

PAX SOVIETICA

GAME OF DOMINOES: AUSTRALIA'S SECURITY AND THE COLD WAR 1947-1991

THE 5TH MHHV BIENNIAL TWO-DAY CONFERENCE

MELBOURNE

SATURDAY 13 & SUNDAY 14 APRIL 2024

Since the 1940s space activities have been at the heart of Australia's most important alliance relationships-Britain and the USA. In the late 1940s, Woomera was established to permit the United Kingdom to develop missiles that could be used in a future war with the USSR.

This started officially in 1947, with the signing of the Anglo-Australia Joint Project. From the 1960s, the United States has been permitted to locate ground stations that remain vital to America's national security interests on Australian soil. Many details of the importance, nature and extent of these space relationships have been and remain shrouded in secrecy. However, they lie close to the heart of Australian foreign, security and defence policies.

Theme 1, Political and International geo-political context.

Theme 2, The Cold War and Australia's contribution to Britain's atomic /nuclear deterrent.

Theme 3, Joint Project, Nation building, Defence Science and the Cold War.

Conclusion. Joint-Project and AUKUS.

Theme 1:Background: Geo- Political Context. Slide 2



- The fall of Singapore in 1942 led the Australian Government to reconsider its alliance with Britain. In fact it drew Australia closer to the Mother Country.
- In 1944 Britain asked the Commonwealth government to supply as much uranium as it could [Sparked a uranium]
- The dropping of the atomic bomb on Hiroshima ushered Australia into the atomic age.
- In introducing the Atomic Energy [Control of Materials Bill 1946, on 12th July 1946, John Dedman in reading the Bill for the second time stated: "the central point before the House to-day - there is a general realization that the problem of control of atomic developments and raw materials is one of immediate and inescapable urgency.'
- From July 1 1946 to July 25, 1946, plutonium-based devices were used in the Able and Baker tests at Bikini Atoll. Commodore S.H.K. Spurgeon and Prof Oliphant, were the two observers to represent Australia to watch the atomic bomb tests at Bikini Atoll. That the Commonwealth government advance their knowledge on Atomic energy.
- The Chifley Labor government had established the Woomera Rocket Range, uranium exploration, and extensive funding of the Australian National University to conduct atomic/nuclear research
- The McMahon Act of July 1946, left Britain to develop, its own Atomic weapon. It was a turning point as Britain and Australia would sign the Anglo-Australian Joint Project in 1947, for the development and testing of a British atomic bomb-Blue Danube.
- Soviet Union became a nuclear power in 1949.

Theme 2: Australia's Contribution to Britain's atomic and Nuclear deterrent.

Slide 3



- Prior to and after the Second World War [1939-1945], saw the start of the 'atomic weapons revolution. Weapons "revolution can be defined as the onset of a new type of armed force. The most important scientific development being British atomic fission research and its military application. The innovation of nuclear weapons along with their delivery means, redefined the character of warfare. Australia played a significant role.
- Exploring Anglo-Australian relations through the lens of the history of science and technology provides a new paradigm for examining the nature of the special relationship during the Cold War.
- Prime Minister Ben Chifley[] accepted Monte Bello and Maralinga as testing sites for atomic weapons as early as 1946.
- Chifley, accepted
- "the project, subject to Australia having full access to information, and being able to manufacture modern weapons at a future date in accordance with the need to disperse manufacture throughout the Empire"
- From the beginning to the end all work designated as **Atomic'** were given Top Secret classification.
- The Menzies Government saw Australia's interests being best served by restoration of Britain to its pre-war status. Menzies also believed in having two "**great and powerful friends'**, with atomic bombs! Menzies placed Australia front and centre for British atomic/nuclear tests.
- Menzies used our relationship with developing a British deterrent. To forewarn the communist expansion in SE Asia that, that Australia might have her own independent nuclear capacity.

- Forward Defence, was Menzies defence policy underpinned our relationship with Britain/US and our SE Asia.

Theme 1: Background: Geo-Political Context 1950-1960

Slide 4



Norman Lindsay cartoon . 'Little Man ,What Now.' 1

- From the beginning of the atomic age, Britain chose Australia to conduct their Cold War programs of atomic/nuclear weapons testing. Australia and the Pacific Islands were used as a nuclear playground to conduct more than 315 atmospheric and underground tests.
- PM Chifley & Menzies enhanced their political careers via the development of atomic infrastructure, jobs, and financial opportunities created by the expansion of military personnel[MIC]
- The Menzies Coalition government came to power a few months after the Soviet Union detonated its first atomic bomb.
- The role of ASIO was especially ubiquitous. Since 1950, the Menzies government fosters ASIO to focus on the enemy within.
- On 20 September 1950, the Prime Minister, Robert Menzies, delivered a solemn national radio broadcast. It was full of foreboding. Within three years, he stated, Australia would be involved in a third world war. This would become the justification in one of the most momentous decisions of the Cold War, he agreed—secretly and without any consultation with his Cabinet—to the British request to test atomic bombs in Australia.1953-1963.
- The communist and broader protest movement disrupted Australia's ability to obtain nuclear technology beyond the 1958 Lucas Heights reactor secured by Menzies.
- Operation Hurricane [(25 kiloton)] in Australia on 3/10/1952, conformed Britain as the 3rd Nuclear power, and Australia wanted to be part of that club.

