ) and assembly areas for reserves.
- b. The timings and sequences of engagement of planned targets cannot be decided before an enemy attack.
- c. Command posts record all defensive fire targets in range and within supported formation or unit boundaries. This may impose an unmanageable workload and artillery commanders must give guidance on which targets are to be recorded at various levels.
- d. When own forces are withdrawing, planned fire support is usually required along the intended axis of withdrawal. This planning identifies a number of on-call targets. It includes targets on prominent features that can be used as a framework for a detailed fire plan.

Offensive fire plans

5.5 Offensive fire plans support forces attacking an objective. Depending on the level at which the attack is planned, the supporting fire plan will be either quick or deliberate.

5.6 A quick fire plan originates at unit level or lower and may vary from a very simple plan involving one battery to a more complicated plan involving many offensive support assets. Quick fire plans are the responsibility of the supported commander planning the attack and their JOSCC commander or forward observer. There is normally only one level of planning and fire plan orders are issued directly from that level to the firing units involved.

5.7 A deliberate fire plan originates at formation level or higher and usually involves more than one regiment of guns, NGS and OAS. Detailed fire planning is done by supported unit commanders and their JOSCC commanders. Fire plans are coordinated at ascending levels of command by their direct support regimental commanders and, when necessary, by commander divisional artillery. Orders for the fire plan are usually issued by the artillery HQ responsible for its final coordination.

Counterbattery fire plans

5.8 Counterbattery fire plans are normally prepared at joint force level, with the aim of neutralising or destroying enemy indirect fire support assets. If they are to be successful, a substantial allotment of fire support resources is normally required. Counterbattery fire plans are required to support both defensive and offensive operations.

Interdiction fire plans

5.9 Interdiction fire plans are prepared at joint force level and form part of the overall formation interdiction plan. Their aim is to delay, disrupt and weaken the enemy; isolate selected parts of the enemy force; and help shape the battlefield. The interdiction plan (including the interdiction fire plan) must provide clear planning and execution guidance and usually involves medium and heavy guns, OAS and possibly naval gunfire.

5.10 The outline interdiction plan is derived from the formation commander's concept of operations or outline plan. The commander's intent facilitates the identification of enemy forces to be interdicted, and what result is required. The outline interdiction plan is approved by the formation commander in consultation with the combat support commanders and the air liaison officer. The plan includes:

- a. a general description of the enemy dispositions;
- b. an event-based interdiction schedule which sequences interdiction tasks (interdiction fire, OAS and attacks in depth);

- c. the purpose of each interdiction task (eg block an approach, secure a flank);
- d. the time or event when interdiction tasks are to be implemented (eg arrival of the second echelon in a designated area); and
- e. an on-call interdiction fire plan.

Fire plans for the advance and withdrawal

5.11 Fire planning for the advance or withdrawal normally consist of selecting on-call targets along the general axis of the operation. The fire plan will probably originate at the level at which the operational plan is made. It forms the basis of planning at unit level, where the battery commander enhances the plan and coordinates bids submitted by forward observers. Further coordination is undertaken at formation and joint force level to produce the final plan. Selected targets should be on features or areas that are:

- a. possible enemy locations,
- b. easily identified on the map, and
- c. easily identified on the ground so that they can be used as reference points to adjust fire onto nearby locations.

5.12 The HQ initiating the fire plan prepares the target list by grouping targets associated with a particular axis and allocating priorities. As the advance or withdrawal progresses, artillery in direct support or at priority call may be ordered to lay (and perhaps load) on selected targets.

CHAPTER 6

JOINT SUPPRESSION OF ENEMY AIR DEFENCE

6.1 Joint suppression of enemy air defence (JSEAD) involves the neutralisation, destruction or temporary degradation of enemy air defence systems by physical attack and electronic warfare (EW). Categories of JSEAD are: theatre, localised and opportune.

6.2 Theatre suppression creates favourable conditions for friendly operations by disabling enemy air defence systems. Localised suppression operations normally involve specified time and space limitations to support specific missions or tasks. Opportune suppression includes self-defence and offensive attacks against targets of opportunity.

