



# OPERATION BURSA

**Protecting Australia's  
Offshore  
Oil Rigs  
1980-89**



By Marcus Peake

**A**t 0659 on 25 August 1980 Navy Office Canberra released a signal starting with the words:

**'THE COSC HAS DIRECTED THAT A SPECIAL INDEPENDENT OFFSHORE INSTALLATION GROUP (OAG) BE ESTABLISHED BY 30SEP80. AN INTEGRAL PART OF THIS GROUP WILL BE DEDICATED HELICOPTERS FOR INITIAL INSERTION OF A TACTICAL ASSAULT GROUP (TAG) FOLLOWED BY AN EOD AND MEDICAL TEAM...'**

**So began OPERATION BURSA.**

**Background**

The genesis of the above Directive went back almost two years. The main impetus for the establishment of a Counter Terrorist (CT) capability in the Special Air Service Regiment (SASR) was the bomb attack near the Hilton Hotel in Sydney in February 1978. The Australian Army had been planning to develop a CT capability before this attack, but the Hilton bombing ensured the proposal would have political support.

On 21 September 1978 the Intelligence and Security Committee of Cabinet agreed that Australia would adopt a 'hard line' policy in dealing with terrorists and that if tactical negotiations aimed at persuading the terrorists to surrender failed, and in particular, if violent action by the terrorists (for example, killing or injuring hostages or major property damage) was anticipated, 'action could be taken to subdue the terrorists by force' [1].

The Defence Department continued to prepare plans for a CT capability, and on 1 May 1979 the Government approved the establishment of 'a specialised and dedicated counter terrorist assault team', to be available to the Commonwealth to deal, where authorised, with high risk terrorist incidents. [2]



*The Hilton bombing in 1978 was a wake-up call to reconsider Australia's security arrangements.*

**CONTENTS**

Operation Bursa Background .....	1
Offshore Operations .....	2
HC723 Squadron.....	3
Training & Development of Tactics.....	4
Maintenance .....	7
Transfer of the Role .....	9
The Loss of Wessex 825.....	11
Possum Pilot - the role of 161 Sqn .....	13
Acknowledgements & Footnotes.....	15
Op. Bursa Timeline.....	16



It was not until 31 August 1979 that the then Chief of the General Staff (CGS), Lieutenant General D. B. Dunstan, issued his directive to establish a Tactical Assault Group (TAG). Its tasks included:

- neutralisation, including capture, of terrorist groups, which might include snipers, hijackers, kidnappers, bombers or assassins;
- neutralisation of aircraft or ships;
- recovery of hostages and property held by terrorists; and
- recovery of buildings and installations occupied by terrorists.

The strength of the assault team was not to exceed three officers and 26 soldiers of the Special Air Services Regiment (SASR) and the codeword *Gauntlet* was to be used when referring to the TAG. The TAG headquarters was to consist of the commanding officer of the SASR, his operations officer and two signallers. The directive included rules of engagement.[3]

When the SASR was directed to raise the CT capability it received some advice from Britain's 22nd SAS Regiment, but essentially it needed to develop its own concepts and techniques. New, makeshift training facilities were quickly constructed. Techniques developed included:

- Close quarter fighting. Soldiers were trained to enter a room where hostages and terrorists were located and, firing instinctively, to identify and kill terrorists who might be standing beside hostages. These rooms might contain smoke and incapacitating gas. This training was undertaken with live ammunition.
- Methods of entry. The TAG developed and practised techniques for entering buildings, aircraft, buses, or offshore oil installations. This might involve the use of sledge hammers, explosive charges or other devices.
- Approaches to stronghold. The TAG developed and practiced techniques for approaching terrorist strongholds swiftly and covertly. This might involve using fast moving vehicles, rappelling down buildings, using helicopters, underwater swimming and the use of small boats. Training was undertaken at night and in poor weather conditions.

The SASR quickly established an interim TAG, with very basic equipment and a rudimentary capability, which could be deployed with 24 hours notice. After a period of training and development the first fully operational TAG commenced in May 1980 to deal with siege-hostage situations on land. In SASR terminology, the TAG became 'online' (meaning operational).

Offshore Operations

Government considered advice about the vulnerability of off-shore oil installations in Bass Strait. It knew that the RAN had been tasked with operations in the Strait for some time (principally using Patrol Boats but also with occasional Grumman Tracker and P3 Orion aircraft) but these had been in the nature of general surveillance. Cabinet agreed 'that the threat of terrorist attack '...was real and potentially highly dangerous'. [4] It authorised the ADF to establish a special group to deal with such an attack. The CGS therefore directed the raising of another assault

team (codename *Nullah*) for offshore oil installations. As his directive explained: 'It is the view of the Government that the threat of terrorist attack to the installations is real and potentially highly dangerous'. [5] The offshore assault team became operational in November 1980.

The two teams, *Gauntlet* and *Nullah*, were part of the 1st SAS Squadron that had responsibility for the CT capability. As the force developed, the TAG was expanded to include a troop from 152 Signals Squadron and logistic support from the SAS Base Squadron. RAN clearance divers supplemented SASR to provide personnel for the *Nullah* troop.

The task of providing rotary wing assets fell to Navy, which was deemed to have the appropriate aircraft, together with experience in operating at very low levels over the water by day and night. At that time there were only two helicopter Squadrons in the RAN: HC723, equipped with Wessex 31Bs, Iroquois UH1-Bs and Bell Kiowas; and HS817, comprising six Sea King HAS Mk 50s.

817's Sea Kings would have been an optimal choice, but the Squadron's other commitments ruled it out so 723 Squadron was selected. Of the three rotary-wing types on its ORBAT the Wessex was really the only option as it had a proven over water night capability in its previous role as an Anti-Submarine Warfare helicopter, and was of the size and performance required.

# RAN TRACKERS CEASE BASS STRAIT RIG PATROLS

RAN Tracker aircraft ceased airborne surveillance of the Bass Strait oil field on Saturday, December 31, 1983. Trackers from VS816 and VC851 Squadrons have been flying surveillance sorties around the oil rigs for the past three years.

In 1980 a merchant ship steamed through the Bass Strait oil and gas field, narrowly missing one of the oil rigs. Had the ship collided the results could have been catastrophic, not only in the oil field itself but also in the disruption to Australian fuel supplies and, consequently, the economy.

To safeguard against this the Australian Government declared a restricted area around the oil field, in addition to the normal safety zone around each oil rig, and tasked the Australian Defence Forces to provide surveillance of the area.

The task was to detect and if necessary deter approaching vessels of over 200 tonnes from entering the restricted area and all vessels except rig tenders from entering the 500 metre safety zone around each rig and well head.

The Royal Australian Air Force was initially given the task of providing airborne surveillance of the Bass Strait oil field in conjunction with a Royal Australian Navy patrol boat acting as a surface response vessel.

On December 24, 1980, Navy S2 Trackers commenced surveillance operations on two days out of every three with Orions of the RAAF continuing to fly on the third day.

Initially the Navy task was flown by 816 Squadron and on January 11, 1982, the squadron commenced daily surveillance sorties due to the RAAF's withdrawal of its Orion aircraft from the task.

Later 851 Squadron took over from 816 Squadron.

Sorties have been flown every day since, until the Federal Government decided to cease operations on December 31, 1983.

Navy aircraft have flown over 2500 hours on Bass Strait surveillance operations.

The following signal was sent by Chief of Naval Staff to VC851 Squadron to mark the completion of the task.

Operation ESTES:

"Since Navy assumed the ESTES surveillance task (24DEC80) only two sorties have been missed, one due to an aircraft unserviceability, the other because of unsuitable weather.

"The sortie completion rate achieved by VC851 and VS816 during their long involvement with Operation ESTES reflects creditably on the professionalism of the Fleet Air Arm.

"All personnel who have been involved with Operation ESTES, particularly VC851 and ex members of VS816 are commended for their achievement."

TRYING TO BE SAILORS

NEW RELEASE

Their training was sketchy and they learnt the hard way — in operations at

The [Wessex](#) was old – it had been introduced into the Navy in 1962 – but with the dipping sonar and associated equipment removed the cabin was relatively spacious and the payload capability at sea level adequate in the relatively cold and windy conditions in Bass Strait. In contrast, the Iroquois lacked the range and capacity and was, in any case, unsuitable to fly very low over water at night due to the lack of a Radar Altimeter. The Kiowa, with its capacity to carry a maximum of only five people (doors off) and with similar instrumentation and endurance restrictions was also unsuitable.

The Commanding Officer of HC723 at the time was Lieutenant Commander Victor Battese, who had posted into the Squadron on 07 July 1980 and only completed his Wessex familiarisation a week before being informed of the new task. He was an experienced pilot, however, having served in Vietnam and with previous postings as Senior Pilot HC723 and Training Officer and Senior Pilot HS817 under his belt. He posted into the CO's job directly from staff college to the displeasure of the Director, who told him in no uncertain terms that the





<p>HC 723 Squadron Commanding Officer's Temporary Memorandum 17/80</p> <p>OFFICERS/AIRCREW DUTIES</p>	
LCDR V.T. BATTESI	COMMANDING OFFICER, QHI
LCDR K.VOTE	Senior Pilot, QHI, IRE, CFS Agent
LEUT G.SPENCE	Senior Observer, Sea Diver Training Office
	Sar and Logistic Equipment
LEUT B. STEINSON	Air Engineering Officer, Divisional Office
	For Senior ATA Sailors.
WOATWL K. WRIGHT	Weapons Electrical Engineering Officer
LEUT G. LEDGER	Divisional Officer Senior ATW/ATC, FAREO.
LEUT A. DROVER	SOCIAL SEC, TRNG OFFICER, QHI, IRE, UN-1E
LEUT R. SMITH	MTP, SPORTS.
LEUT S. BRAND	FLIGHT SAFETY OFFICER, STAFF OFFICER,
ASLT A. FISHER	SAR MISSION, PROJECTS OFFICER.
ASLT M. HENSCHKE	OPERATIONS, RPO, DO AIRCREWMEN, AIRCRAFT
ASLT J. CLARK	TRAINING, ASW OFFICER.
ASLT M. HYPE	DO JUNIOR APC/ATW SAILORS.
MIDN D. REED	TIMES & SLOTS.
MIDN M. CAMPBELL	DO JUNIOR ATA/MISC SAILORS.
	SECURITY, PRO, DIARY OFFICER.
	MAPS & CHARTS, AIR PUBS, SESO, ASST. & FE
	1st LEUT, BLOCKS OFFICER, LINE BOOK.
	RECOGNITION & INTELLIGENCE, COMPASS OFFICER
<u>PARENTING CELL</u>	
LEUT M. PEAKE	OIC, QHI.
SBLT C. ALLEN	AEO
WOATA R. BROOKES	WO ATA
<u>TOBRUK FLIGHT</u>	
LCDR C. MAYO	OIC, WESSEX 31B MTP
SBLT A. DIPIETRO	FLIGHT OPS.
ASLT G. SYDNEY	
ASLT C. TUTIN	
WOATA T. EPIS	AEO
<u>MELBOURNE SAR FLIGHT</u>	
LEUT C. GEORGE	OIC, WESSEX 31B MTP.
SBLT R. CHARTIER	
SBLT V. DIPIETRO	
<u>MORESBY FLIGHT</u>	
LEUT B. DOWSING	OIC
SBLT K. CHAMPTON	