Theme 2: Australia's Contribution to Britain's atomic and nuclear deterrent. slide 5



Chronological order of Atomic/ Nuclear weapons development at Woomera.

- Blue Peacock
- Blue Boar 1950-Guided glider bombs
- Blue Danube-First in-service Atomic Bomb [1946-1955]
- Red Beard-Second generation fission weapon.-R&D-1954-1958. OD in 1961.
- Violet Club-Air dropped bomb, used at Grapple. [1957] 9000 lbs.
- Yellow Sun-Deployment of 'true' H-Bomb. Grapple [1957]
- Red Snow-Development of megaton warhead. OD 1961
- Blue Steel-Britain's first nuclear missile. 1956-1962' OD 1963. Ceased in 1968.
- Black Knight/Blue Streak-The Blue Streak missile was conceived as an Intermediate-Range Ballistic Missile (IRBM) by the United Kingdom. Its primary purpose was to serve as an independent British nuclear deterrent, The Blue Streak rocket was developed and test-fired right across the middle of Australia, from Woomera all the way to the Indian Ocean, just south of Broome. [1955-1965]
- WE 177-Free-Fall Bomb and was the last of Britain's air delivered nuclear weapons.
- Polaris Warhead. TP as Britain decided that submarines would carry nuclear weapons.
- Chevaline.- Modify Polaris missiles. PAC system given to Woomera
- Project Falstaff
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Blue Danube: Free Standing Atomic Bomb. **Blue Danube was an implosion-type fission bomb using plutonium and uranium as fuel. Designed as a 40-kiloton weapon, for this test, the yield was reduced to 3 kilotons. The bomb was 24 feet, 2 inches (7.366 meters) long and had a diameter of 5 feet, 2 inches (1.575 meters). The spherical 32-lens plutonium/uranium implosion system was 5 feet (1.524 meters) in diameter. The bomb weighed 10,000 pounds (4,536 kilograms).**

Blue Danube. Slide 6



The Blue Danube Mar 1 bomb drops away from Vickers Valiant B.1 WZ366 over the Kite test site, Maralinga, South Australia. [Crown Copyright]

Theme 2: Australia's Contribution to Britain's atomic and Nuclear deterrent.

Blue Streak & Black Knight Slide 7

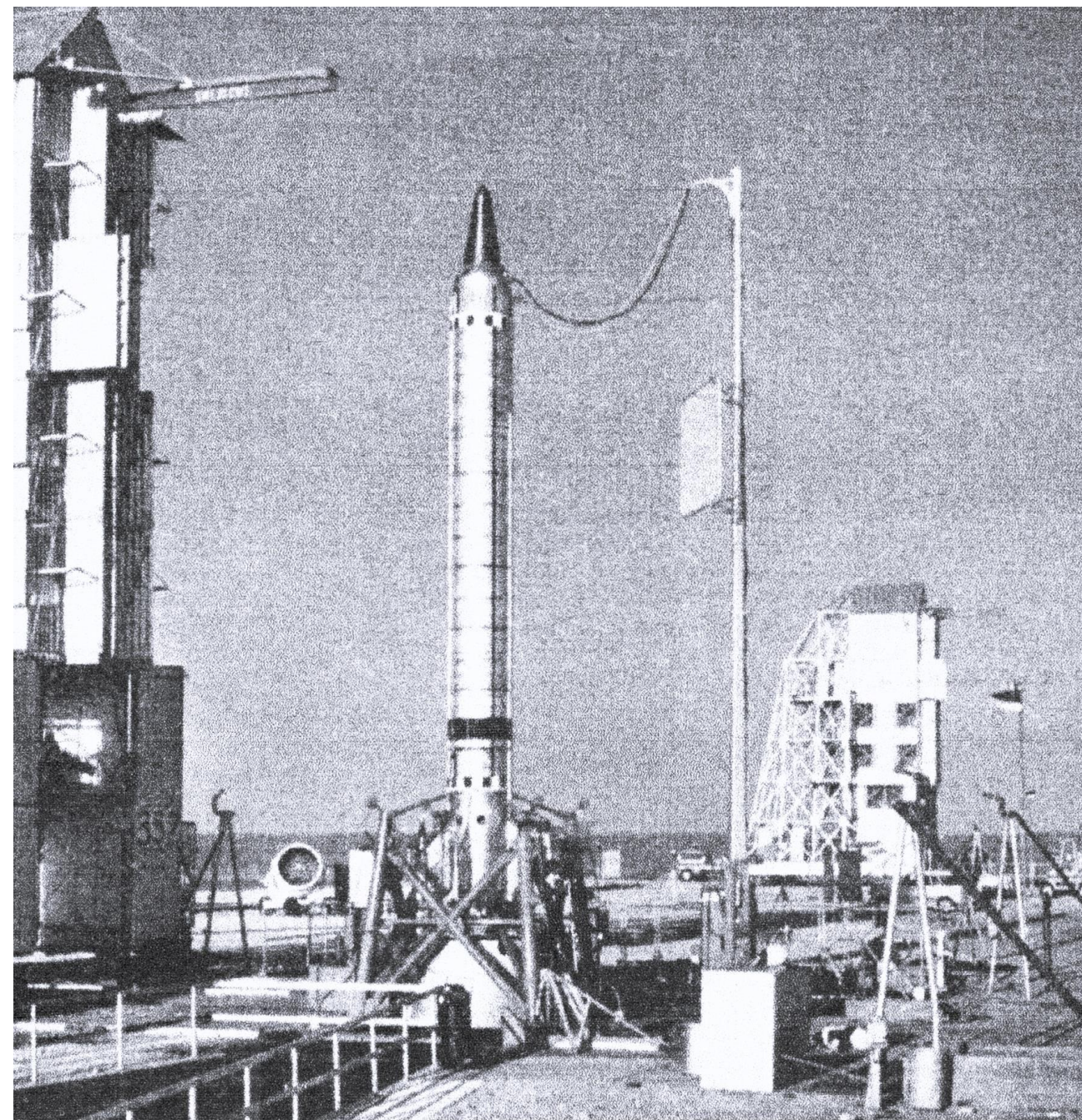
In 1955, Britain had a much larger missile under development, the ATLAS-ICBM sized BLUE-STREAK Medium Range Ballistic Missile (MRBM).

