

exposure

Spring 2024

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Foreword

Hello and welcome to the Spring edition of exposure magazine.

The important news of this issue is the 2024 Nuclear
Community Convention. The Dates for the convention is
Friday May 10th to Sunday May the 12th.

Please check the details of the convention on p04 and p05 of
this issue. The NCCF will be funding 100 applications to attend
the event for free.

If you wish to attend the event please don't hesitate to contact
the NCCF. You can register by calling the NCCF on **0115 8883442**
leave you name and number on the answer machine and we will
get back to you. Alternatively email **office@thenccf.org** telling
us you would like to attend.

Please register asap to avoid disappointment.

We hope you enjoy this edition of the magazine.

Editor - exposure

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2024 Nuclear Community Convention

Calling All BNTVA & NCCF Members: Register to attend **FREE** Event at the Nuclear Community Convention!



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Why attend?

Meet with fellow Veterans, members and Nuclear Community project leads. Unlock new perspectives with awesome talks and discussions about the latest developments in the Nuclear Survivor Community. Celebrate how we are shaping our community's future and protecting our Veterans' heritage.

Bonus for being a member: You get free access to everything: talks, reunion, exhibits, networking events, gala dinner and coach trip.

Don't miss out!

This is your chance to connect, learn, and be part of something bigger. Register now to grab your free spot at this amazing event.

All you have to do is get here! The accommodation and food are free – all you need is money for Beer! Applicants can be either for single or double rooms.

Register Now

Call **0115 8883442** or email **office@thenccf.org**

If you call leave a message on the answer machine telling us you would like to register for the conference and clearly leave your name and telephone number for us to get back to you.

If you email please say you wish to register for the conference and we will email you a PDF registration form for you to fill out and email back to us.

The first 100 applications will be funded by the NCCF saving you £400! Spaces are limited, so call or email to book your place **today!**



Special Excursion On Sunday morning, you will be provided with a free coach trip to visit the National Memorial Arboretum and the BNTVA Memorial.



The Dates

Friday 10th May - Early Check in

For those who want to arrive the night before conference you can check in after 3pm.

Saturday 11th May - Day of the Conference

The conference will start at 10.00 refreshments and lunch will be served at breaks in the agenda. The gala dinner will start at 7.00pm

Sunday 12th May - Excursion to the NMA

A coach will take guests to the NMA leaving the Hotel at 10am and will return to the hotel for 14.15.

The Venue

**Hilton East Midlands Airport
M1 Junction 24
24 Derby Road
Derby, DE74 2YZ**



How to get there

By Car

The hotel is situated just off Junction 24 of the M1, use Postcode DE74 2YZ in your sat nav.

By Air

If anyone does arrive by air, East Midlands Airport is less than 10 minutes by car.

By Train

The closest railway station is East Midlands Parkway, just off the A453. A 5 minute Taxi ride from the hotel from the taxi rank at the station entrance.

Trains also run from Derby Station and Nottingham Station Direct to East Midlands Parkway.

Looking for lost pals



If you are looking to find and get in touch with long lost pals or anyone you may have served with, let us know who you are and where and when you served. We will publish your request here and will forward any replies onto you.

If you have any information or want to get in touch:

Call **01158 883 442**

Email **editor@exposure.press**

Or write to:

Exposure
PO Box 8244
Castle Donington
DE74 2BY

We cannot publish personal information in the magazine but will pass this on to anyone wishing to make contact.



I think I need help - How do I get it?

- Are you a member of the British Nuclear Test Survivor Community based in the UK?
- Do you have issues affecting your daily life?
- Struggle getting up and down stairs?
- Can't sleep properly?
- Difficulty walking to the shops
- Difficulty Bathing?

If you feel you need help but are not sure exactly what is available we have a range of assessment options to identify goods and services that can address your suffering and enhance your wellbeing. Contact us to apply via:

Email
office@thencf.org

Telephone
01158 883 442



The Nuclear Community Charity Fund

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The Nuclear Community
Charity Fund



Making that difference

Community Care Check

Supported by the Office for Veterans Affairs

First quarter results

Outreach Program Success

We are pleased to report that Ian has significantly contributed to the program's initial phase. His proactive approach has resulted in a high level of contact activity with cohort members, exceeding all but one of the targeted visit goals established for March. This intensive outreach has directly facilitated ten successful Care Wellbeing and Inclusion Fund (CWI Fund) support applications, five of which progressed to more in-depth Independent Living Assessments. Notably, the program has maintained a 100% success rate for approved applications.

One veteran, demonstrating the commendable spirit that defines our community, elected to decline offered goods and services, prioritising the needs of others. This exemplifies the selflessness often encountered among program beneficiaries.

Prioritising and Building Benefit

The program's outreach efforts have also identified several beneficiaries who may be eligible for unclaimed benefits such as Personal Independence Payment (PIP) and Attendance Allowance. Our Outreach Facilitator actively signposts and encourages veterans to explore these avenues of potential support. Additionally, we have included informative articles within this edition detailing these benefits and the application process.

CCC Results in £34,000 More Grants

The best measure of the impact of 'going out and actively seeking applications' is by comparing the current £43,000+ in grants under the CCC programme with the £9,000 of grants made to the wider community during the same period.

2024 BNTVA Convention

Building upon the program's positive impact and aligning with the BNTVA CONNECT initiative, the NCCF Board of Trustees has authorised the funding of accommodations for the upcoming 2024 Nuclear Community Convention. This initial allocation will provide fully-funded spaces for over 100 veterans and their spouses to attend the convention, scheduled for May 10th-12th. The chosen venue prioritises accessibility for the program's CCC Cohort region, fostering further interaction and maximising the program's impact.

Not Part of the CCC Pilot Area?

Don't live in the pilot area? No worries! You can still get help from the Care Wellbeing and Inclusion Fund (CWI Fund). This includes getting an Independent Living Assessment to see what kind of support might be best for you.

We want to make sure everyone in our nuclear survivor community has what they need, wherever you are in the UK.

That's why we're excited to announce that the CWI Fund is getting a boost!

By working on the mobile apps for another program, we were able to unlock some new tools that will make it much faster to get your application reviewed. We can deliver shorter wait times and improved service for everyone!

Help for Those In Need

The NCCF is all about helping those who genuinely need it. That means our funds can't be used for personal gain, even if someone feels down on their luck. Imagine if we gave money to someone who could easily handle things themselves – that's really not 'charitable' and wouldn't be fair to others who need our support!

The Care Wellbeing and Inclusion Fund is here to help; it's not means-tested. We don't ask you to jump through hoops to prove you need it. Still, we must fully understand your situation to ensure the charitable purpose is being achieved.

We examine your finances, living situation, and challenges. This helps us see the whole picture and make the best decision about how to support you.

The only time we limit the amount of help is if you have a significant amount of savings you can easily access (more than the limits set by the government for pensions). Think of it like this: if you've already got a giant piggy bank full of cash, we want to focus on helping those who might be struggling more.