...../2



**Top:** CO HC723 Squadron Memorandum 17/80 of 08 August 1980 lists the available aircrew and their duties on the Squadron just prior to BURSA. The paucity of experienced Wessex aircrew and the plethora of other priorities such as Ships' Flights created immediate difficulties for the National Tasking. **Lower.** An image of a Wessex 31B cockpit. Designed in the early 50s there was little of any sophistication to be found in it. The lack of any positioning aids was, in particular, a hurdle to be overcome (RAN images).♣

posting was no challenge and would be a 'quiet number'. How wrong that advice was to be!

## HC723 Squadron

HC723 Squadron had always been a somewhat challenging command, mostly because of its varied inventory and roles. From the very beginning it had operated a mix of Sea Furies, Fireflies, Dakotas and Wirraways, and as the Squadron transitioned to rotary wing its variety of aircraft continued to make support and inventory difficult. Added to this the Squadron had always juxtaposed training with its operational commitments, including being the parent training unit for RAN Helicopter Flight Vietnam aircrew in 67-71, and later establishing a new Flight Parenting Cell to prepare small Ships' Flights for the new FFGs under construction in the US. Juggling these training and operational priorities invariably created a tension, particularly in times of low rates of aircraft serviceability.

At the time of the National Task the Squadron still retained its other roles: Station SAR pilot/observer/aircrewman training effort and general fleet support including the provision of HMAS Melbourne's SAR Flight, HMAS Moresby's B206 Flight and occasional detachments to other ships such as *Stalwart* and *Tobruk*. All in all it was a busy environment, but the Squadron had a big heart and always took on new roles with distinction and reliability.

At the time of initial BURSA tasking the Squadron's Wessex UAE was just four aircraft, but the new CO was advised that he would be given 'all assistance up to but not including the provision of new aircraft'. The number of Wessex was therefore quickly augmented to ten by the addition of ex-HT725 Squadron aircraft, which had been moth-balled in Hawker de Havilland's facilities in Bankstown. Two of the Squadron's aircraft were necessary to support HMAS Melbourne's SAR flight, which was an operational requirement. This left eight available for BURSA and the Squadron's other commitments: primarily, training and general duties tasks.[6]

Battese was also directed that the capability should be developed by no later than the end of November 1980, which gave him only eight weeks to establish the necessary tactics and work up sufficient crews to the level of expertise required. At this time he only had six experienced Wessex captains: LCDRs Ken Vote and Clive Mayo, both of whom had served in Vietnam; LEUTs Cris George and Ron Lawrence, and LEUTs Geoff Ledger and Marcus Peake who were both experienced Helicopter Instructors. On the Observer side, he had LEUTs George Spence and Adrian Cass, both experienced Naval Observers. There were three other LEUT pilots of lesser experience and seven MIDN/SBLT pilots with little captaincy time – not all of whom were Wessex qualified.

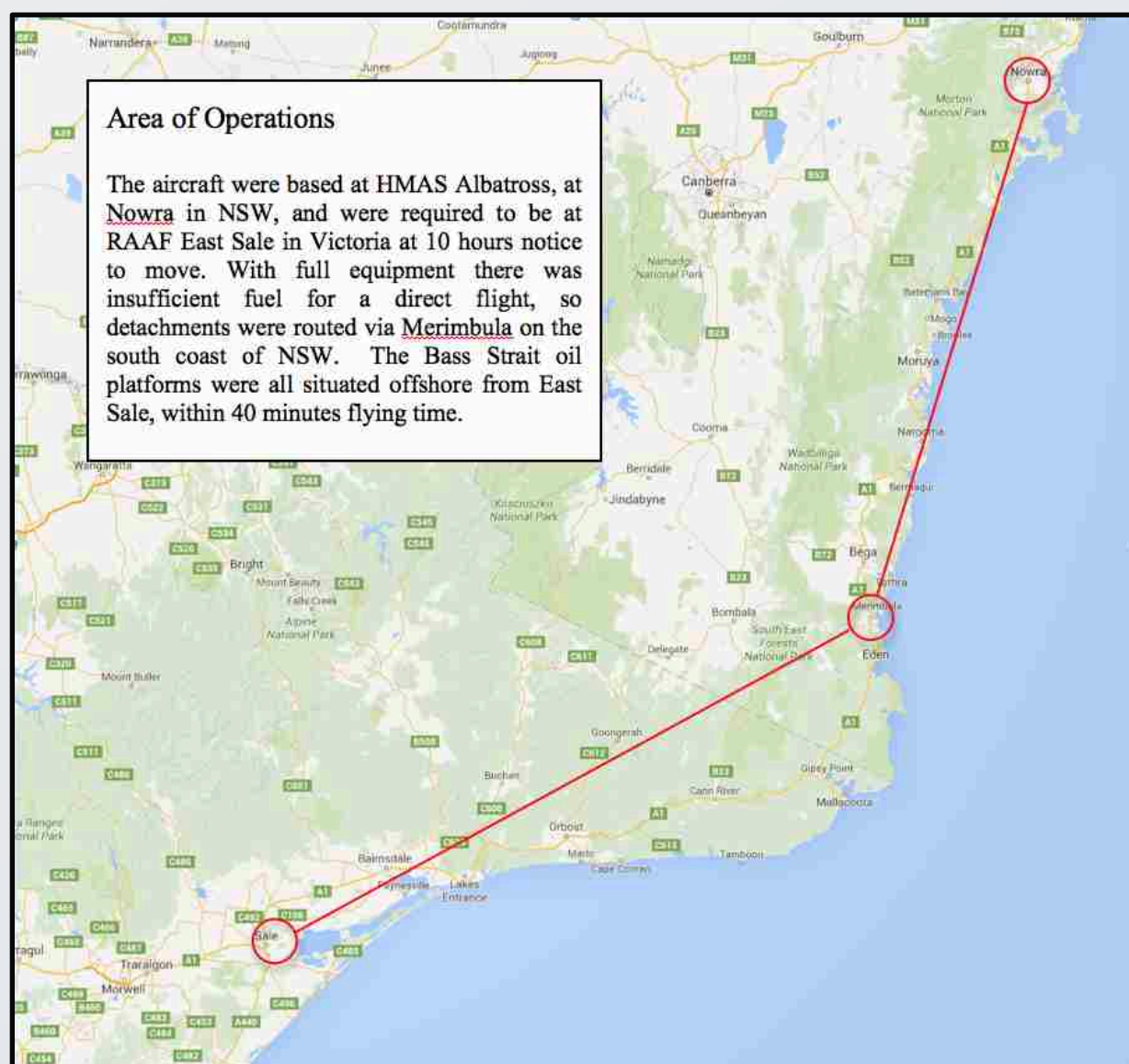
Aside from aircrew numbers there were many other problems. The ageing Wessex suffered poor serviceability, with typically only one out of four being available on line – hardly sufficient to train crews, yet alone take on additional tasking. Discussion with the SASR had yet to occur to agree how the two key elements of the capability would work together; nor was it clear what level of help the Air Force could offer in terms of accommodation and support in the Bass Strait area. The lack of navigation and positioning equipment in the Wessex was also of concern, as was the capacity to operate in close proximity to other aircraft (and oil rigs) at night. Even the availability of the rigs for training was uncertain, noting that ESSO did not necessarily share the same security concerns as the Government.

There was also the issue of personnel recall. The Operational Directive specified aircraft should be available for assault at East Sale inside 10 hours, which required them to be airborne from Nowra within 2 hours of the first call. It meant, in effect, that rostered personnel had to remain by a telephone and could not leave the local area (mobile phones did not exist and there were no pagers available). Because of low personnel numbers this applied, for the most part, for the duration of peoples' appointments to the Squadron.

On 22 September 1980 Battese and Mayo made a short visit to RAAF East Sale to assess facilities available for up to ten Wessex and accommodation for air and ground crews. They returned there on 27 October 1980 to conduct a 'fly off' using the Wessex and RAAF 9 Squadron Iroquois. This allowed an opportunity for the SAS to evaluate approach profiles and noise levels: the choice of Wessex was reaffirmed for its superior noise footprint and capacity.

Battese remembers standing on the helipad of oil-rig "Snapper" [7] to watch the Iroquois. The helicopter was clearly visible above the horizon, and he decided that any approach must therefore be made at very low level – that is, well below the level of the rig's helipad – for as long as possible. That profile would 'mask' the helicopter against the background of the sea rather than the sky, and maximise the effect of the Wessex paint





Before departing Swanbourne they were given the opportunity to experience first hand a live fire exercise in the “killing house” – an experience not to be missed. They were told to stand in an area no bigger than a square metre in either corner of the room and told under no circumstances to move – they didn’t.

In the meantime the CO returned to East Sale, which was close to the Bass Strait, to meet with the Commanding officer of the RAAF base and to talk to Esso, whose rigs fell under the protection of the Operation. Esso was demonstrably nervous about having strange military helicopters and personnel operate on and around their rigs, but under the circumstances were amazingly cooperative in their assistance and advice, and also in allowing rig access and the use of their frequencies and facilities.