The biggest project of all is Blue Streak, whose sole purpose was to launch hydrogen bombs at the USSR.

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Black Knight was a research vehicle whose initial function was to act as a test bed for Blue Streak and to research re-entry vehicles for nuclear warheads.

To test nose cones at re-entry velocities of about 10,000 mph, the smaller rocket was developed which was 3 feet (0.91m) in diameter. Developed and manufactured in Britain, launches began in 1958 at Woomera, Australia, and of the twenty-five built, twenty-two were launched. Meanwhile in 1960 the BLUE-STREAK missile was cancelled as a missile. However eighteen BLUE-STREAKS were built of which eleven were launched between 1964 and 1971. BLACK-KNIGHT launches continued until 1965 from the two special Pads at Area-5 at Woomera, but extraordinary results interested the United States. Black Knight was part of the Gaslight program, carried out in cooperation with the United States and Australia. The main objective of this program was to study the effects of high-speed re-entry on dummy nuclear warheads.



ds, Area 5A & B with BK.13 (foreground) and BK.14 (background).

Most of the early work was devoted to surface-to-air missiles, which would result in the Bloodhound, Thunderbird and Sea Slug missiles. Slide 8.

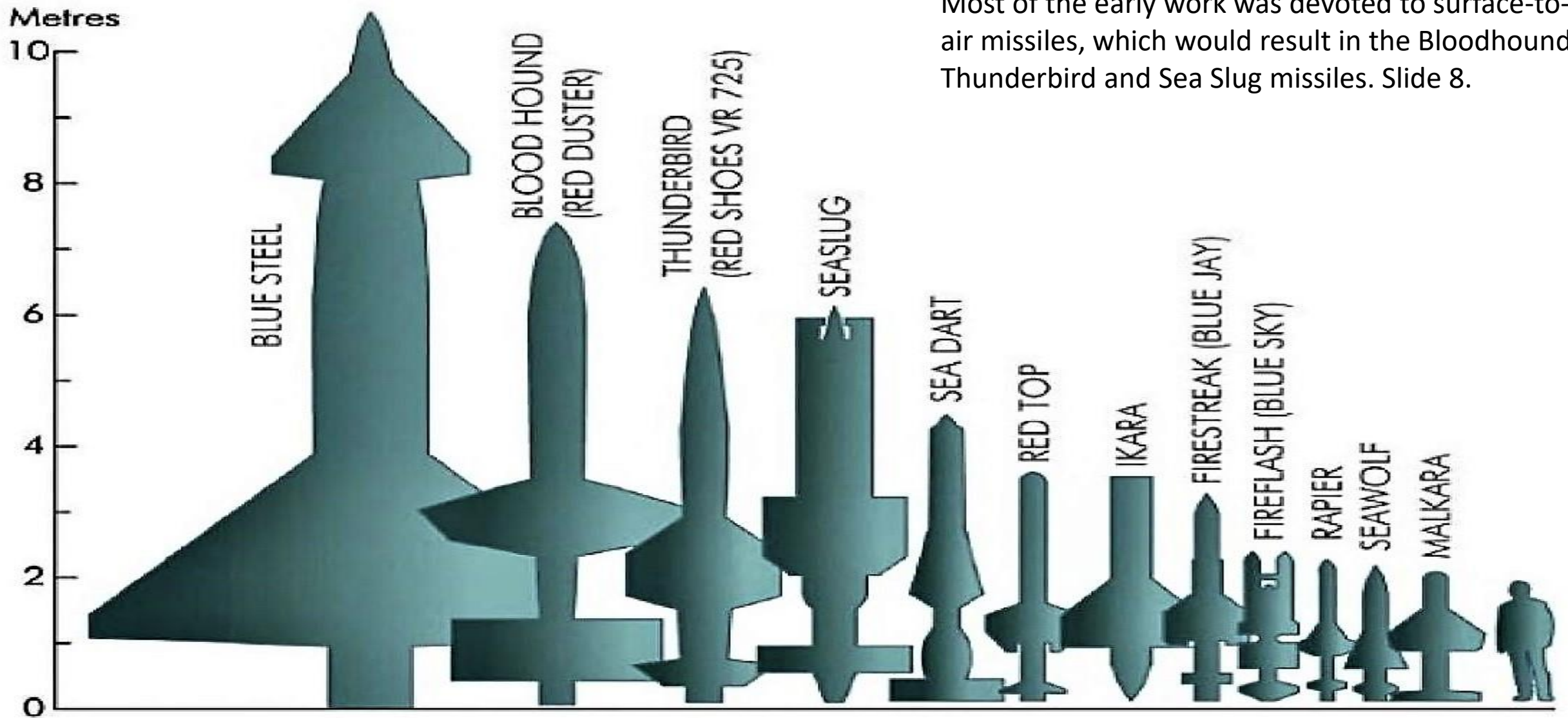