Delving Deeper than Definitions

Assessing Our Nuclear Community Wellbeing with the Warwick-Edinburgh Mental Wellbeing Scales

Community wellbeing assessment can be a tricky endeavour, where subjective opinions and anecdotal evidence can often mislead. It's like navigating through a treacherous swamp without a clear course. That's why it's crucial to have grounded and robust tools to help chart a path towards clear assessment. The Warwick-Edinburgh Mental Wellbeing Scales (WEMWBS) offer a rigorously

validated and reliable approach to understanding and nurturing community wellbeing.

The NCCF is licensed to use WEMWBS to evaluate community wellbeing and measure and interpret the impact of our programmes and projects. As the NCCF delivers events and activities, those participating will be asked to complete the Short

Warwick-Edinburgh Mental Wellbeing Scale questionnaire before and after participation.

The questionnaire we use contains seven simple questions and asks you to grade your experience. Combining this with your primary demographic data, we can create a comprehensive assessment of our community and the impact of our activities.

Example of the WEMWBS Questionnaire



The Nuclear Community Charity Fund
Community Care Check

Below are some statements about feelings and thoughts. Please select the answer that best describes your experience of each over the last 2 weeks.

	None of the time	Rarely	Some of the time	Often	All of the time
I've been feeling optimistic about the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I've been feeling useful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I've been feeling relaxed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I've been dealing with problems well	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I've been thinking clearly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I've been feeling close to other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I've been able to make up my own mind about things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Warwick-Edinburgh Mental Wellbeing Scale data collected is anonymised and collectively evaluated. It will not be used to establish individual wellbeing. However, where a very low wellbeing result is encountered before anonymisation, we may reach out to that person to see if there is anything we can do to help as once the anonymisation has taken place, we are unable to identify individuals in the data.

The WEMWBS stands firmly on a foundation of extensive research conducted across diverse populations. This meticulous testing, spearheaded by renowned psychologists and spanning years of thorough data analysis, has established the WEMWBS as a gold-standard instrument in the field of community wellbeing assessment. This robust evidence base translates into tangible benefits for communities seeking to cultivate a thriving and resilient environment:

- **Unparalleled Accuracy:**

The WEMWBS moves beyond simplistic happiness scores to delve into the multifaceted nature of wellbeing. Its psychometrically validated design ensures accurate measurement of critical dimensions like meaning, purpose, and positive relationships, providing a nuanced portrait of community wellbeing.

- **Unwavering Consistency:**

Whether applied in urban metropolises or remote villages, the WEMWBS delivers consistent results. This allows for meaningful comparisons across communities and over time, empowering policymakers and community leaders to track progress, identify trends, and tailor interventions effectively.

- **Universally Applicable Insights:**

The research underpinning the WEMWBS transcends specific cultural contexts, making its findings applicable to diverse communities around the globe. This fosters knowledge sharing and best practice adoption, accelerating advancements in community wellbeing across borders.

Unlike traditional mental health assessments that predominantly focus on pathology, the Warwick-Edinburgh Mental Wellbeing Scale adopts a positive psychology lens. It delves into two pivotal facets of wellbeing:

- **Hedonic Wellbeing:**

Encompassing joy, contentment, and satisfaction, this dimension captures the pleasurable aspects of daily life. The WEMWBS assesses hedonic wellbeing through questions exploring positive emotions, strong relationships, and engaging activities.

- **Eudaimonic Wellbeing:**

This component explores meaning, purpose, and self-actualisation, delving deeper into the essence of a fulfilling life. The WEMWBS taps into this dimension through questions about personal growth, meaningful contributions to society, and a sense of control over one's life.

Applying the Warwick-Edinburgh Mental Wellbeing Scale to the British Nuclear Survivor Community delivers practical benefits:

- **Make Data-Driven Decisions:**

NCCF Policymakers can confidently allocate resources and design interventions based on accurate and comprehensive insights into our community's wellbeing needs.

- **Monitor Progress and Impact:**

Regularly measuring wellbeing using the WEMWBS allows us to assess the effectiveness of our initiatives like the Community Care Check and BNTVA CONNECT, allowing us to change our approach as needed and drive continuous improvement.

- **Foster Trust and Transparency:**

Sharing data and insights from the WEMWBS fosters trust and transparency between beneficiaries and the NCCF, encouraging a collaborative approach to 'going forward together' to improve our unique communities' wellbeing.

In conclusion, the Warwick-Edinburgh Mental Wellbeing Scale offers a valuable tool for understanding and nurturing the wellbeing of the British Nuclear Test Survivor Community. Its robust evidence base, comprehensive assessment, and actionable insights empower communities, researchers, and policymakers to address the unique challenges faced by this population and ensure you receive the support and recognition you deserve. By moving beyond mere wellbeing measurement, the WEMWBS paves the way for collaborative efforts toward building a future where we can truly thrive.

Getting the Support You Deserve

Attendance Allowance is a financial benefit the UK government offers to help people of State Pension Age with the extra costs associated with disability.

Support for Greater Independence

It's specifically designed for people who:

- **Reached State Pension Age:** You must be old enough to qualify for the State Pension
- **Need Help with Daily Living:** Due to a disability or illness, you require assistance with everyday tasks.

Attendance Allowance helps those who can manage at home but need extra help getting by.

How Much Can You Get?

The amount awarded depends on the level of care you need. There are two rates:

- **Lower Rate:** This is for those who require **some** help throughout the day or night
- **Higher Rate:** This is for those who require **substantial** care throughout the day or night.

At the time of publishing, the weekly Attendance Allowance rates are (Lower) £68.10 and (Higher) £101.75.

That's an extra income of between £3,500 and over £5,200! The benefit is **non-means tested**, meaning it's not based on your income or savings.

How to Claim Attendance Allowance

Attendance Allowance is a vital financial lifeline for many people in England facing disability challenges. It supports those who need help with their daily lives due to illness or physical limitations. If you think you might be eligible, here's a

comprehensive guide to help you navigate the claiming process smoothly.

Who Can Claim Attendance Allowance?

Attendance Allowance is available to residents of England, Scotland, Wales, and Northern Ireland who meet two critical criteria:

- **Age:** You must have reached the State Pension age.
- **Care Needs:** You need assistance with daily activities due to a disability.

The level of care you require determines the amount of Attendance Allowance you receive. There are two rates: a lower rate for those needing some help and a higher rate for those requiring substantial care throughout the day or night.

Making Your Claim: Two Straightforward Options

There are two main ways to initiate your Attendance Allowance claim:

- **Claim Form:** Download the Attendance Allowance claim form (AA1) directly from the GOV.UK website. This form allows you to outline your needs and circumstances clearly. Print it out, fill in the details carefully, and send it to them using the FreePost address provided.
<https://www.gov.uk/government/publications/attendance-allowance-claim-form>
- **Phone:** If you prefer a more personalised approach, call the Attendance Allowance helpline at **0800 731 0122**

A friendly advisor can send you a claim form over the phone and answer any questions you might have during the process.