The problem of long transits from Nowra to East Sale also had to be overcome: the Wessex internal fuel load was insufficient for a single leg (given the frequent southerly/westerly winds), and the weight of external tanks limited essential cargo. Accordingly, Merimbula was selected as a refuelling stop<sup>[13]</sup> and became used to eight or more aircraft arriving unannounced from time to time. Unfortunately the airfield did not have AVTUR fuelling facilities so a NAS Nowra tanker was driven there for planned deployment dates. (Eventually arrangements were made for the permanent siting of a Navy tanker at Merimbula.)

### Training and the Development of Tactics

The Squadron quickly set about qualifying and re-qualifying as many aircrew as possible on the Wessex. Although the task put a huge strain on the Squadron across the board, there was a palpable sense of purpose within the unit particularly amongst the junior aircrew. There was an increased workload on the QHIs as the low-time Iroquois pilots now required a Wessex conversion to co-pilot standard. The course was not curtailed in any way. All needed an Instrument Rating and knowledge of the Flight Control System.

Throughout September/October of 1980 the training of junior pilots proceeded apace. Names included SBLTs Antonio and Vince Di Pietro, Mark Henschke (who was to suffer a catastrophic ditching in Bass Strait 3 years later); Chris Tutin, Dick Chartier, George Sydney, Adrian Croft, Mark Hype and Tony Reyne. Other more experienced pilots followed later including LCDRs Brett Dowsing, Mick Perrott, Bill Shurey and Ken Alderman, and LEUT Tony Drover.

The tactics to determine how best to deliver the *Nullah* team to a rig under the control of a terrorist group also had to be developed. The flying profile had to deliver the maximum number of Troopers to a rig in the least possible time and with the least risk from small arms fire. The profile also had to minimise the risk of aircraft collision, and be adaptable to both day and night operations.

Each aircraft carried six SAS Troopers who would (ideally) fast rope to the deck once the aircraft came to a hover. Initially the Wessex did not have hard points to allow rappelling, which meant the aircraft would have to actually land on the platform to disembark its troopers: a less than ideal scenario. A major modification to enable rappelling ropes to be



**Lower.** Two Wessex making practice approaches to the “Drum and Drumsticks”, a pinnacle feature not far from NAS Nowra. Initial day approaches soon gave way to night assaults, which were interesting as there were no lights anywhere, and early night vision goggles proved totally incompatible with the Wessex. (Image: Brett Dowsing).♣

scheme – white on blue. He also decided that approaches under cover of darkness would be preferable to daylight operations, to further minimise the chance of being detected.

In mid October 1980 Ken Vote and George Spence, the Squadron’s Senior Pilot and Senior Observer respectively, were tasked to liaise with the SAS *Nullah* team in Swanbourne. Vote had flown with 9 Sqn in Vietnam where one of the primary tasks had been the insertion and extraction of SAS patrols – not in a maritime environment, but nevertheless valuable experience in SAS methods and techniques.

The visit to Swanbourne was a sobering one as earlier in the month there had been a fatal training accident outside the “killing house” used for SAS Training. Two troopers were practicing dry firing drills with their pistols when one had shot the other in the head, mortally wounding him. The accident reinforced to the two Navy Officers how seriously the SAS took their task, but it also reaffirmed that SAS training and deployment from helicopters had changed little from Viet Nam in 1968-69.

attached to the aircraft was therefore developed, which comprised a Rope Attachment Device (RAD) attached to the rescue winch frame.

The RAD was designed to fit two hooks (although history only ever mentions one being used) with a quick release capability. Commercial rigging hardware was used to speed the design process but a lack of understanding of commercial tolerances resulted in an inadvertent rope release and serious injury to a SASR trooper in early operations (’82 or ’83). Following design changes the RAD remained in service throughout the period the Wessex was used. But even when the gear became available there were no rappelling skills on the Squadron and they had to be developed in concert with other training.

The first detachment to East Sale occurred at the end of October 1980, only eight weeks after the Bursa tasking. Aside from familiarising the SAS with the Wessex, this detachment allowed both them and the aircrew to view the layout of the oil platforms and see the plan of field during daylight. Training was conducted on a remote part of RAAF East Sale. (The first night training with the *Nullah* team occurred between the 08-12 December, again at East Sale.)



The initial rappelling equipment quickly developed a critical fault, insofar as the steel brackets through which the rope was threaded began to distort under load. In its haste SAMR had not conducted any destructive testing and all rope training had to cease whilst the problem was rectified.

Meanwhile, an approach profile had been developed and practiced at the 'Drum and Drumsticks' – a rock formation projecting from the sea off the cliffs of Beecroft Peninsula, near Nowra. The Sale detachment provided the first opportunity to test the profile to a rig, however, and after minor adjustments they became the standard approach that was to change little over successive years. The lead-aircraft was designated the mission commander and formation leader, which would normally be flown by the Squadron Commanding Officer, Senior Pilot or a senior Flight Commander. Numbering from the lead aircraft, the airborne assault formation would transit at 1000 feet in line-astern to a holding pattern about 10 nautical miles down-wind from the target rig. They would then hold at 80 knots at 200 feet (lower by day) until the TAG mission commander called for the formation to attack – this would be once the underwater assaulters were in position on the rig to provide a coordinated assault.

Once inbound from the holding pattern, the formation would simultaneously descend to 125 feet (at night) or 50 feet (in daylight) above sea-level and increase speed to 90 knots. The formation leader, based purely on visual assessment (there was no GPS in those days), would give a two-minute warning from arrival and Number 2 and 3 aircraft would move out to position line-abreast on the lead aircraft. Number 6 would commence slowing to 80 knots, then Number 5 and,

finally, Number 4 but still in line-astern. At 30 seconds from the rig all assault troops were in position in each aircraft and weapons were armed. Lead would commence a decelerating climbing quick-stop to terminate in a hover at about 30 feet above the oil-rig's landing pad while Numbers 2 and 3 would simultaneously position to port and starboard of the rig to provide firing arcs for their onboard snipers. [8]

Wind direction was not a critical factor as the rigs had been constructed such that the ESSO helicopters that visited regularly each day would have a clear approach path into any prevailing wind. At the top of the "popup" the aircraft was levelled and hover power introduced – if done correctly and with a bit of practice it was relatively easy to avoid an incipient vortex-ring state. The SAS troopers then conducted fast roping to the platform upon which the rope was recovered and the aircraft transitioned rapidly to forward flight by 'falling' off the edge of the deck. The ideal profile was to roll out of the hover as the next aircraft appeared at the apex of its "popup", about 20 seconds later. At night, this timing was one of the major difficulties without radar or any other navigation or positional aids.

Once clear of the platform the navigation lights would be switched on (in a training scenario) and the aircraft would be flown back to the holding pattern at 80 knots and 500 feet. Anti-collision lights would also be switched on until a rejoining aircraft called for them to be extinguished. From that stage of the mission the last aircraft of the formation maintained their anti-collision lights on.

Timing was calculated so that once Lead called "clear" Number 4 would be in the final stages of achieving hover above the rig's landing pad and then discharging his fast-roping troops. As he called "clear"

Number 5 would be about to discharge his troops and then, in turn, Number 6. Should sniping support no longer be required then Number 2 and then 3 would move to the landing pad, fast-rope their snipers and then rejoin the rest of the formation in the holding pattern. Overall, the time lapsed from the first aircraft over the rig to all troops discharged and last aircraft clear was about three minutes once fully worked up.

There were two major problems to overcome. The first was how fly in formation at night without lights. Aircrew were well versed in daylight close formation but none had flown the profile in darkness, which presented a specific challenge – how to avoid colliding with other aircraft in close proximity whilst minimising (and preferably avoiding) any ambient light sources that would reveal their position.

A number of ideas were trialed, which included illumination by flares. Ken Vote recalls:

*"My logbook shows and I clearly remember that on 05 March 1981 a coordinated brief with a VC 851 S2G (Tracker) crew flown by LCDR Peter James with LCDR Rod Coles as his TACCO saw a flight of Wessex depart NAS to strike the quarter deck of HMAS Derwent.*

*I was lead on this mission but on start my aircraft went u/s. I handed the lead to the deputy LEUT Ron Lawrence and bolted with my crew to the previously preflighted 'spare'. My copilot was SBLT Vince Di Pietro. We got airborne quickly and we managed to catch the flight just after "feet wet" at Point Perpendicular.*

*Thanks to excellent spacing of the parachute flares dropped by LCDR James' crew from 1,500 feet all the Wessex crews were able to make a number of successful arrivals over the quarterdeck in continuous daylight-like illumination.*

*During a subsequent major briefing with ESSO, Army, RAAF, Commonwealth Police, politicians, public servants and other odds and sods ESSO showed more than a little concern about magnesium fuelled parachute floating down amongst their oil rigs. Practice had shown us though that if dispatched from sufficient height and spacing they burnt out well before they could endanger the rigs. During my time involved in the operation we never dropped flares over the oil field."*

Reliance on flares introduced further complexity, however, in terms of the precise coordination of assets to deploy them and the effect that weather might have once dropped. Other options were therefore explored.



**Above:** A rare photo of Wessex 819 on oil rig 'Marlin', circa 1983, with 810 on short finals (Jeff Chartier collection). Typically the aircraft only landed on the pad to collect people or equipment dropped onto the rig during practice approaches, as in this image. By international standards the rigs were small, and there was opportunity to foul the landing pad with crane jibs etc., although this scenario was never practised. **Next page:** A stick of six Wessex in Bass Strait. (Photo: Brett Dowsing).♣





During the Vietnam war the US had developed “Starlight Scopes” to aid infantry at night. A further iteration was the large, heavy and cumbersome devices for tank crews. During the December 1980 East Sale deployment LCDR Tony Baker, a Navy Test Pilot, arrived with a set of “tankie goggles”, which elicited some excitement amongst the aircrew who shut themselves in a darkened room and peered through the device to see a greenish, ghostly, fuzzy image when the IR function was activated. In a completely black room the goggles showed no image without the IR function.

On the night of 27 January 1981 Vote and Mayo flew a “Low Light Goggle” sortie, which immediately revealed a serious incompatibility between the goggles and the instrument lighting. Successful or not this was probably the first aviation use of night vision equipment in the Australian Defence Force.