Diagram of the major guided weapons tested at Woomera. All were British except for the Malkara and Ikara, which were Australian, and powered by rocket motors developed by the Australian Defence Scientific Service (ADSS). The Malkara and Bloodhound missiles were the first developed using mathematical modelling and computer simulation pioneered by the ADSS. (Based on an original 1960s WRE diagram)

Other diverse array of Missiles and research.

Air to Air Weapons

Surface to Air Weapons

Air to Ground Weapons

Anti-Tank Weapons

Anti-Submarine Weapons

Bombs

Research Vehicles

High Explosive Research [HER]

Hypersonic International Flight Research and Experimentation[HIFIRE]

Upper Atmospheric research rockets

Let us not forget the price of ANZAS

Signals Intelligence [SIGINT]

On 26 February 1960, the Menzies Government enters into a partnership with the United States to build a series of specialised tracking stations to support NASA's space program. These stations would prove crucial to the Manned Space Flight Network (MSFN), the Deep Space Network (DSN) and the Satellite Tracking and Data Acquisition Network [STADAN], helping the United States to first catch up and then overtake the USSR in the Space Race.

Special Anti-Missile Research Tests, Australia.[SPARTA]

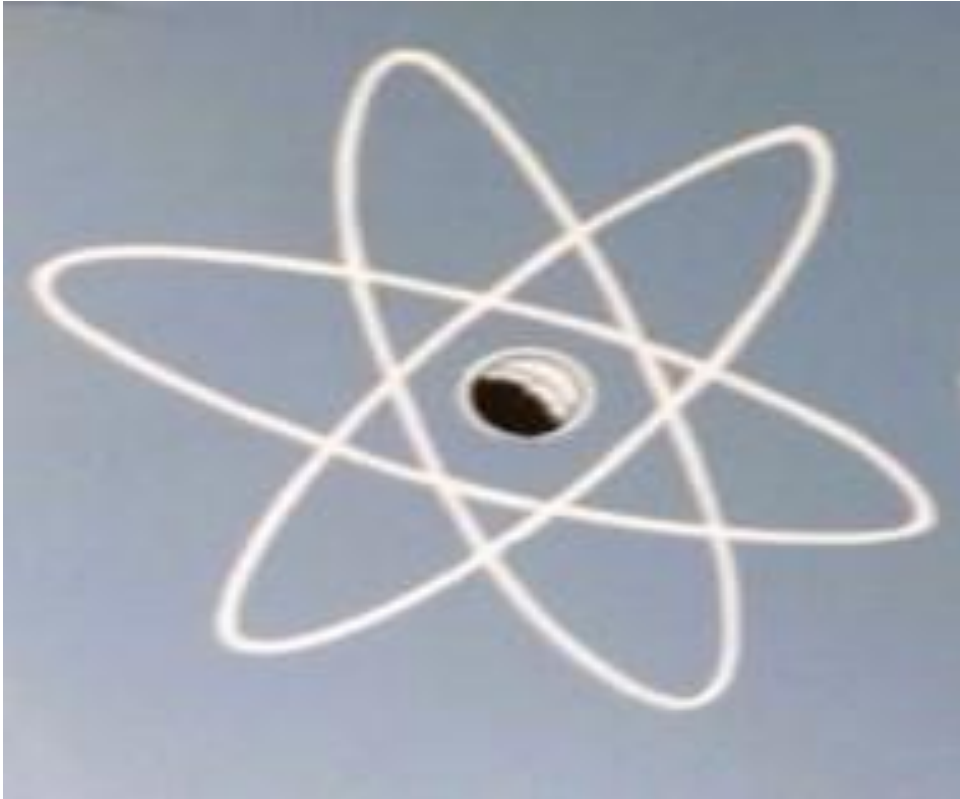
US Bases in Australia

Blue Lagoon Deep Station

TRANET Station built at Smithfield ,Adelaide. This was part of the US Transit navigation satellite program to provide the US fleet ballistic missiles [FBM] Submarines navigational support.