Maximising Your Claim's Success

To ensure your claim is processed efficiently and accurately, consider these helpful tips:

- **Gather Supporting Evidence:** Medical records or letters from your doctor documenting your disability and care needs can significantly strengthen your claim.
- **Seek Guidance When Needed:** Filling out official forms can sometimes feel overwhelming. Don't hesitate to seek help from Age UK or other disability charities. They offer valuable support services, including assistance with completing claim forms.
- **Claim Early, Don't Delay:** Attendance Allowance cannot be backdated, so it's crucial to claim as soon as you believe you might be eligible. This ensures you receive the financial support you deserve as quickly as possible.

Special Considerations for Urgent Cases

If you have a terminal illness and your doctor estimates you have less than 12 months to live, you can qualify for faster processing under "special rules." In such cases, you'll need to obtain a completed form SR1 from your doctor to submit alongside your claim form. This will expedite the assessment process.

The Takeaway: Claiming What You're Entitled To

Attendance Allowance can make a huge difference in managing daily life with a disability. It can help cover the costs of additional care, equipment, or transportation, easing the financial burden and allowing you to focus on your well-being. Remember, you're not alone in this process. By following these steps, gathering necessary documentation, and seeking help from available resources, you can successfully claim Attendance Allowance and get the support you deserve.

Take Charge of Your Well-being: Additional Resources

- **GOV.UK Attendance Allowance:** A comprehensive resource with detailed information on eligibility, claiming process, and benefit rates: <https://www.gov.uk/attendance-allowance>
- **Age UK Attendance Allowance Information:** Age UK provides clear and concise information about Attendance Allowance, including eligibility criteria and helpful tips: <https://www.ageuk.org.uk/information-advice/money-legal/benefits-entitlements/attendance-allowance/>



Facing Armageddon

It's always interesting hearing from nuclear veterans about their experiences; albeit, witnessing a handful of tests over a 12 month period; mind you, one bomb is enough, however, my own encounters with such tests were to endure the USA's 25 atmospheric nuclear H-bomb tests within 11 weeks.

It took the UK seven years to carry out that many tests. The codename, 'Operation Dominic' was used by the USA; it was their show. And, the codename 'Brigadoon,' was used by the UK. The detonations were carried out at a distance of between 18 and 22 miles over the sea off Christmas Island, during 25th April up until 25th of July 1962. Most were carried out in the pitch dark around 6:30am. During this period, the 200 UK servicemen that were already stationed there, including myself, had an extra 100 arrivals for the occasion, making a total of 300; comprising, RAF, Royal Engineers and Royal Navy, who were billeted mainly within the Port Camp area. The tests, involved 10,000 USA servicemen.

The UK did very well out of it. For the first time, the US shared information, in exchange for the use of the island and a handful of men. Unfortunately, at the end, not everyone came away unscathed. The fellow veterans I kept in contact with over the years, are sadly, no longer around. In 2006, Roy Prescott was awarded \$75,000 by the US Government for his cancerous illness. At the time, Channel Four televised his case. I too would have qualified for this award but I feel very fortunate because my 'high risk' tumour was discovered and removed before it had turned cancerous.

For my part, I was amongst the last to be called-up for National Service into the RAF at the age of 20. Friends who were a few months older than I, were in and out by the age of 20. Anyhow, be that as it may, this threw my way of life into complete disarray; as a pianist, torn away from a very successful rock'n'roll group, together with a decent well-paid job.

Eight months into service life and married, I was offered a choice of oversea postings. Naively believing that I actually had a choice, I ticked the "any accompanied posting" box. Soon after this, the unaccompanied posting came through. Despite my wife being pregnant, there was nothing I could do to change things.

Over the years, I wrote a no-holds-barred account about my 12 month 'sentence' on the island and it has recently been published under the title; 'FACING ARMAGEDDON' - complete with previously unpublished photographs. Grub Street Publishers, who specialise in military books, took on the task, and have informed me that they are now in the process of also producing an audio version.

Kind regards

Chas Hall



Pictures Chas Hall



Facing Armageddon by Chas Hall can be bought from: <https://grubstreet.co.uk/product/facing-armageddon/>
It can also be bought from all the major high street book sellers as well as online.
Search for: **Facing Armageddon by Chas Hall** or ISBN: **9781911667889**



**Communications during
Operation Grapple**

The technical challenges provide
communications for the Grapple Z

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My Story

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Communications during Operation Grapple

From May 1958 until May 1959, WO2 (Foreman of Signals) Pat Soward served with 2 (Special) Air Formation Signal Troop on Christmas Island. In this article, Pat recalls the technical challenges his unit had to overcome to provide communications for the Grapple Z test series.

A Signal Troop of 20 men took the scenic route to Christmas Island, arriving in June 1957 after a journey by air from London to Fiji (via New York, San Francisco and Honolulu) and by sea aboard the good ship Devonshire which already stowed an Engineer Field Squadron from the Far East. What happened next is vividly recorded in our Corps magazine, *The Wire*:

"The Devonshire anchored a mile off shore. Two ungainly copra barges, towed by an old launch, the White Swan, bore load after load of sweating, close packed troops, ashore through the narrow channels in the reef. On landing, beach communications were established using cable and telephones held by the Engineer Squadron!"

The Signal Troop had at least three names during the operation, but for our purposes it was 2 (Special) Air Formation Signal Troop. It was unit of soldiers under RAF operational command, primarily tasked to establish the operational and administrative telephone and telegraph circuits needs for the RAF Airfield and main camp, though it also tended to the communication needs of Naval, Army and AWRE units on the island.

The Troop had two main tasks: to install and maintain three larger and more permanent telephone exchanges as soon as air conditioned buildings could be built for them; and to create the extensive cable network for junctions between exchanges, lines to individual telephone instruments and point-to-point operational circuits.

Initially two-pair (quad) field cables were erected on light poles but it did not take long for supplies of armoured cable to be laid underground. A grader was 'acquired' and, driven by Cpl Ferguson from Jamaica. It was used to create 'V' shaped trenches up to 25 miles long, into which cables were laid by a three-ton lorry towing a cable trailer. The lengths (about 1/2 mile) of 14-pair cable were jointed using blow-torches and soldering irons, together with tools better known to plumbers who worked on lead pipes!

There was a 50 watt BFBS Radio station serving the forces on the island, but we also tuned in to broadcasts from Honolulu. During my tour, the Americans exploded a high altitude nuclear weapon over the Johnston Atoll. This disrupted the radio wave deflecting properties of the ionosphere and nothing was heard from Radio Honolulu for four weeks afterwards.

The normal tour for members of the unit was one year, but this was flexible and it consequently varied in size from the initial 20 to some 65 at its peak. I arrived in May 1958 as WO2 (Foreman of Signals) and enjoyed a hectic tour. My tour was in a lull between weapon tests and we were able to train our team of Linemen, Cable Jointers and Drivers to install the new telephone exchanges - luckily of a type which I knew quite well. We made specialist lacing tools and worked shifts to complete the three installations in time for the next series of tests.