On the night of 05 March 1981 Vote again flew with the night vision goggles, this time as Vic Battese’s copilot. The task was to attempt close formation with another Wessex, the pilot of which became increasingly uncomfortable when first asked to turn off his navigation lights and then his instrument lights because of their diminishing effect on the goggles. The overall result was not good: whilst the goggle performance was assessed as adequate in total darkness, any ambient light whatsoever “blew” the goggles making them useless – even the exhaust glow had an effect. This limitation, together with the very narrow field of view they afforded, rendered them unsuitable. There is no report the goggles were ever used again during the Navy’s CT tasking.

In the meantime other forms of lighting were studied. Chemical ‘Cyalume’ sticks were briefly considered for attachment to the rotor blades in the assumption that the tips, travelling in an arc some 28 feet from the fuselage, represented the first and immediate point of collision. The concept was quickly rejected as blade tracking would have been a major problem. Fastening Beta lights to the rotor tips was also considered – in fact a trial was conducted on 26 May but failed.

The final solution involved Cyalume sticks but fastened to the airframe rather than the rotors: one stick on each outer oleo strut and one on the tail, below the tail rotor disk. The pilots of aircraft in formation were able to position these lights to give a ‘step down’ rotor profile, and use their geometry to evaluate the required distance. It was a matter of very fine judgment, however, and required enormous concentration as closing speeds were hard to determine particularly when the lead aircraft was changing attitude.

The need for speedy solutions sometimes overtook proper procedure and process: for example, Battese recalled when Captain David Ferry (the newly appointed Superintendent of Aircraft Maintenance and Repair (SAMR)) walked into a discussion in his office on fixing chemical lights to the aircraft:

*“After listening attentively he looked at the ceiling and said: ‘out of respect of my years of knowing you I will forget what I have just heard. But before the next flight and no later than next Wednesday I expect to have a MOD proposal on my desk’. It was done and the MOD was subsequently approved.”*

By today’s standards the use of Cyalume lights to achieve close formation at night without other aids would be regarded as foolhardy; indeed, CDRE Norman Lee, the Commanding Officer of HMAS Albatross, recorded at the time:

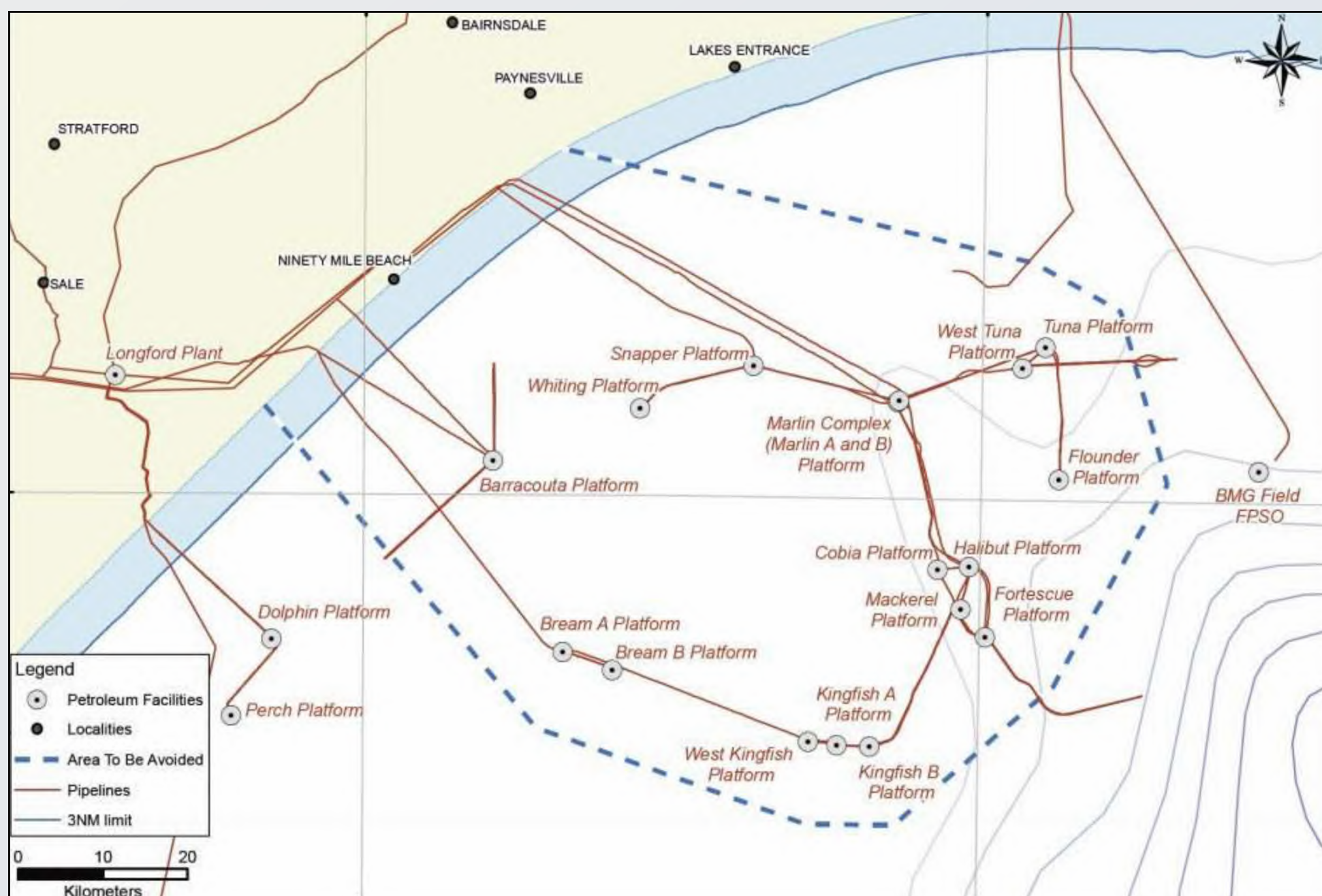
*“723 SQDN Wessex was given a national security task which entailed flying at night with [sic] night vision goggles. I flew with them on one of their night training missions and reached the conclusion that they were operating on the edge but the task had to be done...” [9]*

Throughout the entire task, however, no close formation incident ever occurred – although it was highly demanding on those actually flying the aircraft, who relied solely on two pinpoint light sources to give them necessary spatial information, and on the rear cabin occupants who knew they were within a few feet of other aircraft but could see no illumination at all from their positions.



*A detachment of RAN Wessex at RAAF East Sale, having just completed a morning practice session on the rigs. Once the crews were comfortable with the daylight practices, night ops would commence. (RAN image). ♣*





Top: Esso oil rig distribution in the Bass Strait. RAAF East Sale is not shown on the map, but was near the township of Sale, which is. Most of the training was conducted to the rigs closer ashore, such as Barracouta and Snapper, although occasional forays were made to those further out.♣

Years later the Army lost 18 soldiers when two Blackhawks collided at night during a low level tactical approach to a clearing near Townsville. Their pilots were on [later generation] night vision goggles. This is not to suggest that their techniques or procedures were inferior, but the tragedy dramatically illustrated how quickly disaster can strike when aircraft are flying in close proximity at night. In retrospect, the Wessex crews should consider themselves lucky.

The second major problem during the run-in was timing. Success of the mission depended on placing as many troopers on the platform as possible in the shortest possible time: in other words, to 'stream' the aircraft sequentially over the deck without delay between them. Visual cues during daylight were more than adequate to judge speed and timing, but at night it was a different matter. On their final run-in the Wessex were in line astern and the pilots in each aircraft had to judge, as best they could, the speed and position of the helicopter in front of them, which was approaching the rig at 80 knots before pulling up in a hard decelerating 'zoom' climb to terminate in a hover above the landing platform. The speed and duration of the climb was variable, depending on the wind speed, so each approach was potentially different to those practiced before.

The Wessex had no positioning aids to assist in this task, so separation relied solely on the fine judgment of each pilot. Each aircraft would call 'climbing' as it started its deceleration, and 'breaking' when it subsequently departed from the hover, but other than this the only cues were the outline of the platform and the bobbing Cyalume sticks to provide adequate separation.

Once they had discharged their Troopers, aircraft would gather in a holding pattern some distance from the rig to wait for further requirements, which might include medical evacuation or removal of personnel or equipment. During training this normally only involved returning the TAG ashore to East Sale to be followed the next day by recovering other specialist equipment and personnel that were deployed to the target rig or others. These flights were normally conducted in a solo manner, but with mutual SAR arrangements, long-stream formations were sometimes involved although usually at safer heights – 1000 feet outbound and 1500 feet inbound.

LCDR Mike Lehan, who was to Command HC723 from October 1983, later described the profile as 'archaic and extremely hair-raising', and noted:

*"It is doubtful that any of the aircrew involved in this evolution will ever forget letting down over the pitch black sea of the Bass Strait in winter – or of losing sight of the aircraft ahead as the pilot flared to slow down*

*and deposit his troops on the oil rig platform – all achieved by immaculate timing."*<sup>[10]</sup>

## Maintenance

The BURSA commitment injected a new urgency into the Squadron. At the beginning of the task hangar and personnel accommodation were immediate issues as additional aircraft and people arrived on complement. 'E' hangar was made available to supplement the Squadron's normal 'F' hangar space. Three extra office buildings were also made available close to the Squadron's existing accommodation – like the hangars they were old, shabby and cold. Working in the hangars was particularly miserable in the winter months, as no heating was available. The Squadron CO often made unannounced visits during the night to acknowledge maintainer effort and remembers how uncomfortable the working areas were; he secured cold weather clothing for the maintenance crews but the standard of the buildings and accommodation never really improved.

Maintenance, previously conducted in two watches, was re-organised into three to give round-the-clock effort. This placed a significant burden on the maintenance sailors but Vic Battese was able to negotiate a waiver for duties on HMAS Albatross's watch-bill, which assisted, and provided

## In Command

The CT Task commenced from August 1980 and concluded (with the transfer to Army) in December 1989. During that time the Squadrons were commanded by the following officers:

### HC723 Squadron

- Jun80-Oct81 LCDR V. Battese, RAN
- Oct81-Oct82 LCDR M. Perrott, RAN
- Oct82-Feb84 LCDR M. Lehan, RAN

### HU816 Squadron

- Feb84-Dec85 LCDR C. Mayo, RAN
- Dec85-Jun87 LCDR K. Alderman, RAN

### HS817 Squadron

- Jul88-Dec89 LCDR A. Wright, RAN





**Above:** Two images of Squadron personnel at RAAF East Sale. On the left LCDR Mike Lehan (front left) [CO HC723] leads his aircrew having just completed a morning practice run to the Bass Strait rigs.