Threat

6.3 Air defence threats are normally incorporated into an integrated air defence system, capable of the following tasks:

- a. detection, identification and warning of air threats;
- b. destruction or neutralisation of hostile aircraft before they threaten forces and critical assets;
- c. redundant protection for high value assets, strategic targets, key command, control and communication nodes and critical military units; and
- d. jamming of aircraft navigation, communication and target acquisition systems to degrade effectiveness.

Component responsibilities

6.4 JSEAD objectives are specified by Commander Australian Theatre or a Joint Force Commander (JFC), who should consider the unique capabilities of each component to contribute to the operation. Component responsibilities are determined by force capabilities, suppression requirements and mission objectives.

6.5 The land force should have primary responsibility for suppression of ground-based enemy air defence to the limits of fire observed by either an observer (ie forward or aerial observer) or acquisition equipment (ie artillery radars, sensors) capable of adjusting or controlling fire based on observation. Engagements by land force systems are more economical than air attacks and allow the air component to concentrate on suppressing deeper targets.

6.6 Targets unable to be engaged with observed fire should become the primary responsibility of the air component; the land force has secondary responsibility for these targets to the limit of their weapon's range. The air component may use air assets to locate and observe targets and request land force assets to provide suppression. Land assets can be used to suppress accurately located targets with unobserved indirect fire, however the required effect is not guaranteed. The effect is dependent on many conditions including weather, calibration and the availability of artillery target acquisition assets.

6.7 During amphibious operations, Commander Amphibious Task Force should have primary responsibility for JSEAD to the limit of observed fire.

Support

6.8 Component commanders undertaking air operations may require support to prosecute JSEAD from other components. Support required may include:

- a. reconnaissance and target acquisition;
- b. EW to provide close-in jamming and stand-off jamming of radar, data links and voice communication;
- c. smoke to degrade visual target acquisition;
- d. aerial fire support on designated targets or targets of opportunity;

- e. direct or indirect fire onto enemy air defences;
- f. direct action by special forces; and
- g. ground or amphibious manoeuvres to disrupt enemy air defences in an area of operations.

Such support may be applied in direct attack or as part of deception measures against an integrated air defence system.

Theatre joint suppression of enemy air defences

6.9 Responsibility for the planning and conduct of theatre JSEAD rests with the theatre air component commander. Suppression efforts should target high payoff air defence assets to achieve maximum degradation of the enemy integrated air defence system.

6.10 Theatre JSEAD can have a significant impact upon friendly operations and may attract a higher priority for assets than localised JSEAD. Planners should consider the impact on manoeuvre elements if strikes in support of localised JSEAD are cancelled.

Localised joint suppression of enemy air defences

6.11 The aim of localised JSEAD is to protect friendly aircraft operating at low and medium altitudes in a specified area from hostile air defence systems. Localised JSEAD operations support close air support operations, tactical airlift, helicopter operations, reconnaissance activity, airborne operations and the establishment of air corridors for air and land force missions.

6.12 JSEAD for air corridor establishment may be required for: missions transiting the forward line of own troops (FLOT); air missions supporting tactical airlift or combat search and rescue operations; support of special operations or helicopter operations forward of the FLOT. This form of JSEAD requires precise synchronisation and substantial resources and is restricted to the establishment of a limited number of corridors in a given period. Air corridor JSEAD should begin when aircraft enter the air defence engagement zone short of the FLOT and continue while the corridor is in use. The senior Joint Offensive Support Coordination Centre must coordinate with adjacent and subordinate units to support the primary JSEAD effort during the time the corridor is activated.

Opportune joint suppression of enemy air defences

6.13 Opportune JSEAD protects aircraft operations near the FLOT by targeting short and medium range air defence guns and missile systems. It is a continuous operation involving immediate response to acquired air defence targets of opportunity. Opportune JSEAD is limited primarily to targets of known location, however areas where targets are suspected may also be suppressed.

6.14 Areas along the FLOT where future air operations are planned are assigned higher priority, for a specific period of time, than those areas where future operations are not anticipated. Priorities are established by the JFC in consultation with the air component commander (if appointed) and coordinated through the Joint Force Air Operations Centre. An intense opportune JSEAD effort in a specific geographical area can deceive the enemy as to the commander's intent but is likely to employ significant resources.