In the meantime the Royal Engineers were building roads and a new airfield at B Site (Aeon Field). We kept a close working relationship with them and, if necessary, installed ducting under places where there would be a road crossing. But we had no ducting and time was short! The Americans came to our aid. Whilst building the Second World War airfield, they had created a tank farm for aviation fuel in the coconut plantations some three miles from the airfield. They were connected to the airfield by four-inch diameter steel pipes, cut into 18 ft lengths. They were ideal for our purposes.

There was a bonus, too. Some of these pipes still held wartime aviation fuel!

© Royal Signals Museum



Pat Soward - Christmas Island

It could not be allowed to go to waste and was found to work wonders for our Land Rovers which developed new 'urge' and a phenomenal mileage per gallon - as well as a propensity to shed silencers!

The last two weapon explosions were by weapons raised by balloons on the tip of the island at B Site. Cables had to be laid in the hard coral and the best we could do was to bury them in slits some two-three inches deep. After the explosions, it was noted that cables still in the ground were unharmed but those which the force of the explosion had lifted to the surface and been reduced to bare copper wires.

By April 1961, the total military strength on the island was down to some 350 of which three were Royal Signals. These were probably found from 19th (Air Formation) Signal Regiment in Singapore who sent soldiers for care-and-maintenance purposes for several years afterwards. One last point: if we were No 2 (Special) Signal Troop, was there a No 1? Yes. It was on Gann Island that also came, eventually, under 19th Signal Regiment's umbrella.

Listen to Pat recall his experience of the Grapple Z tests on the Royal Signals Museum digital guide available via the free Bloomberg Connects app. Scan the QR code to download to your smartphone or tablet device.



Once installed, scan the code again and you will be taken to the article and can listen to Pat.

The Big Bang

The 10th of February is an important date in my life, it's my birthday, and 1956 was an especially important year. The occasion, the arrival of the advance party of 1 troop, 7th Independent Field Squadron, Royal Australian Engineers at the 43 mile camp site for the oncoming atomic tests destined to be held at Maralinga.

1 troop, numbering 72 members, consisted of predominantly sappers of my own age, 19 and with limited army experience. A core of an older in age and experience old soldier types, a number of who had served in the previous mainland tests at Emu were also in this advance party. Emu had been part of the British atomic tests in 1952 and was situated some hundred or more miles north in the desert from Maralinga. As a unit we were commanded by Captain Jim Lockey and seconded by Lieutenant Sharpe, we had two sergeants Jack Spedding and Cliff Stuart together with a number of full and lance corporals.

I knew only a limited number of the troops in 7 Squadron; these were those who had attended the same field engineering class at the School of Military Engineering that had concluded the previous year. I had been posted to 17 Construction Squadron, stationed at Kingsford, whilst 7 Squadron was in the grounds of S.M.E. as 7 Sqn. had no plant operators attached, part of the plant troop of 17 was attached for the duration of the planned tests. We had Billy Mills who normally held the rank of sergeant but I think was a corporal at Maralinga, Bluey Thomas a corporal, Rocky Main, corporal and ex Emu, Hec Lawler Spr, Bruce Sloggett, Spr, Ray Howard Spr and me the learner.

We had spent a number of weeks with 7 Sqn. preparing for the projected mile journey by vehicle,

packing the required equipment into the eight allotted vehicles, old G.M.C.s and from memory newer International trucks, two jeeps and two Harley Davidson motorcycles. Most of our time was gainfully spent, there was nothing else to do, in making camouflage nets, weaving scrimmage through the netting, the old army axiom, idle hands lead to mischief, must have something to do.

Did we have any briefing on what to expect, I don't think so, the ex Emu blokes told of some of the hardships in working in a desert environment the lack of basic facilities and such but nothing was said of or perhaps known of the effects and danger of radiation associated with the firing of atomic bombs. It must be remembered that this period of time was only 12 years after the first atomic bombs were dropped during the war and the trading of information between concerned nations was not of the day.

To us it was an adventure, there was no conflict where Australian troops could be sent, young men yearn adventure, if not why join any of the services. The alternative would be to spend ones time in a base camp somewhere in Australia and the main point to be remembered is that we had no choice in the decision to go, we were all posted, the young, the married with family the lot. Prior to leaving Liverpool we all had visits to the dentist, well at least he had the title and officer rank of dentist, at Moorebank, people like

Bruce Sloggett could attest to his skill and his personality, we had to be classed A.1. in fitness and only the rudiments in hospital care was to be expected from then on.

We left in a convoy of eight vehicles and seventy two troops staying overnight in C.M.F. (citizen military forces) drill halls or in the country showgrounds. The route followed the Murray River through Victoria and South Australia with the last civilisation being at Ceduna. It was in this frontier town, where we camped in the street sleeping on the footpath, where Ray Howard earned himself a name of sorts when after being approached outside of the hotel by a large local tribesman, who by law was not allowed in the pub or to buy liquor, agreed to take his proffered one pound note and to exchange it with mine host for a suitable quantity of liquor. Later that night we were awakened by the now very irate bare footed boomerang armed local who had been ripped right off.

From Ceduna the road, or track, was unsealed and pretty rough even or because of the mode of transport and it was on the Nullarbor Plain that we stopped and some of the party climbed into one of the water tanks to keep cool, that were and still are positioned on the roadside.

Some distance later we left the road and followed a track heading north into the desert country and for a time we followed a track alongside the railway line. Bruce Sloggett and the cook (whose name I don't remember) had the task of going ahead first light in the morning and setting up for meals, they had a Wiles Cooker towed behind a G.M.C. and the road or lack of it caused the towing hitch to break and this had to be welded, (did we also tow a K.V.A.).

The track led to our first clay pan and we spent some time contemplating the way across with the vehicles which had by necessity been heavily loaded. We must have been successful because we later passed through an aboriginal camp where we saw our first sight of a camel. He was attached to the chassis of an old engineless truck and was being used as a form of transport for the aborigines who seemed to be permanently camped in the area. We made friends with the children of the camp by throwing blown up condoms, then called French letters which for some unknown reason we had been issued with, to them from the backs of the truck.

On reaching the rail siding at Watson, the gateway to the firing range, consisting of six or seven small railway houses, a small railway station and that was that. From Watson to the 43 mile camp was, as the name suggests, 43 miles from Watson, over a well graded though dusty sand surface road, running alongside and then over a number of sand hills and then at last to a flat barren area, stunted salt bushes, marked by a large marquee with an army issue mobile refrigerator and camp cooker.