**Above Right:** same place, different time: LCDR Ken Alderman [CO HS616] presents his Wessex detachment in August 1986. The Bursa task was handed over to HS817 (Seakings) only a few months later.

RAN Images via Jeff Chartier and Ken Alderman respectively. **Left.** A rare picture of Wessex in black livery. The black paint was only applied once, for a night exercise in bright moonlight which was reflecting off the normally white upper surface of the aircraft.♣

calls, lead would call for 'Nite Sun, Nite Sun' just before he started his pop manoeuvre, at which point I'd transition the light to white mode aiming to have the target illuminated in white light as he came to the hover over the pad. The idea was that, because I'd have had the target steadily illuminated on IR mode for the two minutes of lead's run in, the beam would be stable when switched to white mode, thus avoiding 'fumbling in the dark' with the white light as lead was at his most critical point.

We'd then hold in an orbit overhead, keeping the target lit up for everyone else, as the rest of the stream rolled on then off the pad. The mount for the Nite Sun had a fairly limited freedom of movement, so it became a bit of an art form keeping the target steadily lit as we orbited in strong cross winds, calling to Dick [the pilot] for a 'bit more bank', or 'we need some right pedal'. The times when someone else was manning the Nite Sun cab, and I flew in one of the assaulting aircraft, I remember that the strong shadows thrown on the pad by the Nite Sun, from the orbiting aircraft, were terribly disorienting as we hovered over the pad."

The only other acquisition was a VHF radio fit – but the 'wish list' for a Doppler Navigation System, improved main rotor blade rain protection and improved night vision devices (or even a compatible lighting fit) was never realised.

Despite the hazardous nature of the flying there were relatively few incidents: in October 1983 a Wessex crew came close to disaster when the exhaust stacks on one side of their aircraft were removed by a gum tree (the aircraft was known affectionally as "Miss Eucalyptus" from then on). Ironically, the worst accident did not occur during low level or close proximity operations but on a daylight support flight, when in December 1983 aircraft number 825 ([N7-215](#)) suffered a catastrophic gearbox failure before crashing into Bass Strait with the loss of two lives. When the venerable old Wessex finally paid off six years later this tragic event remained the only fatal accident in the entire 27 years of their service.

The impact of this accident was profound, insofar as it was a brutal reminder to all of those involved in flying and supporting the National Task that it was inherently risky. It also came shortly after the Government's decision to pay off the fixed-wing element of the Fleet Air Arm, generating an attendant view that they had been 'abandoned' by the Navy. The sentiment was recorded by CO ALBATROSS in his quarterly Report of Proceedings of December 1983:



LEUT Craig Marcombe holding the evidence of his near miss, when an exhaust stack on one side of his aircraft was removed by a gum tree.

a once-monthly long weekend leave pass for sailors, when the rosters allowed.

In many respects the maintenance crews were the unsung heroes: working long hours in unheated hangars with old equipment and inadequate spares. By that stage in their lives the Wessex were notoriously unreliable but their dedication worked wonders: in 81/82, for example, the Squadron was allocated 2500 flying hours and actually achieved 2600.

That's not to say that maintenance issues did not cause significant problems, however. For example, a detachment to RAAF East Sale was scheduled for early April 1981 but the first week of that month produced a rash of unserviceability. The flying rate of effort was starting to eat into spares, particularly engines, rotor blades and hydraulic systems. The problem was made worse when one aircraft had a generator explode during a base run. Despite score marks on the engine intake, no internal damage could be found and the engine (after a generator change) produced full power. SAMR finally approved a flight (there being no more engines). It was the Friday before the detachment was to deploy on the weekend. If the aircraft 'came up' they would have had the bare four helicopters. One of the Squadron Maintenance Test Pilots (LCDR Mayo) agreed to test fly subject to the CO authorising the flight and accompanying him, which he did. The engine performed splendidly. On returning to land, however, a rotor blade pocket separated with a loud bang and severe vibration. If that was not bad enough, another Wessex had a hydraulic 'nose bleed', and the Squadron was down to two aircraft. That was the last straw and the detachment had to be cancelled.

Despite such set backs the Squadron continued to provide the capability and to train and replace aircrew as individuals were posted out.

By the time Vic Battese left HC723 in October 1981 the Wessex had undertaken four full deployments to Sale and the flying, training and tactics were well established. Mike Perrott succeeded him for a year and then Mike Lehan took over: both did a fine job in the continuation of the role, as did subsequent HU816 & HS817 Squadron Commanding Officers.

Minor changes were made in the process, such as the addition of a 'Nitesun' capability in 1982 and the reorganisation of the Squadron into Flights to separate training and operational commitments – but aside from these changes the basic aircraft and the tactics remained unchanged throughout.

The Nite Sun is worthy of mention as it was the only major equipment acquisition in the whole operation. It comprised a high power searchlight that was mounted on a discrete aircraft whose job it was to illuminate the rig for rappelling and sniping (and presumably to be shot at!). Al Byrne remembers the procedure as follows:

*"We'd hold at, as I recall, 1500' and run in above and displaced to the left of lead (to give me a view of the target from the cabin door), with me keeping the target lit by IR, and calling an estimated distance to run visually. On the basis of lead's own timing and the guesstimated distance*



*Following the fatal crash of Wessex 825 the remaining aircraft were placed on HMAS Tobruk for carriage back to Albatross, pending a full investigation of the outcome of the accident.♣*



*“The Wessex crash on 04 December with its loss of life had a tremendous emotional impact on many personnel at NAS NOWRA and more especially upon dependents. The accident seemed to serve as an excuse for people to vent their pent up feelings against authorities whom they blame for the current plight of the Fleet Air Arm. This episode clearly demonstrated the depth of strong feeling that lies just below the surface at NAS NOWRA. Careful, sympathetic understanding of individual needs must dominate man management at ALBATROSS during the crucial months ahead.”[11]*

As a result of the accident all Wessex were temporarily grounded, which caused a logistic problem in how to return the remaining seven aircraft of the detachment from East Sale to Nowra. This was achieved



*The Sea King could deploy a higher number of troopers than the Wessex, so only four were required to be on task. This was, however, a high proportion of available airframes – which led to difficulties in meeting task requirements.♣*

by ship (see photo below) after which the aircraft were reassembled and were expected to execute the Bursa role if required, despite questions about their airworthiness. Arguably the accident was also the catalyst for delayed recognition that the complexity of HC723 Squadron's diverse roles was far greater than desirable and the National Task required a dedicated Squadron.

As a result of airworthiness concerns a major engineering modification program was developed, which required all aircraft to be fitted with a modified gearbox. Coincidentally, a Gazelle engine compressor blade failure also required all aircraft to be fitted with a modified engine. Thus, in the first half of 1984, the new Squadron's maintenance organisation was faced with the removal and replacement of main rotor gearboxes and engines in all aircraft, along with the associated test flying and vibration monitoring efforts. At the same time the Squadron was expected to have sufficient ready aircraft to be able to execute the Bursa role. Sufficient progress had been made to enable enough airworthy aircraft to be available for the April deployment to East Sale.

#### **The Transfer of the Role**

HC723's effort over these years was prodigious, but it eventually became apparent that the Squadron just had too many aircraft types and too many other tasks to manage such an important role. These concerns had been flagged as early as December 1982 by Commodore NAS, who noted:

*‘HC723 Squadron is currently being expanded to a possible strength of 13 Wessex, six Bell 206 (Kiowas) and four UH-1Bs. The squadron is responsible for all helicopter support requirements for the Fleet, Small Ships Flights and the national Task. With the responsibilities of the Fleet Aviation Officer's organisation being transferred to Commodore NAS, HC723 has an increasing role to play through the Small Ships Parenting Cell, monitoring standards and practices and performing inspections of all the Air and Vertrep Capable Ships of the Fleet. A complement proposal to reflect some aspects of the increased tasking was forwarded in early September 1982 and action is currently with Navy Office.’[12]*

The imminent arrival of yet another aircraft type to the Squadron (the Aerospatiale AS350 Squirrel) was the deciding factor. Accordingly, HU816 Squadron was commissioned on 09 February 1984 as an Army Support Unit under the Command of LCDR Clive Mayo. All Wessex helicopters were transferred to the new Squadron to continue the CT Task.

HC723 exited stage left, where it continued to operate the UH-1, Bell 206 and HS748 platforms, and to take delivery of six Squirrels for training and as an interim FFG Flight aircraft. History shows that the Squadron embraced the CT role with distinction during its early development and formative years, in the face of enormous difficulties.





*A rare photo of a stick of Sea Kings operating to a rig in the Bass Strait (via Jeff Chartier).*

HU816 held the task until late 1986 when Wessex safety and supportability issues dictated it should be handed over to HS817 Squadron. At that point HU816 was decommissioned, and Navy continued to provide the capability with 817's Sea Kings. The Wessex continued as a general utility aircraft for another three years.