6.15 Land force weapon systems capable of engaging enemy air defence weapons participate in opportune JSEAD on a see-kill basis to support current and future land force objectives. The level of effort is determined by land force priorities within the designated areas where friendly air operations are planned. It includes actions taken by Army aircraft in self-defence.

Joint suppression of enemy air defences agencies

6.16 Gun and rocket artillery systems can destroy accurately located enemy air defence assets. Targets not accurately located nor directly observed are normally not engaged. A suspected enemy air defence target location may be engaged to assist the ground or air manoeuvre main effort or to protect close air support operations. The disruptive effect of this action is of short duration with limited destructive effect.

6.17 The effectiveness of artillery in disrupting and degrading air defence weapons can be enhanced if closely synchronised with aircraft operations. The efficient operation of air defence systems may be disrupted by short duration engagements.

6.18 Smoke in JSEAD operations can have positive and negative effects. Smoke hides aircraft from enemy air defence weapons requiring visual acquisition but is ineffective against some infra-red and all radar-guided air defence systems. Smoke may obscure the target or prevent friendly aircraft from defending themselves from other weapons. Smoke is a limited resource and its use must be thoroughly planned and coordinated with the supporting air unit to ensure greatest effect.

6.19 Air defence weapons systems normally move shortly after they have engaged an aircraft or they suspect they have been detected. Mines may be delivered by a variety of means, including artillery, to hold targets beyond the range of observed fire in position long enough to allow aircraft to respond. Though surface-laid, the mines may impede target movement until aircraft arrive. It must be noted that the Australian Defence Force (ADF) is not permitted to fire antipersonnel mines into the area because Australia is party to the Convention on the Prohibition of the Use, Stockpiling, Production, and Transfer of Antipersonnel Mines and on their Destruction (commonly known as the Ottawa Treaty). However, this convention does not affect the ADF use of anti-armoured/vehicle land mines.

6.20 Army Aviation is employed primarily as a manoeuvre element and is not usually assigned JSEAD missions. It contributes to opportune JSEAD by engaging targets of opportunity encountered during assigned missions.

6.21 Fixed-wing aircraft are usually employed beyond the limits of observed artillery fire and are best employed for suppressing air defence systems for short times. Most air-to-surface weapons are very effective in causing fragment damage to air defence systems and preventing their use until repaired. Destruction of an air defence system is more difficult to achieve and requires accurate target location, correct weapons-to-target matching and precise weapons delivery.

6.22 Electronic assets are used to attack systems not precisely located or those more effectively suppressed by electronic means. The electronic order of battle, location and deployment of an air defence system may be obtained by passive EW means. Electronic attack disrupts command and control communications, surveillance radars and weapons acquisition sensors.

GLOSSARY

air defence commander (NATO)

A duly appointed commander responsible for the air defence of a designated area.

air reconnaissance (NATO)

The collection of information of intelligence interest either by visual observation from the air or through the use of airborne sensors.

airborne alert (NATO)

A state of aircraft readiness wherein combat-equipped aircraft are airborne and ready for immediate action.

airspace control area (NATO)

Airspace which is laterally defined by the boundaries of the area of operations. The airspace control area may be subdivided into airspace control sub-areas.

airspace control authority (NATO)

The commander designated to assume overall responsibility for the operation of the airspace control system in the airspace control area.

allotment (NATO)

The temporary change of assignment of tactical air forces between subordinate commands. The authority to allot is vested in the commander having operational command.

close air support (NATO)

Air action against hostile targets which are in close proximity to friendly forces and which require detailed integration of each air mission with the fire and movement of those forces.

control (NATO)

The authority exercised by a commander over part of the activities of subordinate organisations, or other organisations not normally under their command, which encompasses the responsibility for implementing orders or directives. All or part of this authority may be transferred or delegated.

direct fire (NATO)

Fire directed at a target which is visible to the aimer.

fire plan (ADF)

A tactical plan for using the weapons of all forms of offensive support.

indirect fire (NATO)