Our first stop was the marquee where we were issued with our first surprise, a cup of tea. This was no ordinary cup for it had been made with bore water and was so many times saltier than sea water, utterly impossible to

drink, a great welcome to Maralinga. Our second shock came only minutes later; we were led to the site of our new camp, on the ground lay dozens of very used eight men army tents, piles of tent poles and tent pegs. Our first orders, erect one tent between two men in parallel rows to the large dining marquee. Using wooden mallets it was impossible to drive a steel peg below the surface of the sand, the pegs in effect would bend and almost double over, and much as we looked for softer ground it was impossible, some started to get their tents erected outside of the delineated lines and were quickly told to get them regimented. The only way to get pegs into the ground was to first drill holes with the one and only towed compressor that we had brought with us. This entailed time and effort in the by now afternoon heat of February summer and did not lead to a feeling of goodwill between all. This is where we had our first encounter with what was to become one of the major problems encountered, the bush fly. That first cup of tea, now made with fresh water, was shared with these pests and many a fly was swallowed along with the tea.

I shared my tent with Ray Howard; we had the last tent, counting the orderly/stores tent as the first from the parade ground, in the row nearest the mess marquee. As with all the others we had a steel trunk each and a metal stretcher for furnishing. The tents were left open almost all of the time with the sides rolled up, when the windstorms came, as they often did, even the tied down sides and fronts could not keep the red sand out and everything was covered. It was sometime later that the "chuffer" was obtained and this device was towed behind a four wheel drive vehicle and did a tour around the camp dispensing a stream of smoke like vapour designed to kill the flies.

That it was not 100% effective was shown by after a few months in residence some of the blankets were fly blown, hats khaki fur felt were blown around the headband where perspiration had gathered and those blankets had to be replaced by the Q.M.

At the top of our row of tents lived the Sqdn. Clerk whose correct name escapes me but was widely known as Mousy Strassfeldt, and even that will be the wrong spelling, together with Mr. Sharpe, the 2.i.c.

The parade ground was that area in front of the row of tents and we were assembled there for the first parade of the morning

Our duties for the first period were to erect the 43 mile camp; everything came from the U.K. in crates or pallets and were prefabricated. Some of these plywood crates then became our shower and toilet blocks. One of my personal tasks was to assist Bluey O'Brien, a plumber, in getting the water pipes cut to size and laid from the water tower to the shower block. The water, when it was finally connected, was bore water and ordinary soap was of no use whatever. We were issued with special salt water soap named Seagull which lathered, in a fashion, another party were involved in the erection of the tents that were to be occupied by the air force and navy personnel who were due to arrive later. It was some small time before the tasks associated with the actual bomb were commenced. We had a marquee erected for a wet canteen and from where movies were shown from time to time.

We were joined by our new R.S.M. at an early date, Tom Muggleton, of the Royal Australian Regiment, he must have found it quiet a culture shock to come from the regiment to a sapper camp.

Tom always looked the part of a RSM in bearing and dress and his troops would have looked the antithesis of his former charges. Our dress was worn for comfort in the desert heat and shorts, more the worse for wear, bare tops, boots worn by the sand and hats of undetermined shape was the order of the day. Tom, whose duties were not that onerous, spent a lot of his time in the bush trapping dingoes of which there were plenty. The dogs kept away from the immediate area from the camp but were plentiful in the bush. What was surprising, at least to me, was the presence of camels, away in the Never Never one could find the big splayfooted tracks in the sand hills and although I only saw the animals from a distance it was apparent that a number were in the vicinity. Kangaroos were plentiful, big ones at that, and the majestic wedge tailed eagle built nests of large sized branches in the stunted trees and they used the sealed roadway as a sort of landing field to take off when they would flap their huge wings and run, if that is the word, for quiet some distance until they were able to gain take off speed. We also had little field mice, which became of pest proportions in the tents and ingenious ways of trapping were invented. One method used, more for fun than extermination, was to have a piece of timber leading like a ramp to the top of a container filled with water with a piece of food balanced on the end over the water. The mouse, tempted by the bait scampered to the bait and then, so the theory went, splash.

Not far from the camp site was a very historical feature, Tietkens well. This relic of years gone by was the only reminder in that remote inhospitable place of the exertions undertaken years gone by the party of explorers led by Tietken. In an endeavor to discover water to enable them to survive, they had dug this hole in the ground in a search for the all important water.

The surface at Maralinga is covered in extremely fine red bull dust but this is only a matter of inches deep then begins a solid depth of white coloured fractured rock. How the earlier visitors, using the most primitive of hand tools, dug to the depth they did in such conditions shows the calibre of those explorers. Records show that they did in fact strike the elusive water, but it too was too salty for consumption. There was an amount of rough-cut timber near the opening but whether this comprised the parts of a windlass or not is up to speculation.

Talking of timber, there was none save for the stunted, bent and twisted form of eucalyptus, covered in vicious ants and the iron hard mulga. Ground cover consisted of salt bush, full of prickles when dry at which time it formed into ball shapes and blown by the wind would cover the landscape. These balls were handy for the lighting of fires to boil the billy but were a menace when driven through and the radiators would suffer. The mulga is perfect for cooking fires but later became a serious problem when the grader was forming tracks, necessary for the monitoring of the tests, when it would pierce the tyres like pieces of steel.

One of the first engineering tasks to be undertaken was the erection of a tower and the placement of a water tank. This edifice was later to become the first sign of the camp when arriving by road. From memory, before the tank could be filled for use the winds, which can become quite savage, lifted the tank from its perch and deposited it next to the R.A.A.F transport lines.

Night entertainment was for a hard core, playing poker in one of the tents. It was like lambs to slaughter, young bucks with visions of the Wild West type of gambling in mind, against some of the hard line old diggers who had played the game in some of

the furthest corners of Australia and perhaps the world.

Two come to mind, Rocky Main for sure and I think Snowy Sturgess, were masters of the game. Rocky could count cards like kids can count lollies, it wouldn't matter what you had in your hand Rocky knew from the cards that had been dealt and discarded what you didn't have and he could play accordingly. He would borrow a pound or two from me some evenings, I think most of his pay went to the bank, and without fail he would return the same to me that same evening from a roll of notes that had been donated from the players.

That was the limit to the entertaining for the troops, we were allowed two bottles of beer per week, on the Sunday, issued from the canteen caravan and these bottles were opened when purchased. For sappers, and to be fair the navy and air force personnel whose conditions of service were as arduous as those of ours, these two bottles took on a great importance. I lost two bottles once when my hands, covered in sweat, could not hold the bottles covered in beautiful beads of icy cold frost slipped through my grasp and made a golden foam in the sand when they clashed together falling to the ground. To be fair they were replaced, without cost, by the canteen manager and were carried away to be consumed with a much firmer pressure. Most of the drinking took place in the big marquee, near the shower block, and drinking glasses were made from beer bottles being cut below the neck by the old way of tying a piece of string soaked in petrol around the selected site of the neck, set afire and then the bottle dunked in a bucket of water. Like drinkers anywhere it was dangerous to leave ones drink partly consumed the area for Maralinga. The idea was to search Emu and to retrieve any building supplies tools etc. that may have been left behind and that may have assisted in the establishment of Maralinga.

I didn't go but I remember the amount of material that was recovered. It allowed for the work to continue. Among the items recovered was a large number of "giggle suits" these were very well made coveralls used as protective clothing for those entering the contaminated area during the last tests. These suits were now being worn by nearly all of a night time as the height of fashion.