Slide 9

Theme 3: MIC, J-P, Nation building, Defence Science and the Cold War. Slide 10



- **World War Two saw the acceleration of the connection between scientific research and the military .MIC was the conduit to connect all the key players/**
- **In May 1946, Australia & Britain forged the foundations for the Anglo Australia Joint Project at the prime ministers conference in London. Namely Australia's role in Empire Defence Plan and atomic development and munitions.**
- **At the Imperial Science conference[London] , held in June 1946, this would set the direction of defence science. The focus of defence science was to advance both atomic and biological research. This drove Australia down the MIC path, and ushered in a new era ,where Australia would play its role in Empire Defence and the development of atomic weapons and atomic energy throughout the Cold War.**
- **In June 1946 the Chifley Government secretly agreed in principle with a British request to develop a rocket testing facility in Australia. Subsequently, in the federal election later that year, Prime Minister Ben Chifley announced that his government was seeking to develop 'a gigantic industrial project for the production of guided projectiles'. The J-P was at the forefront of Australia's Nation-building, and yet this has never been included in Australia's economic history narrative.**
- **The Joint-Project needs to be seen through the lens of MIC. A feature of the Cold War was a much closer relationship between the universities, private contractors and the Department of Defence. The theory of an MIC argues that there is a symbiotic relationship ,between military development and defence-related research conducted by universities. All Australian Universities received Commonwealth research grants for work indirectly and direct work associated with the J-P.**
- **Throughout the post-war period, science, technology and the development of the atomic/nuclear bomb went hand in hand with nation building.**
- **To make the negative aspects of the atomic age more palatable, for the Australian public, there was a juxtaposition between atomic –bomb development and the possible benefits of a civic nuclear programme. For example as early as January 1948 , the Atomic Age Exhibition was seen by thousands along the east coast of Australia.**

Theme 3: MIC, J-P, Nation building, Defence Science and the Cold War.



Woomera had all the characteristics of MIC.

The JP required 3 things from Australia Slide11

[i] Range and associated facilities

[ii] Development facilities

[iii] Production capacity [Both Government and private firms

Government departments involved include Department of Defence, all services, Works, Supply, PMG, Interior, National Mapping Commonwealth railways, including a number of State governments.

Private Contractors, located at Salisbury:

A.V. Roe & Co. Ltd

Bristol Aeroplane Co. [Australia]

De Havilland Aircraft Pty. Ltd

Elliot Bros. [London] Ltd

E.M.I Engineering Development [Australia] Ltd

English Electric Co. Ltd.

Fairey Aviation Co. of Australia Pty Ltd

Ferranti Ltd.

General Electric Co. Ltd.

Hunting Engineering Ltd.

Saunders-Roe Ltd

Sir W.G. Armstrong Whitworth Aircraft Ltd

Sperry Gyroscope Co. Ltd

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Conclusion. Slide 13

The Anglo-Australian Joint Project , played a significant role both in the International aspects of the Cold War and within the Australian context

In my book , I make the case that, the historical importance of the Woomera rocket range in South Australia and the Cold War is undervalued, and under researched.

The Woomera story is at the heart of the arms race, space race and National Development.

In its heyday of rocket testing, covering an area of 270,000 square kilometres, Woomera hosted the second highest number of rocket launches in the world, exceeded only by the NASA launch facilities at Cape Canaveral.

We should not forget the fact that Australia leapt out of the space race starting blocks in 1967, becoming just the third nation in the world to build and launch its own satellite-WRESAT

Born out of WW2 and fuelled by the Cold War, Woomera and all of its components , made an enormous contribution to the arms and space race and Biological and Chemical weapons research.

Communists and Atomic Development.

World War Two saw the acceleration of the connection between scientific research and the military. The invention and rapid introduction of radar, sonar, the proximity fuse and the atomic bomb clearly demonstrates this connection. In future, wars would be fought and won not just by front line troops, but by the country which could effectively apply advancements in scientific knowledge to military purposes. The world was moving towards a situation where about half of all scientists would work at least part-time for the military. This placed them almost at the centre of any future war preparations, a role that was acknowledged by Prime Minister J.B. Chifley when he announced the development of the Woomera rocket range.

In June 1946 the Chifley Government secretly agreed in principle with a British request to develop a rocket testing facility in Australia. Subsequently, in the federal election later that year, Prime Minister Ben Chifley announced that his government was seeking to develop 'a gigantic industrial project for the production of guided projectiles'. The project was often shrouded in secrecy and when critics of the project raised potential problems they were dismissed as either 'oversights' or 'readily solvable'.

The anti-Woomera campaign was therefore one of the few times prior to the formation of the APC that the CPA actively involved itself in a peace related issue.

the CPA had about the impact of the proposed rocket range on Aborigines, was nearly always overridden by the suspicion that it was acting solely on behalf of the Soviet Union to prevent a vital defence project.