Advice from the then Training Officer of HS817 demonstrates that the changes that the larger Sea Kings brought:

*"817 flew the CT role with four aircraft (as opposed to 816 who used six Wessex plus a top cover/Nightsun aircraft). All approaches were conducted in line astern (similar Cyalume stick formation pattern to the Wessex) with the Radar Altimeter engaged and a 40-foot step-up between aircraft.*

*Aircraft #1 was lead and starboard sniper (from the passenger door, upper hatch removed); Aircraft #2 was the port sniper (from cargo door) and Aircraft #3 and #4 were the first and second assaulters respectively.*

*We held 5 miles downwind (using radar positioning). During the run-in aircraft #1, #2 and #3 would maintain two rotor-spans [separation] and approach at 100 knots IAS to a quickstop, #1 going right of the target, #2 to the left and #3 directly to the target, #4 would fly in at 60-80 KIAS, aiming to arrive over the target as #2 rolled off.*

*#1 would then move over the target and fast rope the team lead and sniper, followed by #2 with the medic and sniper (so we would come off the target in 2 groups: #3 & 4 followed by #1 & #2).*

*For exercise purposes, to conduct another practice we did a radar rejoin to end up back in 1,2,3,4 order – this was quite often the scariest bit and probably the closest we came to disaster (certainly in my experience).*

*Over the back half of 1986 our aircraft starting rolling into a modification program at HDH Bankstown for the CT support role (I picked up/dropped off an aircraft in Nov and Dec, I think it was a 6 week mod cycle). A new radio rack was installed aft of the passenger door, forward of the reeling machine on the port side that had a range of VHF, FM and Motorola radios for the SF guys (much better than the strap-in VHF radio we sometimes had access to up to that point for NAVEXes).*

*We also got to practice with a range of Generation 1 Night Vision Goggles – good for night formation, no good for an approach to lit targets (especially ones with a gas flare burning brightly all the time!!)"*

One of the Seaking pilots recalled an early flight to practice live firing with the SAS snipers. The Sea King offered an opening panel above the personnel door behind the co-pilot which gave an ideal position for the starboard sniper. Another sniper was positioned in the aircraft cabin shooting through the removed Observer's window. As firing commenced the co-pilot let out a blood curdling scream, suggesting he was being shot in his back. A cease fire was immediately ordered and the problem was

discovered – the hot cartridges being ejected from the rifle were landing into the rear of the co-pilot's collar and rolling down his back. The answer was found initially by using a left handed shooter with a left ejecting rifle, but eventually a modified weapon was provided.

Between the work there were lighter moments. The SASR suggested that the display of aircrew names on uniforms and flying suits could be a security risk, and offered to pay for fake name patches to be produced for use during exercises. 817 Squadron aircrew jumped at the opportunity and following a rowdy crewroom meeting came up with many new aliases such as 'Perry Scope', 'Pete O'Tube', 'Hertz Van Rental', 'Ben Dover' and 'Neil Down' to name but a few.

Although the Sea King had better avionics and a greater capacity, it suffered other disadvantages. It was a larger and more cumbersome aircraft and the attack profile was consequently far more sedate than that of the Wessex. The Wessex provided far greater sniper coverage with up to four shooters out of the cabin; the Sea King could only provide two; furthermore, the Sea King was still being used regularly as an ASW aircraft which distracted from the Bursa commitment. The Sea King crews initially attempted to use their on board radar for aircraft positioning before and after an attack, however this was discontinued following a near head on mid air collision between two unlit pairs of aircraft one night over Bass Strait. The Sea King also suffered serviceability problems, just as the Wessex had, but lack of availability was exacerbated by the smaller number of aircraft hulls available. Generally, this meant that only two or three aircraft were available which was insufficient to carry out the task effectively.

HS817 held the task until the end of December 1989, when Navy's involvement was finally terminated. Ironically, at the very same time the Sea Kings relinquished the task the faithful old Wessex were finally paid off, with the surviving airframes destined for museums, private collectors, or the scrap heap.

Looking back, the National Task was one of those operations that was born of a genuine concern on the part of the Government, but was never really properly resourced or equipped. The material achievement of a prolonged, risky and intensive operation was, at the end of the day, accomplished with little more than existing old aircraft and one-dollar Cyalume sticks to allow close proximity operations at night.

The tactics developed and the way they were executed reflected the unique circumstances of thirty-odd years ago – today, they would be done in a very different way. Nonetheless, the ability to not only meet the task but to do so with such professionalism speaks volumes of the Fleet Air Arm. It is a quality that persists to this day. ♣





# The Loss of Wessex N7-215

**04 December 1983**

Remembering  
LSACMN G. Macey  
CPL J. Campbell

On 04 December 1983 Wessex N7-217 was transiting back to East Sale with eight persons on board having collected an ADF medical team from the Marlin Platform. This was the aircraft's second sortie of the day.

About 13 minutes after departing the rig the pilot (LEUT Mark Henschke) noticed an unusual and increasing vibration through the airframe. He declared a PAN call at 1206 and descended from his cruising speed/altitude of 90knots /1000 feet to approximately 60 knots /100 feet with the intent of making an emergency landing at the nearest point of land (Golden Beach), which was then some 25 nm away.

At 1212 pm East Sale approach monitored a further call from the Wessex to the control tower at the Longford oil and gas plant, to the effect that the vibrations were worse and contact had been lost with East Sale due to the low altitude. That was the last transmission received and the aircraft was assumed to have crashed into the sea at approximately 1213 hrs.

At 1234 The Longford SAR helicopter, a float-equipped Bell 205 sighted an oil slick approximately one mile off Golden Beach. The Huey landed on the water and rescued six survivors, who were transferred to RAAF East Sale.

The search continued for the two missing persons but without trace. The bodies of LSACMN [Gary Macey](#) and CPL J. Campbell were subsequently recovered from the aircraft wreck, which was raised relatively quickly due to the shallow water (60 feet) and the availability of a specialised offshore support vessel. The aircraft was resting inverted on the cockpit roof and rotor head. Both personnel were in the cabin.

The cause of the accident was failure of the input drive bevel gear in the transmission casing, due to a fatigue crack. This crack originated in a metallurgical defect developed during manufacture. On failing the drive was ejected though the transmission casing which also provided support for the port swash-plate control servo. With no support, the servo dropped towards the floor of the transmission bay causing the aircraft to pitch and roll rapidly and uncontrollably nose down and to port. The pilot recounted that the aircraft was nose low and almost inverted when it struck the water.

Click [here](#) for the abbreviated Board of Inquiry Report

Click [here](#) for the Aeronautical Research Laboratory's Technical Report. ♣







**A loud bang,  
pitched and  
rolled to port**



● Wessex aircraft N7-215 which crashed into Bass Strait.

## PILOT HONOURERED

LEUT Mark Henschke, pilot of the ill-fated Wessex 825 which crashed into the sea near East Sale last year, has been awarded a CNS commendation for the airmanship he displayed in dealing with the emergency which caused the accident.

On Sunday, December 4, 1983, 825 and a number of other Wessex operating out of East Sale were carrying out a routine transfer of passengers and baggage to and from offshore oil rigs in Bass Strait. Following one uneventful sortie in the morning, Wessex 825 departed East Sale at 11.15 am for the Marlin oil rig with LEUT Henschke as pilot, LSA Macey as aircrewman and a passenger, ABATA Beauchamp, in the co-pilot's seat. At Marlin five members of an RAAF medical team were embarked and the aircraft departed for East Sale.

### NORMAL

The weather was fine with a slight south-easterly and good visibility; the aircraft was functioning satisfactorily and all cockpit indications were normal. To make the flight more interesting for the passengers, the pilot diverted slightly to track via Snapper and Southern Cross oil rigs on the return leg.

Approximately 10 miles from the coast inbound for East Sale the pilot sensed an unfamiliar vibration through the air frame and the flying controls. He advised Air Traffic Control at East Sale that he had a problem by transmitting a "PAN" call then started a descent from the cruising altitude of 1000ft down to 100ft AMSL, gradually reduced speed from 105 knots to 60 knots and altered course to track directly for the nearest beach.

During the descent gentle manoeuvres were carried out to try to determine the cause of the vibration, which was progressively getting worse, and the aircrewman inspected the aircraft visually for any loose panels that could conceivably cause similar symptoms.

Once level at 100ft the pilot attempted to call East Sale Air Traffic Control again to give an update of the situation. Due to the low altitude of the aircraft this call was unsuccessful and the pilot notified LONGFORD (the ESSO Helicopter Base) of his problem and advised that he intended to land on the nearest beach.

Shortly after this call the aircraft occupants heard a loud bang and 825 pitched nose down and rolled to port violently, failing to respond to the pilot's corrective control inputs. The aircraft made an uncontrolled entry to the water and sank approximately one nautical mile from Nine Mile Beach.

### SINKING

Six of the eight occupants of the aircraft escaped as the aircraft was sinking, unfortunately the aircrewman LSA Gary Macey and one of the members of the RAAF medical team, Corporal James Campbell, died as a result of the accident.

An investigation later revealed that the accident was caused by failure of a gearbox component, the input bevel gear drive pinion from the engine to the gearbox. On failure of this item the engine oversped and disintegrated and the bevel gear was ejected through the gearbox casing severing part of the main rotor pitch control mechanism thus rendering the aircraft uncontrollable.



● Vice Admiral Leach and LEUT Henschke.

The CNS commendation reads:  
**LEUT Mark Dawson Henschke:** I commend you for exemplary professional skill and handling of Wessex aircraft N7-215 which crashed into Bass Strait on December 4 1983 following catastrophic mechanical failure. As the emergency developed you carried out all appropriate actions, most significantly reducing the speed and height of your aircraft above the water, thereby lessening the severity of an uncontrollable impact. These factors allowed for the survival of six of the eight persons involved. Your actions were in the highest traditions of the Fleet Air Arm and have brought great credit upon yourself and the Royal Australian Navy.



# POSSUM PILOT



## The Unknown Story of 161 Recce Squadron's Support of Operation Bursa

By Ken Gwynne

What follows are the recollections of a Possum pilot from a time nearly forty years ago.

I was assigned to Op Bursa in November 1982, with 161 Recce Sqn maintaining two modified Kiowa aircraft on a similar notice to move as the RAN Wessex aircraft. These Kiowas were fitted with auxiliary fuel, fixed floats, an SASR Command and Control radio system, life rafts, and the pièce de résistance, a basic rad-alt to ensure that low level flight could be "safely" conducted over water at night! Op Bursa was not the only CT tasking for 161 Recce Sqn. The SASR CT capability was rapidly evolving in the early eighties and the squadron was also required to deploy aircraft to WA in support of training activities at Swanbourne, HMAS Stirling, and other locations.

As part of the CT training, I conducted float ops on Pittwater and low-level night unaided flight training within the Holsworthy range area. Pittwater, with its mild surface chop, in no way resembled Bass Strait, but it did allow safe training to be conducted at a considerable distance from any shore cues, something not possible when operating from dams.