One night at the open air movies, Ray Howard and I were enjoying a quiet beer and staring at the screen when an enormous centipede bit Ray on the thigh; I made a swipe at the beast with my bottle but missed and got bit on the thumb for my trouble. A little time later both Ray and I were in pain, his more than mine I'm sure, and we had to get the R.A.P. member to have a look and try and ease the pain. He decided that as the poison effect of giant centipedes was not within his limited knowledge we should be taken to Watson, 43 miles away over part sand dune roads, for a professional opinion of a doctor who was employed, probably by the construction company Kiwana, and based at Watson. Charlie Easy undertook the trip and we headed off in one of the old 1940s Willy jeeps that were used. It wasn't the best of trips; the road was bad enough but the thought of that creatures poison going through the system made the trip even worse. A couple of hours later we arrived at the railhead and the three of us went to the small building that we had been told housed doctor. The sounds of music and laughter came from the open door and in answer to our knock we met with a man holding what I now know to be a brandy balloon, I'd only seen these glasses on the movies before. He was the most obnoxious person I had met in my life, no wonder he was practicing in the middle of no where, on being told we had been bitten and sent to consult with him as to the severity of the poison, he took the stance that he was not to be

concerned with such petty affairs and that he had more important things to do with his time. Well that might have been that, doctors are doctors and we only soldiers and sappers at that. Well not with Charlie Easy, he took that doctor right on and read his family history in no uncertain terms. The pain in my thumb took on second place as I heard this lance corporal berate the doctor. The result was that Ray and I received treatment and were kept for observation at the small hospital at Watson until we were cleared by a chastened doctor the next morning.

Although the work was arduous and working conditions primitive, morale was kept at a remarkable high and we were all in the peak of physical and mental condition. One case of stress comes to mind and it occurred with "paddy?", who shared a tent with Bluey Thomas' hearing voices coming from his radio set. These phantom voices were not connected with any scheduled radio program but were in his mind only. It was decided that he should be flown out of the area in the next available aircraft and one of the staunchest members, in my opinion, corporal "Twiggy" was sent with Paddy as a helpmate and escort for treatment. Time clouds many issues and I may be wrong but I think Paddy later became Ray Howard's father in law, having married the widowed mother of Ray's wife.

After working the long hours that were necessary to complete the camp in the allotted schedule and without having a day off for weeks then months, it was decided to give the troops a break. Transport was provided to carry the troops the extensive distance to the coast to give the workers a swim in the ocean. I don't know where they went. Ray Howard had a better idea. Ray and I and one of the young Survey Corp members took one of the land rovers and headed for Emu. Unauthorised and taboo.

It was no effort, the track by now was well defined and 44 gallon fuel drums were left in small dumps on the side of the track. It was necessary to refuel on the way as four wheel drive and low range had to be used at times. The track wandered over sand dunes and skirted large salt pans. This jaunt finished at Emu and began one of the most frightening experiences of my life. From first sight Emu appeared to be still operating as a camp. There was a sealed roadway, a windmill still turning and this was servicing the toilets. As one walked past the toilet blocks the toilets would flush, the living quarters remained furnished with stretchers and bedside lockers, the mess, with its large colourful wall mural painted by Len Beadell, had tables and chairs, cooking utensils and the vegetable lockers had potatoes and onions now in the stage of growing. A very large cat was in residence in the mess hall. There was ample tinned food of variety in the lockers to enable us to have a midday meal. Outside the sealed streets were covered in tumbleweeds blowing down the street with the wind and very large red kangaroos could be seen.

I was fascinated with the workshops, all types of heavy machinery were lined up ready it appeared to be operated, hand tools were placed on shadow boards on the walls, all good quality, trucks and land rovers were lined up outside with no visible sign to show why they were not taken when the camp closed. Some had by this time flat tyres and from trying to start a couple it was obvious that they now had flat batteries. From all appearances it seemed that somebody had given the order and everyone had just downed tools and left, the camp then remaining as it was until visited first by the recovery party sent earlier from 43 mile and now by us.

It was against all that I had learnt in my short time in the services, everything I had ever been issued with to use for working, tools etc. had to be signed for and any piece of equipment whatsoever had to remain on charge until a board of survey was set up to dispose of any U.S. equipment and yet here was thousands of items laying where they had been left. It just didn't compute, to this day I believe that something happened at Emu to cause a hurried withdrawal with no thought of the equipment left behind.

On leaving the camp site proper we went for a drive around the general area and came across what must have been the command site for the bomb tests or experiments of some kind. There was a number of what I would describe as portable windowless rooms with black cloth curtains, flapping in the breeze, over the doorways giving darkness to the interior. Inside were banks of instruments set up not unlike what one now sees in space movies, in the complete absence of any other person or even sounds it was a frightening scene and one that I was only too happy to leave. We took from the workshop area a number of electric tools to return to the 43 mile. Our return journey was without incident and nobody was ever the wiser that we had been to Emu. A short time later Ray and his mate returned to Emu, without my knowledge and from late accounts took with them a spare battery that they then placed into a land rover and then began the trip back. Their plan was to hide the land rover near Watson and later to return and have it shipped out by train to Sydney. I doubt if the back of the land rover remained empty when there was so much portable equipment laying around for the taking. Anyway the venture did not come to fruition. A blown head gasket put paid to the plan and a match was thought to be the answer to the culprits being found. It was only short time before the burnt out remains were discovered

and a full compulsory parade was held where it was explained that the person/persons involved were in danger of radioactivity and in need of immediate medical help. If they came forward no further action would be taken. Needless to say no one came forward and after a few nights of checking to see if they glowed in the dark the two offenders rested easy. This venture wasn't one off; there was a D8 bulldozer invitingly left at Emu. What a great start to an earthmoving business this would be if one could only track it to the railway line, not Watson because security would be rather shocked to see a bulldozer come out of the desert but maybe down the line a bit. After the fuss of the bomb tests one could come back and retrieve the machine and then ones civilian future would be assured as the owner of such a valuable machine. This plan also came a gutser when the gear lever either broke or fell off and there was no way of repairing with out the proper tools. This time the machine was not set to the torch but left where it was. It was later found and then brought to 43 mile on the back of a low loader. And who was responsible for this caper, well once again old hands from 17 Const. were responsible. What equipment was taken and later found its way into the civilian world only those involved would ever know.

It was during April/may, a few months into our stay that a nasty incident occurred and with the passage of time the details are now blurred. It started with a clash of personalities in the officer's mess, which had far reaching consequences and the removal of the officer with the title "range commander". At about this time, or maybe it was the same evening, a member of the troop, a GMC. driver, after a few beers, decided that he had had enough of the working conditions or lack thereof, and took off in his vehicle, minus an exhaust pipe, and after doing a circuit of the camp area headed off with a roar southward

with the purpose in mind of going where? He was stopped at Watson and had to drive the vehicle back to 43 mile under escort. He was then placed in one of the tents that was to be used as his place of confinement but a party of the troops, including air force and navy, took exception to this treatment and managed to pull the tent pegs from the ground, tent collapses, prisoner is released. Then came what has been called "the riot" I remember little except for the mass of troops parading around as a mob making a hell of a din with dirt tins and lids. If I remember correctly Tom Muggleton, the RSM. was the calming influence during this event.