The campaign did involve two sometimes conflicting issues: the right of Aboriginal people to full control of their reserves without outside interference, and questions of defence policy

In August 1946 the Port Augusta CPA branch was the first unit of the Party to issue a public statement opposing the rocket range.⁴⁴ Later that year a conference of the Northern branches of the CPA in South Australia, comprising branches from Iron Knob, Kimba, Port Augusta, Port Pirie, Quorn and Whyalla, strongly criticised the proposal and the infrastructure developments that were associated with it.⁴⁵ A significant proportion of those attending would have been industrial workers. Whyalla's 'best known' Communist, Joe Brazel, was also secretary of the Port Pirie-Whyalla branch of the FIA and the only full-time union official in Whyalla.⁴⁶ In Adelaide, the CPA had a strong influence in a number of unions including the FIA, the Tramways Union, Boilermakers, Builders, Labourers, Gasworkers, Clerks, Shop Assistants, several building unions and the WME.⁴⁷ The influence of

The attempt to impose a ban on Woomera was quickly defeated. Percy Clarey, the ACTU President, called on unions to ignore the ban.

In the face of this widespread criticism the CPA made a rapid retreat and abandoned all attempts to impose union bans on Woomera.

Despite the withdrawal of the proposed ban, Evatt successfully steered the Approved Defence Projects Protection Act (ADPPA) through Parliament. The Act provided for fines up to £500 or imprisonment for twelve months for any person who by 'speech or writing advocates or encourages the prevention, hindrance, or obstruction of the carrying out of an approved defence project'. The Act had the full support of the opposition parties. However, Menzies contrasted the Chifley Government's tacit acceptance of the maritime unions' bans on Dutch shipping, with its determination to act against similar bans on Woomera

New Defence Research Plan

From Our Special Representative

CANBERRA, Tuesday. — The Defence Council today decided to set up a new administration to carry out defence research in Australia.

The administration will be similar to that operating in Great Britain.

It will consist of:

- A scientific research policy committee of three chiefs-of-staff and top-ranking scientists, to draw up research policy.

- An executive committee, led by a chief scientist, to carry out the policy committee's directions.

The Government hopes to be able to announce the appointment of a chief scientist within the next four or five weeks.

His first job will be to survey research facilities in Australia, and recommend how they should be re-estimated and expanded.

Chief object of his survey will be to prepare for Australia to undertake basic research in the future, as well as applied research being carried out now.

The council made its decision today after receiving reports on the progress of research development during the past year.

This financial year the Government is allocating nearly £1,000,000 for research, compared with an expenditure of about £1,000,000 in 1943-44.

Range Speed Up

Of the £1,000,000, nearly £1,000,000 is earmarked for expenditure on the rocket range in Central Australia and auxiliary experimental stations.

Experts said that construction of the range would speed up from now on, because the authorities had overcome previous problems of labor and material shortages.

Target date to complete the entire range and auxiliary testing and experimental stations is still two and a half years away.

But reports said that the authorities would be able to use the range long before then for limited experiments.

Daily
Telegraph
22/9/1948

Re-Planned Defence Research

CANBERRA, Friday. — The Defence Council next Tuesday will recommend reorganisation of Australian defence research administration.

The object is to bring Australian administration into line with the British.

The recommendations, which the Government will accept, propose that Australia should set up as quickly as possible:

- A scientific research policy committee of three chiefs-of-staff, senior officers, and top-ranking scientists, to draw up policy.

- An executive committee, led by a chief defence scientist of the Supply and Development Department, to carry out the policy committee's directions.

Most Australian defence authorities consider that this type of administrative reorganisation is necessary, because Australia will be taking a larger part in research.

They complain that the recommendations in fact are the result of allegations that England and America are refusing to share defence secrets with Australia.

Chief reason for the proposal is to provide the necessary administrative direction for Australia to carry out basic research, instead of only applied research.

New Position

Within a few months, Australia will appoint a chief defence scientist.

The Minister for Supply and Development (Deputy Prime Minister), who returned today from England and America, discovered a number of similarities while he was overseas.

The first job for the chief scientist will be to survey research facilities in Australia and recommend how they should be re-estimated and expanded.

In setting up the new administration, the Government will have the advice of the House of Representatives and the House of Representatives Policy Committee.

The House of Representatives will visit Australia shortly to confer with the Government and defence authorities.

A report to the Defence Council states that progress is being made on the first-year-research programme but that "generally satisfactory" results have been "generally satisfactory".

Daily
Telegraph
18/9/1948

£100,000 for universities

Research grants to Australian universities in 1949 amounted to £100,000, Mr Dedman, Minister in Charge of the Federal Office of Education, said yesterday. Melbourne University received £24,000.

Argus 30/11/49

Australia's Ambitions to acquire a Nuclear Deterrent:[1957-1972]

- Declassified documents describe repeated attempts by elements within the Australian government to acquire nuclear weapons.
- The first attempt was by the Menzies government to procure a nuclear weapon. In fact part of the signing of the Anglo-Australian joint project was an understanding that Australia's involvement in helping Britain attain an nuclear deterrent, that Australia might obtain such a weapon. Gaining access to nuclear weapons via a third party, was a serious option being obtained by the Menzies government.
-
- In 1958, Australian officials approached the British government regarding the purchase of tactical nuclear weapons.
- In 1961, Australia proposed a secret agreement for the transfer of British nuclear weapons, and, throughout the 1960s, Australia took actions intended to keep its nuclear options open. The reason for this was to forewarn newly developing Communist countries in our backyard, that we might have our own nuclear deterrent.