Our primary Op Bursa task was to fly a SASR Command and Control element. It took a considerable effort to monitor and coordinate the progress of various SAS teams, (including the RAN clearance divers), once an assault on an oil rig had been launched. The aircraft usually carried a crew of three: pilot, the SASR Alternate Commander for the assault and another SASR officer. The SASR crew-members manned the communications links between the various elements, necessary for coordinating the assault. The Alternate Commander would also take over in the event that the assault did not unfold according to plan, especially if one (or more) of the Wessex aircraft went down.

Although the Wessex aircraft had strategically placed cyalume sticks to provide formation flight cues, my Kiowa flew without any lighting at all, as I was positioned at the rear of the formation. Flying at the rear of the line astern formation at night could also be a hair-raising experience. The Wessex crews had to hang in fairly close to prevent losing sight of those dim cyalume sticks and this was very hard work. On more than a few occasions, some alarming concertina ripples occurred at the rear of the formation. I eventually found that I was able to position my Kiowa much higher and still keep the cyalume sticks in view, a move that considerably lowered the stress levels.

Once the assault order was given, I would break off from the Wessex holding pattern and descend to 50 feet to keep well clear, and then head

towards the rig. This part of my mission was always pretty "exciting" and there were plenty of heart stopping moments when the rad-alt fluctuated wildly with those Bass Strait waves! Being in a holding position near the rigs at 50 feet, made my Kiowa almost invisible to those on the oil rig some 100 feet higher than me, and also to the inbound Wessex, which I could only dimly glimpse when they were skylighted above the horizon.

We flew these missions with enough fuel for a two and half hour plus sortie (my longest being 2.6 hours), as it was not possible for my aircraft to land on until after the SASR troops had retaken control of the oil rig. Typically, there would be a significant delay from when the last Wessex disgorged its troops until we could safely land on, and sorties of around two and half hours in duration were not uncommon.

A heavily laden Kiowa on floats has to be flown carefully. It has very little power



**Above.** A photograph of an Army B206 Kiowa taken at Merimbula during a fuelling stop enroute to the Bass Strait in the mid 80s. Of note were the floats - enormous accessories that not only induced significant drag, but were also heavy and robbed more power in the hover due to the rotor downwash impinging on their large surface area. Note also the 'range extender' behind the two figures on the LHS. This was simply an elbow shaped filler tube with the cap located on top, which allowed the internal tank to be filled completely. Image: Rod Newnham (far right).



margin, can vibrate considerably at speed, and must be kept in balance as any yaw can cause the aircraft to roll. It is also a cold and uncomfortable experience with all of the doors removed, in case of ditching. My greatest fears when flying these Op Bursa missions at night were inadvertently descending into one of those notorious Bass Strait waves or experiencing an engine failure. When conducting float training with Kiowa pilots in broad daylight, I had to be ready to take over to prevent any undue yaw and roll developing on entry to autorotation. The natural tendency of pilots is to oppose this roll with cyclic however, as it is generated by the floats, this could potentially lead to catastrophic mast bumping. How any of us Possums supporting Op Bursa would have reacted to a sudden engine failure at night over the blackness of Bass Strait, let alone from a height of fifty feet, is anyone's guess!

When discussing Op Bursa today, aviators are often aghast at the very thought of all that unaided night flying. I had actually instructed on NVG while posted to Fort Rucker in the USA during 1981/82, and believe that we could have obtained those NVG for Op Bursa, had we wanted. So, why didn't we?

Although NVG devices are a no-brainer today, it was a very different story back in 1982. Those early goggles, known as full-face PVS-5 NVG, were actually designed for use by infantry with both feet firmly on the ground. They were held in place by a harness that went under the flying helmet and, being fully sealed around the face, provided no peripheral vision at all. Pilots had to frequently focus one tube "inside" in order to scan the (generally unlit) instruments and then, back out again to infinity to see where they were going. This was most unsatisfactory and some pilots attempted to fly with one NVG tube permanently focused "inside". I had also tried this and found it very disconcerting, and quickly abandoned the idea.

Part of the NVG face shield could be cut away to enable glances under the tubes to check instruments or map read, but for this to work the cockpit lighting had to be NVG compatible. Those early NVG tubes would shut down completely with even the dimmest of red instrument lighting. There were numerous other shortcomings, including difficulty in estimating distance to other close aircraft, but the biggest limitation of all was the extremely poor image quality in low ambient light conditions. Given all of this, it was fairly clear to me that those early NVG were not a viable option for pilots on Op Bursa.

Despite industrial relations sensitivities at the time, from my perspective, Esso seemed genuinely cooperative with Defence when it came to the conduct of these Op Bursa exercises. I personally, had been provided with briefings by ESSO staff and was also given two lengthy check and training flights conducted in Esso aircraft, to familiarise me with all of Esso's Bass Strait oil rigs. This subsequently proved quite useful as I occasionally received tasking to the outer oil rigs that were not involved in the actual assault training. There were limits to the disruption that ESSO could tolerate though, and they firmly warned me that should my aircraft develop a problem and be unable to depart an oil rig helipad when they needed to transfer workers, they would have no hesitation in pushing my little Kiowa over the side!

As far as military cooperation was concerned, many of us Possums personally knew, or were on friendly terms with, members of the SASR CT teams. Additionally, our routine flying training requirements out of Holsworthy meant that we were frequent visitors to NAS Nowra, where we got on very well with the RAN aircrew.

We also seized every opportunity to conduct deck landing training by both day and night, on the (then) newly commissioned HMAS Tobruk (L 50) as it sailed past Sydney. It was unsurprising therefore, for me to discover that all



**Above.** This great photo of HC723 Squadron Wessex was taken by a RAAF photographer from a 161 Recce Squadron Bell Kiowa during a morning practice on one of Esso's oil rigs. The rig strike was conducted by six aircraft, which was the minimum required to carry the requisite number of SAS troopers, snipers etc. Note the Sikorsky S76 on the rig helipad, keeping a low profile! Image via Ken Gwynne.

## Why Possum?

Call-Sign "POSSUM" was born into the annals of Army Aviation in Vietnam in 1965

When 161 Recce Flt arrived in Vietnam waters off the coast of Vung Tau aboard HMAS Sydney the two Bell 47 Sioux helicopters were flown from the ship to Vung Tau airfield in the hands of two intrepid aviators. The aircraft were desirous of some swinging, compass-wise that is, and this intricate exercise necessitated an overnight stay at Vung Tau.

161 Recce Flt was to be part of the 1 RAR Group at Bien Hoa under the operational control of the US Army 173rd Airborne Brigade (Separate). The Brigade had a tradition that units on the Brigade command net both radio and line used pro-words to their call-signs beginning with the letter 'P'. For example, the Brigade HQ switch board was 'Parachute Switch', the Support Battalion was 'Provide' with others like 'Punch' and 'Prowler' being used.

When 1 RAR joined the Brigade in mid 1965 they chose 'Platypus' which met the 'P' requirement and had a distinctly Australian National flavour.

On the 29 September 1965, Captain Bevan Smith, the senior of the two aviators with the aircraft, was advised he had to select a suitable call-sign beginning with the letter 'P' before the aircraft could fly north. In a flash of brilliance he chose 'POSSUM' and this word has become enshrined in the annals of Army Aviation history.

During the period of Op Bursa, 161 Recce Sqn was located at Holsworthy Army Airfield in Western Sydney and equipped with Kiowa aircraft. Today, the Squadron is located at Robertson Barracks near Darwin and is equipped with Tiger aircraft, but it continues to use the Possum callsign.♣



of the Op Bursa pilots from 161 Recce Squadron were offered a front seat ride in a Wessex at some stage during these Bass Strait deployments. I even took two Wessex pilots up for a flight in my Kiowa on an ad-hoc sortie during one deployment. You could do things like that back then and, at a grassroots level, I think it genuinely broadened our understanding of the other services.

Looking back now, I wish I had some photos of the Squadron involvement in Op Bursa. Army was strict on security though, and we Possums were not allowed to even write the name "Op Bursa" in our Pilot's Log Book. Of course, pilots being, well ... pilots, there was little hope of preventing endless late-night stories in the bar, even though the veracity of such tales was widely recognised as being inversely proportional to the quantity of beer consumed!

**My memories of those Op Bursa deployments remain vivid. They were notable for being very high risk by today's standards and sadly, lives were lost. However, the tragic events of 1996 (Black Hawk mid-air) were to remind us all that the inherent dangers of aviation related CT training can never be fully eliminated. ♣**

## About The Author

Ken Gwynne went on to a staff posting before proceeding to 5 Squadron, RAAF, at Fairbairn, where he taught RAN and RAAF (and eventually Army) courses on Squirrel and Iroquois aircraft.



He was the Second-In-Command of 5 Aviation Regiment in Townsville when it was being raised from scratch and also instructed on Black Hawks before being posted, once again, to Fort Rucker, Alabama USA. Here, he was assigned as the Utility Helicopter Branch Chief within the US Army Aviation Directorate of Evaluation and Standardisation for two years prior to returning to Australia on appointment as the Senior Flying Standards Officer for the Australian Army Aviation Corps.

Later, he held a variety of postings, including three years in Montreal on the Black Hawk Simulator Project, before ill-health intervened and led to early retirement. Ken and his wife Mim now divide their time between their home in Toowoomba and an apartment on the coast at Caloundra.♣





#### Acknowledgements:

This record of the Fleet Air Arm's involvement in Operation Bursa could not have been done without the willing and energetic involvement of many people who gave of their time and patience to assist. My particular thanks go to Brett Dowsing, Vic Battese, Ken Vote, George Sydney, Bruce Hamilton and the late Clive Mayo and Ted Wynberg; and to Mike Lehan for his recollections in the FAA Museum publication '*Flying Stations*'.

In producing this work it quickly became apparent there has been little written about Operation *BURSA* and this record, although unofficial, arguably presents the most complete picture of those remarkable events. I am sure, however, there are many other details and/or images that could be added to make the record even richer. If you can help please contact the [Webmaster](#).

Marcus Peake. August 2016

REVISIONS: v3.0 Dec 2022

#### Recognising Bursa

Thirty one years after Operation Bursa finished, Navy personnel who had been involved in the operation finally got the recognition they deserved.

Read the story of the struggle to get that recognition, and the way in which it was finally won.