A short time later we had a visit from what I remember was a General who on a parade gave a rousing morale boosting lecture, promised better conditions and a weeks leave and then left the area to a rousing three cheers. Well that's the accepted version; I don't remember the three cheers as being spontaneous or heart felt.

A list was produced of those members who, now that the 43 mile camp was completed and functioning, were no longer required and were to be returned to Liverpool. A convoy was formed with those vehicles that had originally been brought from Liverpool, some now the worse for wear and tear. At least one of the jeeps, carried piggy back on one of the trucks, had an extra load with tools taken from Emu smuggled out in the petrol tank that had been adapted so that to the eyes of any prying official would appear to hold only petrol.

Before the departure of these members we, the rest, were given one weeks leave in our home state, a result I believe of the visit by the general. We were paraded and told in no uncertain terms if we failed to return when due not only would we be liable for horrible disciplinary measures but our mates would also suffer. We all returned as scheduled.

We travelled on one of the worlds last great train journeys, from Watson to, was it Port Augusta?, where we boarded the modern Budd car train to Adelaide, overnighed and then flew domestic to Sydney. On the first phase of the trip we joined a number of railway fettlers, big drinkers but even bigger card players. Some of our party left more of their hard earned money in these blokes pockets than they had to spend on the rest of their leave. On our return, did Johnny Martin really get married in those few days? I shared a carriage with Gus Sirosky, (remember him?) And as it was the middle of winter and I had left my great coat in Sydney, we had a tug of war all night on the train to get the biggest share of his coat.

On our return the second part of the troop left on their return to Sydney. I then shared my tent with Hec Lawler. A second larger tent city was built 11 miles from Watson on the road to Maralinga. This site was set aside for the large number of what was to be called "indoctranees" from all over the world and very important persons who were to witness the oncoming tests.

About this time we received our first pieces of plant, other than the D8 being used for the laying of cables and the D4 that the Survey Corp. had to clear their lines of sight. We had two D7s, cable operated blades that had been used by the civilian construction corp. during the war. They were pretty knocked about but were used constantly until long after the tests and didn't miss a beat.

At this time my duties took me from the main force of the squadron and with the other plant operators, Rocky Maine, Bruce Slogget, Hec Lawler, we were employed in the bush, staying out in tent flys for accommodation. Our duties were in the making of roads and tracks for the scientists to monitor the effects of the coming blasts.

Snowy Sturgess later joined us with a brand new Cat 12 grader and he finished off these roads/ tracks. I had the honour at this time to work with one of Australia's best and last explorers, Len Beadell. The method used was for Len to travel in his specially equipped land rover to a set point in the distance, worked out with his theodolite, and from a high vantage point on a sand hill either flash with a hand held mirror or fire a vary pistol rocket. The bulldozer would then be driven in an attempt to make a straight line to Len. This was time consuming owing to the stunted growth that had to be cleared and with this growth full of vicious little ants it wasn't the most pleasant. To add to the conditions the heat was such that to place ones hands on the engine cowling was sure to produce a burn. Len was a great man, no doubt, but he wasn't concerned with elementary things like eating. We had a confrontation when I balked at working past the accepted lunch hour period with out having any sustenance. Len soon solved this problem, a can of hot tinned peaches taken from his vehicle, opened with a tomahawk, and presto, that's your lunch, now back to work.

This is where I had my first meeting with wild dingoes, they were so uncaring of us that of a night they would enter under the tent fly and from next to our camp stretchers they would hunt for small mice in our food lockers. They had no fear whatsoever. On top of each of the sand hills that our track traversed Len would put a small marker flag with a pennant of triangular coloured cloth. The dingoes took a likening to this cloth and they would walk unconcernedly behind the noisy dozer to steal this cloth. Every few days we had to return to 43 mile for provisions, on one of these trips, in the evening I hit the largest kangaroo I had ever seen. He did considerable damage to steering and front end of the land rover and I had to limp into 43.

The next day I told a number of the troops of my experience and I can swear to the fact that Soapy (Elliott) returned to where the animal still lay on the road and parts finished up in the cooking pot or maybe the barbecue plate. This seems to put a different light on the propaganda later spread as to the exquisite and plentiful amount of rations the generous government made available to their hard working troops.

With the advent of winter we were all now issued with leather sleeveless jerkins; this gives some indications of the variance in temperature in the desert. The vehicles now had to be provided with anti freeze and those members working on the erection of the steel buildings in the forward area had to wait until the sun warmed up before the could use their bare hands on the cold steel or else risk freezing their skin to the steel. Mousey, the troop clerk, had an artistic bent and he started to decorate the back of the jerkins with cartoon characters. Unsoldierly, a big no no and these pieces of art had then to be removed.

We were being supplied with provisions and stores by aircraft as well as rail Bristol freighters; a large brutish shaped, low speed plane of the times was employed in this task. The pilots took great delight in flying low over our tented camp and with the down blast of their props causing the canvas to flap like sails in a storm and the dust rising into the air leaving a cover of sand over everything in the camp. Must have looked funny to the air crew from up there.

It was whilst we were still at 43 mile camp that we were joined by members of the Canadian army. They came fully equipped with their own transport, reliable Ford Power Wagons and dressed in uniforms better in quality than that of ours.

We didn't have a lot of contact with these members; I think they must have enjoyed their own company more. Members of the Royal Australian Armoured Corp also made up our happy family. These members brought with them Centurion tanks and Ferret scout cars. It wasn't unusual to see these steel monsters in their accompanying cloud of dust racing full mell through the desert. The only problem with these tank jockeys was the attached smell in their coveralls. Apparently when the guns were fired the cordite fumes, plus engine exhaust fumes saturated the cloth and any amount of washing would not remove this smell. The Tankies sat at the other end of the mess tent.

43 mile camp was by now becoming a crowded small town filled with the workers. We had been promised that the main camp at Maralinga village would have been finished before this date but problems were found with the water supply, all the asbestos pipes becoming cracked. Luckily this didn't stop the administration staff and English scientific people from using the facilities of the village. They could sleep in their fly proofed cabins of a night and dine very well thank you, in their air conditioned fly proof messes drinking their cool ale from frosted glasses of an evening. We on the other hand still resided in our, by now falling to pieces tents, having to put our sweat soaked blankets out to dry each day to prevent them becoming fly blown. Later when we did finally move to the luxury of the Village we had the opportunity of meeting with these pillars of the English establishment and we were utilised by these people to do their bidding. This is where I first became aware of class distinction, these graduates of Eton or wherever with their plums in the mouth, were under the illusion that we colonials were put on earth to be their lackeys. What a mob of clowns. We told some of these wonders their antecedents

and the difference between earned respect and servile compliance. Can you imagine grown men wearing shirts and ties with jackets in the desert, all they needed to complete the picture were swagger sticks and with their attitude I wouldn't have been surprised if they turned up in that garb. Anyway we had a parade and were told that we must not upset these very important, to themselves, members of the English upper class and to behave in a manner that would not upset the delicate nature of our betters.