Blue Danube 3

- US Bases in Australia

We need to remember that Woomera also played a substantial role in the Space Race.

Communist attitudes to Woomera/Aborigines and Protests



The Argus 16/5/47

Rocket range may be declared black

Building work on the rocket range at Mt Kwo may soon be declared black by the building trade unions if they carry out a recommendation made last night by the Building Trades Federation.

Mr D. Thomson, federation secretary, said last night that unions did not think Australia should be used as a war materials base. He said that materials used could be better employed in building workers' homes.

Argus 10/5/46

"Australia gets rough over British slur"

Herald Special Service

LONDON, Sunday. — The Melbourne Herald's cartoon of Thursday on Woomera saying, "Get out of here. No Australians allowed," is displayed on the front page of the Sunday Express today.

And with it is a long cabled report of Australian protests at the exclusion of Australians from Woomera.

Large headlines say:

AUSTRALIA GETS ROUGH OVER "BRITISH SLUR."

DUNCAN SANDYS IN BOMB DISPUTE

This is the cartoon.

allowed to take a television film of Mr Sandys's visit to Woomera range while all Australian newspapermen were barred on grounds of security. Even the explanation of the Australian Supply Minister, Mr Beale, that the film has also been taken for home audiences hasn't stopped the rumpus.

Melbourne Herald 7/9/53



The fall of Singapore in 1942 led the Australian Government to reconsider its alliance with Britain.

Woomera and its role in the Cold War.

1947-1980:Back drop.

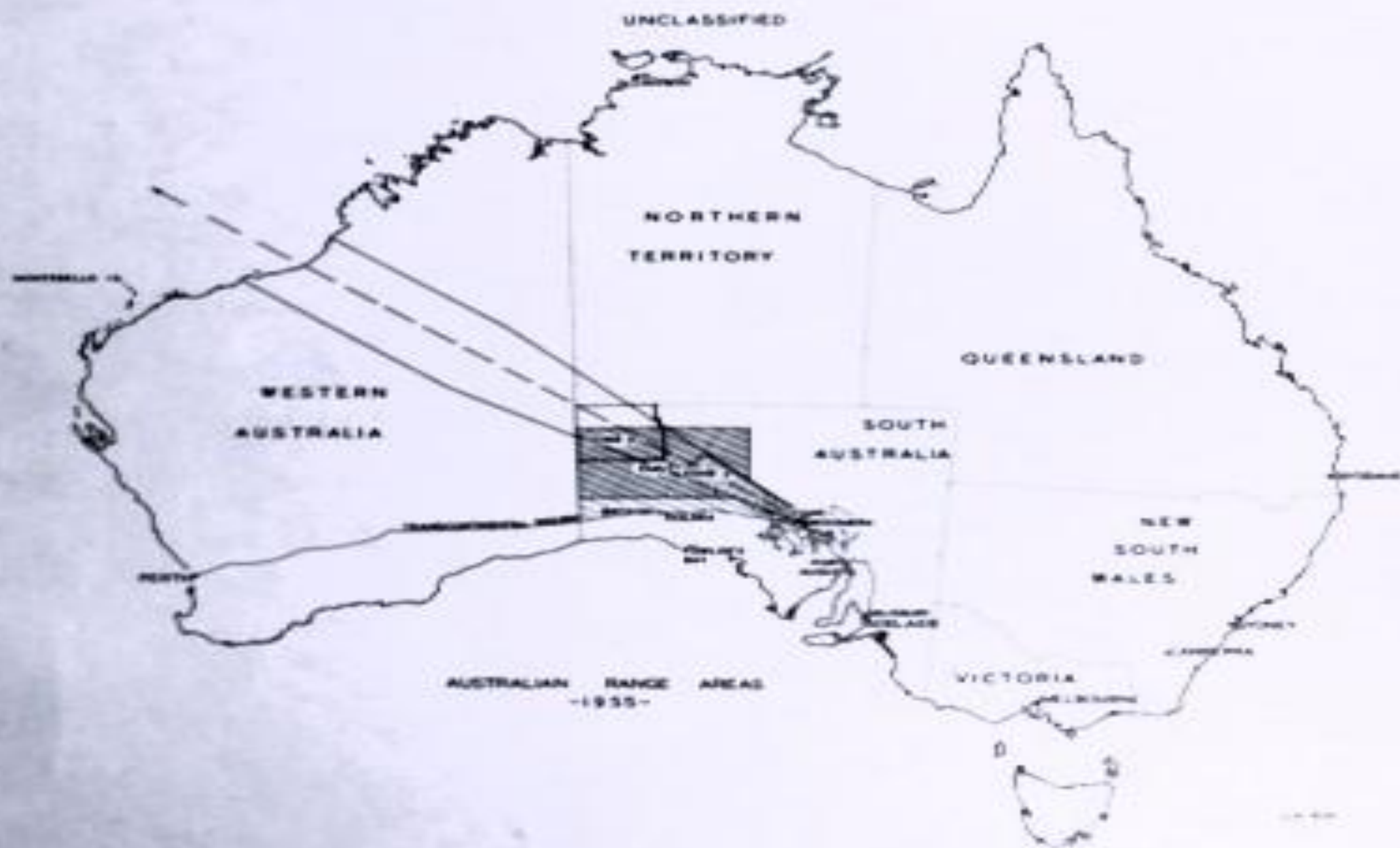
It would surprise most people to learn of Australia's almost forgotten role in the space race of the Cold War Era.