Simply click on the button below.

[Recognising Bursa](#)

#### Endnotes:

- [1] Cabinet Minute Decision No 6753 (I.S), Canberra, 21 September 1978.
- [2] Cabinet Minute No 11315, Canberra, 1 May 1980. See also David Horner, *SAS Phantom of War: A History of the Australian Special Air Service*, Allen & Unwin, Sydney, 2002, p. 423.
- [3] CGS Directive 1/1979 of 31 August 1979. See also Horner, *Phantoms of War*, p. 427.
- [4] Cabinet Minute No 11745, 27 May 1980.
- [5] CGS Directive 2/80 of August 1980.
- [6] Melbourne SAR was disbanded at the end of 1981 with the demise the carrier, and the Squadron's ORBAT was gradually increased to a total of 14, but at the beginning of the task the Squadron managed with eight. *BURSA* required six aircraft on line.
- [7] ESSOs Bass Strait rigs were identified by the name of fish. "Barracuda A" was the closest to shore, about 25 minutes by air from RAAF East Sale, followed by "Snapper" – about 30 minutes). ESSO principally assigned these two rigs for Tactical approaches. Tuna, Halibut and Kingfish B were also on the Squadron's plot for sea navexes and complete area familiarisations. All, depending on wind, were not more than 40 minutes away from East Sale.
- [8] In the early days sniper aircraft were not included and the run-in was conducted at 50 feet by day or by night. This was increased to 125 feet as the profile was developed and additional aircraft were added.
- [9] Mike Lehan, "*HMAS Albatross: A Collection of Memories*" Australian Naval Aviation Museum. p 188.
- [10] Allen & Unwin *Flying Stations: A story of Australian Naval Aviation*. p 257. It should be noted that the reference gives incorrect information on the Bursa exercise generally, however, and in particular the dates it commenced.
- [11] HMAS ALBATROSS Record of Proceedings for the period 01 October to 31 December 1983.
- [12] HMAS ALBATROSS Record of Proceedings for the period 01 October to 31 December 1982.
- [13] Other routes such as through Canberra, Wagga-Wagga or Laverton were also available, but Merimbula was regarded as the main route.



# Operation Bursa Timeline

THE FOLLOWING TABLE PROVIDES A COMPLETE RECORD OF THE MAJOR EVENTS OF OPERATION BURSA FROM ITS CONCEPTION IN 1980 TO ITS EVENTUAL HANDOVER AT THE END OF 1989.

Start	Event	Remarks
28-Jun-80	BSORS Patrols	Commenced with Attack and Fremantle class patrol boats.
01-Aug-80	COSC Minutes	PM directed use of helicopters in support Op BURSA to be effective from 30 Sep 80.
25-Aug-80	CN Op BURSA signal	Navy allocated CT helo support task. HC 723 UAE 10 x Wessex. Priority role was insertion. of TAG. Dedicated to operation on continuing basis.
01-Aug-80	MHQ signal	Navy and Air Force to provide helo support to TAG on fortnightly rotational basis.4 hr standby to move to have acft ready to deploy with TAG from East Sale 10 hrs fm alert.Outline night tactic requiring surprise and speed of action; low-level, high speed approaches with quick-stop terminations without illumination until final stages of assault.
22-Sep-80	723 Sqn survey East Sale	Battese/Mayo visit to reach local agreement accommodate 10 Wessex, aircrew & maintain-ers.
27-Oct-80	723 Sqn East Sale	[until 01Nov80]. First approaches to oil-rig Snapper. Fly-off 9 Sqn UH-1H vs 723 Sqn Wessex.
08-Dec-80	723 Sqn East Sale	[until 12Dec80]. Training with TAG – first night approaches.
05-Mar-81	VC751 NAS Nowra	Tracker used to illuminate HMAS Derwent
27-Jan-81	723 Sqn NAS Nowra	[until 28Jan81]. NVG trial – not successful due non-compatible cockpit
08-Apr-81	723 Sqn East Sale	[until 14Apr81]. Day tactical approaches to rigs with TAG.
26-May-81	723 Sqn NAS Nowra	Tried beta lights on rotors for night formation – failed.
Mid81	CDS signal	Navy to assume CT helicopter support role on full time basis from 15 Oct 81.5 x Wessex required online at East Sale.12 hrs notice to move from NAS but may be shortened if specific threat develops. Army to provide a C2 aircraft. Air Force to provide helo capability if Navy cannot meet requirement.Navy will provide SAR and admin support if Wessex deployed
08-Oct-81	723 Sqn East Sale	[until 16Oct81]. Approaches to Rigs
13-Apr-82	723 Sqn East Sale	[until 22Apr82]. Full exercise with TAG.
Oct-Dec82	723 Sqn NAS Nowra	2 x Tac App exercises with HMAS Parramatta
28-Nov-82	723 Sqn East Sale	[until 11Dec82] Full exercise with TAG – 8 x Wx; departure exercised recall procedures. Exer-cised Nightsun illumination unlit rigs with live rappelling. 13 Wx UAE
24-Jan-83	723 Sqn Laverton/ Watsonia	[until 26Jan83]. Single aircraft deployment investigating alternate CT basing destinations
03-Feb-83	723 Sqn East Sale	[until 21Feb83]. Full exercise with TAG. – 10 x Wx ; 522.2hrs/108hrs NF.
11-Apr-83	723 Sqn East Sale	[until 21Apr83]. Full exercise with TAG – 9 x Wx – Nightsun illumination incorporated in SOPs.
14-Jun-83	723 Sqn East Sale	[until 24Jun83]. Full exercise with TAG – 10 x Wx.
13-Aug-83	723 Sqn East Sale	[until 18Aug83]. Full exercise with TAG – 9 x Wx – witnessed by Fleet Commander Hudson.
11-Oct-83	723 Sqn NAS Nowra	[until 13Oct83]. Exercised with TAG.
19-Nov-83	723 Sqn NAS Nowra	21st Birthday RAN Wx – 14 x Wx, 3 x UH-1B, 1 x B206 Flypast.
28-Nov-83	723 Sqn East Sale	[until 04Dec83] Exercise with TAG – 10 x Wx – exercise suspended 4 Dec due fatal crash N7-215.
04-Dec-83	Crash N7-215	Catastrophic failure and ditching with 2 x fatalities (LSA Macey and RAAF CPL Campbell); aircraft captain LEUT Mark Henschke commended.
09-Feb-84	HU 816 Commissioned	Assumed CT role from 723 Sqn A Flight.
30-Apr-84	816 Sqn East Sale	[until 11May84] Full exercise with TAG.
05-Jul-84	816 Sqn NAS Nowra	[until 26Jul84]. Full exercise with TAG.
26-Oct-84	816 Sqn Point Cook	[until 29Oct84]. Deployment exercise.
15-Nov-84	816 Sqn NAS Nowa	[until 21Nov84]. Skills maintenance with SASR.



22-Nov-84	816 Sqn NAS Nowra	Exercise Call-out.
05-Feb-85	816 Sqn NAS Nowra	[until 15Feb]. Full exercise with TAG including insertions to HMAS Tobruk – one TAG injured. NAS ROP state exercises with TAG including to Tobruk 11-16 Feb)
Apr-Jun85	816 Sqn	Concerns relating to National Task skills retention without access to “in-area training”.
28-May-85	816 Sqn NAS Nowra	Night SAR/recovery trials with SASR waterborne TAG.
01-May-85	817 Sqn East Sale	Recce East Sale in preparation for assuming role
09-Sep-85	816 Sqn NAS Nowra	[until 19Sep85]. Full exercise with TAG including insertions HMAS Tobruk. NAS ROP has TAG exercising 16-20 Sep)
29-Nov-85	816 Sqn NAS Nowra	[until 02Dec85] TAG insertions HMAS Adelaide and skills maintenance NAS. (NAS ROP stated FFG07 a better platform for Nat Task training than Tobruk or Jervis Bay)
21-Apr-86	816 Sqn Edinburgh	[until 01May] Exercised deployment capability for CT
01-May-86	816 Sqn East Sale	[until 24May86]. Full exercise with TAG – first Bass Strait exercise for 2 years. (NAS ROP has CT exercise 10-24 May – Exercise Swallow Dive 1/86)
01-Jul-86	816 Sqn NAS Nowra	[until 30Jun86] SASR CT skills support – Exercise Jupiter.
01-Jul-86	817 Stalwart Flight	Recce RANKIN rig WA with SAS
11-Aug-86	816 Sqn East Sale	[until 22Aug86]. Full exercise with TAG – Exercise Rubber Duck 3/86. (NAS ROP has exercise from 11-23 Aug)
26-Nov-86	816+817 Sqns East Sale	[until 03Dec86]. Full exercise with TAG – Exercise Red Fin.
01-Feb-87	817 Sqn East Sale	Op Bursa workup
01-Apr-87	817 Sqn East Sale	[until 10Apr87]. Full exercise with TAG – 4 x SK – Exercise Swallow Dive.
30-Jun-87	HU 816 Decommissioned	CT role transferred to HS 817 Sqn Sea King Mk 50/50A. 5 x Wx and 43 personnel transfer to 723 Sqn for utility duties including embarked ops.
25-Nov-87	817 Sqn East Sale	[until 02Dec87]. Full exercise with TAG – 4 x SK – Exercise Swallow Dive – final assault not achieved due weather.
10-May-88	817 Sqn East Sale	[until 19May88]. Full exercise with TAG – (4?) x SK – Exercise Swallow Dive.
24-Nov-88	817 Sqn East Sale	[until 08Dec88]. Full exercise with TAG – (4) x SK – Exercise Red Fin.
05-14Apr 89	817 Sqn East Sale	Full exercise with CDT4 & TAG – (4) x SK – Exercise Swallow Dive.
27Nov 89-?	817 Sqn East Sale	Full exercise with TAG – (2) x SK – Exercise (Red Fin).
Early Dec 89	817 Sqn East Sale	Two aircraft began the month at RAAF EAST SALE in support of Exercise SWALLOW DIVE. Owing to the reduced number of aircraft required flight hours were not achieved and the aims of the exercise only partially achieved. The attachment returned to NAS NOWRA on Saturday 9.
01-Dec-89		CT role transferred fm HS 817 Sqn to Army.