Fire delivered at a target which cannot be seen by the aimer.

interdiction fire (NATO)

Fire placed on an area or point to prevent the enemy from using the area or point.

naval gunfire operations centre (NATO)

The agency established in a ship to control the execution of plans for the employment of naval gunfire, process requests for naval gunfire support and to allot ships to forward observers. Ideally located in the same ship as the supporting arms coordination centre.

naval gunfire support forward observer (ADFP 101)

An Army artillery forward observer trained in naval gunfire support procedures.

naval gunfire support liaison officer (ADFP 101)

An Army artillery officer attached to a naval gunfire support ship who acts as adviser to the commanding officer on the military situation and assists in the evaluation of shore targets and preparation of fire plans.

offensive support (ADFP 101)

Offensive support is the offensive measures taken to support a commander in pursuing their tactical aim. Offensive support may be organic to the Service of the supported unit or be provided by another Service, and covers:

- a. naval gunfire support;
- b. fire support from any ground-based weapon system other than small arms; and
- c. offensive air support (which includes air reconnaissance, maritime strike).

scheduled target (NATO)

In artillery and naval gunfire support, a planned target on which fire is to be delivered at a specific time. The term may be applied to any form of offensive support integrated into a fire plan (ADF).

superimposed (NATO)

A term used in fire planning to indicate that an artillery unit is augmenting fire on a target and its fire may be lifted from that target by the authority implicit in its fire support role. The term may also be applied to mortar units (ADF).

target analysis (NATO)

An examination of potential targets to determine military importance, priority of attack and weapons required to obtain a desired level of damage or casualties.

targeting (ADFP 101)

The process of selecting and analysing targets, and matching the appropriate response to them, taking into account national strategy and operational requirements and capabilities. The appropriate response may include lethal and non-lethal options.

ACRONYMS AND ABBREVIATIONS

AAC	Army aviation cell
AAVNLO	Army Aviation liaison officer
ACA	airspace control authority
ACC	air component commander
ACE	airspace coordination element
ACO	air contact officer
ADF	Australian Defence Force
ADFORMS	Australian Defence Formatted Message System
ALO	air liaison officer
AO	area of operations
ASCA	airspace coordination area
ASOC	air support operations centre
CAS	close air support
CATF	commander amphibious task force
CCC	control coordination centre
COMAST	Commander Australian Theatre
FAC	forward air controller
FAC(G)	forward air controller (ground based)
FAC(H)	forward air controller (helicopter)
FGA	fighter ground attack
FO	forward observer
FOF	flying operations facility
FPF	final protective fire
FSV	fire support vehicle
GBAD	ground based air defence
GBADCC	ground based air defence coordination cell
GBADCP	ground based air defence command post
GBADLO	ground based air defence liaison officer
GL	ground liaison
GLN	ground liaison net
GLO	ground liaison officer
GP	general purpose
JF	joint force
JFADC	joint force air defence commander
JFALO	joint force air liaison officer
JFAO	joint force area of operations
JFAOC	joint force air operations centre
JFC	joint force commander
JFHQ	joint force headquarters
JOSCC	joint offensive support coordination centre
JSEAD	joint suppression of enemy air defences
MBT	main battle tank
MRV	medium reconnaissance vehicle
NADC	National Air Defence Commander
NGC	naval gunfire control
NGGS	naval gunfire ground spotting
NGOC	naval gunfire operations centre
NGOC-GO	naval gunfire operations centre gunnery officer
NGS	naval gunfire support
NGSCOORD	naval gunfire support coordination
NGSFO	naval gunfire support forward observer
NGSLO	naval gunfire support liaison officer
NLO	naval liaison officer
NSO	naval support officer

OAS	offensive air support
OSE	offensive support element
PAS	precision air support
PAS(A)	precision air support (airborne designator)
PAS(G)	precision air support (ground based designator)
ROE	rules of engagement
SACC	supporting arms coordination centre
SCC	sensor coordination centre
SEAD	suppression of enemy air defence
TACCON	tactical control
TACFWD	tactical air command forward
TACP	tactical air control party
TAOR	tactical area of responsibility
TOT	time on/over target
TSE	transport support element