Australia played a key role in the development of rocket technology after World War 2.

The Woomera Rocket Range [now known as the Woomera Protected Area] is the largest land-based rocket range in the world, covering an area of approximately 122,000 square kilometres. At its maximum in the heyday of rocket testing [1947-1980], covering an area of 270,000 square kilometres.

After World War 2, the United Kingdom needed a rocket range to continue testing and developing this potent weapon, including the development of a atomic/nuclear deterrent.

The Anglo-Australian Joint Project was formally constituted by agreement between Australia and the the United Kingdom in 1946



Blue Streak & Black Knight

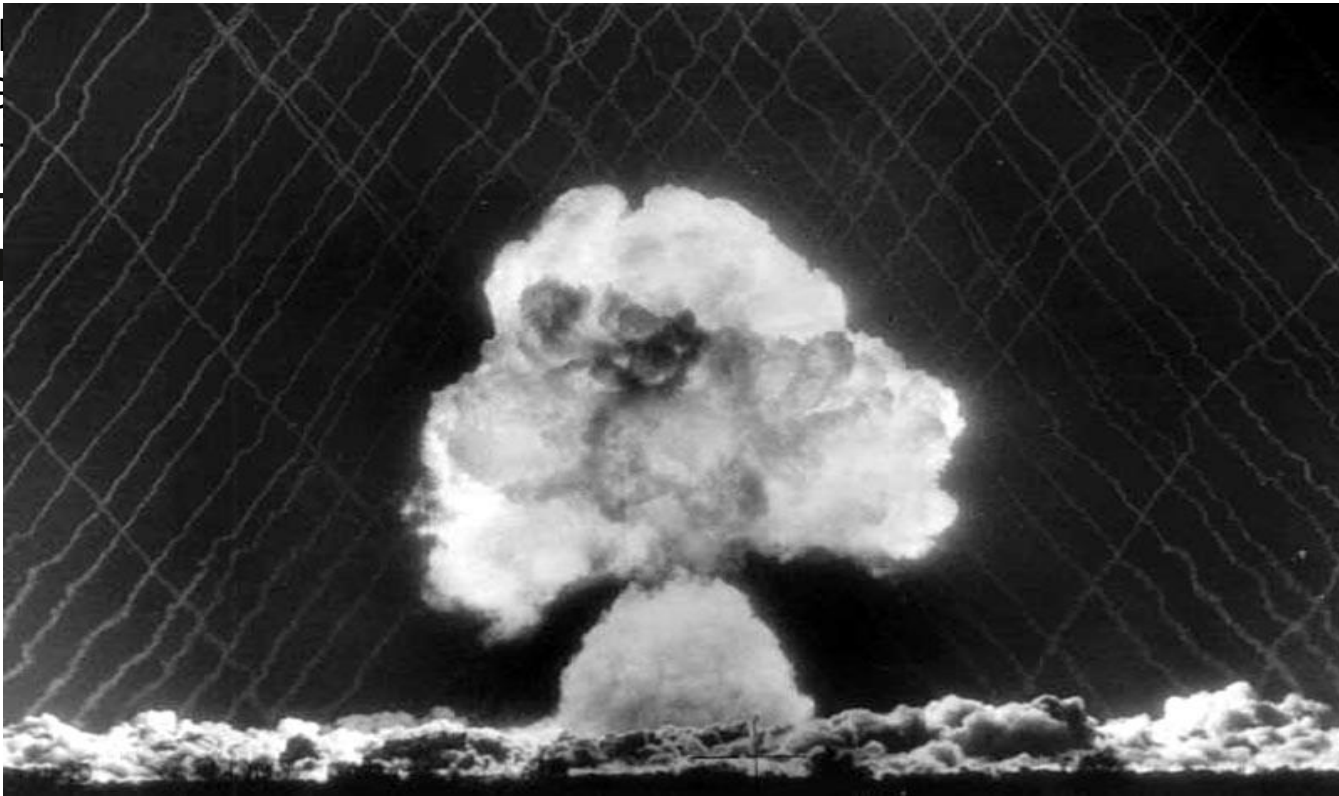
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Operation Buffalo, Round 3, Black Knight, was part of the
Maralinga Test Range, South Australia, 0557 GMT,
11 October 1956. Explosive yield was 3 kilotons.
this was the first British atomic
Invasion Weapons Archive

Blue Danube was an implosion-type fission bomb using plutonium and uranium as fuel. Designed as a 40-kiloton weapon, for this test, the yield was reduced to 3 kilotons. The bomb was 24 feet, 2 inches (7.366 meters) long and had a diameter of 5 feet, 2 inches (1.575 meters). The spherical 32-lens plutonium/uranium implosion system was 5 feet (1.524 meters) in diameter. The bomb weighed 10,000 pounds (4,536 kilograms).