Contrary to these self opinionated Poms, a number of young British national service men from both the air force and army arrived at the village. These poor souls were totally unprepared for what awaited them. They arrived dressed in the heavy serge uniforms suited for England and stayed this way until wiser clothes were provided. With their white skin and only days away from the English winter these young blokes must really have suffered.

Being desert one doesn't expect to see rain, but in fact it does occur albeit rarely. It happened, the air turned cooler, the dust settled and a day or two later the red sand was coloured with the brightest of scarlets when the Sturt peas with their colourful flower and black centres bloomed in the places where the rain had fallen. Other small flowers, the names I'd never know, also came to life for the short term that the ground retained sufficient moisture for them to survive.

The only other colourful incident that I can recall came when the first and only female arrived at Maralinga. This was an extremely attractive air hostess, now called flight attendants, who had been part of the crew of the Ansett, or was it TAA. flight that had brought some government V.I.P.s to the area. This young lady was the centre of attraction, naturally,

wherever she was taken on a tour in an open land rover. The V.I.P.s, did not rate a second glance

Anyway, we still haven't finished with 43 mile camp. The pace now hotted up, an area was set aside for the target response area, jet aeroplanes, of a higher quality than we had at the time in our air force, Swifts, were brought in and tied down to concrete blocks near to the proposed blast. These planes were complete, ready to fly, some of the sappers had great fun sitting in the cockpits playing Biggles, until the information that the seats they were sitting on were liable to be propelled into the atmosphere if a certain train of actions were carried out and the wrong button pressed. The centurion tanks were placed in position. The buildings all erected and holes in the ground, ones we had dug with the dozers, now filled with large steel containers with magic electronic instruments placed in side. Anderson shelters by the dozens lay in mapped out positions some with dummies inside. A large number of dummies dressed in heavy British issued battle dress complete with white painted webbing placed in strategic positions. Some inside below ground, gun positions. There was said to be one or more female dummies ready to be placed too but these were to be left to the last rather than to cause erotic thoughts in the minds of the female starved troops. As a sidelight the webbing later proved to be life threatening, after the blasts a number of web belts were taken from the site. The brass buckle and keepers in the belts were of a much higher quality than Australian issue being rounded enabling a much higher polish to be obtained. These belts, once the white paint was removed were proudly worn by soldiers who later, health wise, must have regretted this action.

So it must have been about this time that we moved to the village, first making sure that not a trace was left to mark the bulldust of the 43 mile camp.

Those stubborn steel tent pegs that caused so much sweat to belt into the rock were now torn up by the dozers, the area completely flattened. We now traveled each day to the forward area, except for those whose duties kept them at the village. A security post was erected at roadside, about 8 miles from ground zero at One Tree, and a mess tent erected for us for our lunch break. A little later a number of white painted specially constructed caravan type vehicles were towed in. These were to be used for the so called decontamination facilities for those obliged to enter the radiation contamination area. Roadside was manned by uniformed Commonwealth police whose duty it was to check the names and passes of each member carrying on from roadside.

One of those kept back at the village was Johnny Rivers, better known as "pommy". His new task was to assist in the well being of the animals that were to be tethered in the path of the bomb and those who survived and could be found, were to be dissected to ascertain the amount of radiation they had been exposed to. This later led to one of the most amusing parts of the tests when John, not a really good rifle shot, tried valiantly to shoot the animals so their corpses could be tested and failed time after time to get a head shot with the .22 rifle he was issued with. John asked for help with some volunteer to hold the animal so he could get a better shot and couldn't understand why no one stepped forward.

With all the tasks now being completed, only made possible by extended work hours, came the time for the first test.

We didn't see the bomb. It was transported on a low loader under canvas and we were all taken from the area of the road to the tower so we could not see the actual bomb.

The timing depended, so it is said, on the vagaries of the weather, the wind had to be such that the expected mushroom type cloud would be swept away from any civilisation, but I'm sure it depended more on the vagaries of the English politicians. Whatever so it came to pass that all was ready, the metrological balloons were now seen to be more common and the transport for the press arranged from 11 mile camp. Sappers issued with printed instruction to where they fitted in to the great scheme of things and sent off to the ground zero area. Sand bag after sand bag was placed against the doors of the underground steel shelters containing the monitoring equipment, boffins ran around like chooks with their heads off checking and checking their electronic equipment. Every one out of the area, names checked off at roadside and then lined up to watch the result of all that work, and we waited and waited. Some say that the first delay was caused by a young British national service airman who had chased a frill neck lizard and got lost in the scrub. Officially we were told that the winds were in the wrong direction so it was back to the ground zero area, sand bags away from the containers and all the other preparations now reversed. This farce continued on and off for over 16 days and nights until at last on the evening of Sunday the bomb was released, in a manner of speaking atop the tower.

We were all lined up in our allotted positions with our backs toward the tower, carrying out instructions to keep our eyes closed and hands over our eyes until after the blast. On command from the loudspeaker we were to turn and face the blast, eyes now opened and experience what man can do. Protective clothing, well we all wore our jackets and hats. The majestic sight of the bomb has been described countless times, needless to say once seen never forgotten.

Like hell had ascended on earth, colours unimaginable, rolling rolling clouds of sand, dust, steam and vapour reaching into the heavens as high as the sky itself, rockets fired from the ground leaving their trails through the cloud at differing height level, a moving mass of sound waves the likes never seen before, solid in their appearance not slowly but quickly approaching. What cannot be described is the effect of that sound wave, no noise yet, hitting one and all like a blast with those off balance being thrown to the ground. Now the noise, rumbling rumbling and loud enough to cause temporary deafness. I had the duty to drive one of the troop trucks back to the village later and I whirled away on the starter motor without realising that the motor had already started, I couldn't hear a thing.

A further three bombs were detonated in the course of the tests, one at ground level, one from the second tower and one from, what I believed to be from a Canberra bomber but from further readings appear to have been from a Vulcan bomber. What I do remember is that the aircraft was in contact by radio with the ground party and the voice of the bombardier could be heard giving directions to the pilot over a loudspeaker that had been set up in the area in which we were waiting. The point of impact, from memory, was the length of a cricket pitch from the marked ground zero. An exceptional feat of accuracy we were told, thankfully. The dramatic effect of this bomb was also experienced in the same manner. After that blast each time we entered the contaminated area a distinct bump could be felt as the vehicles passed along the sealed road where the bomb had caused the road to sink into the ground.

1 troop was allotted duties before, during and after each of the blasts. Preparations took hours during the day and night before each. The ubiquitous sand bags were placed over important instrument sites, electronic monitoring devices were carried and placed into bunkers, assistance was given to the now ecstatic boffins, vehicles were driven into around and out of the sites and then the whole process was reversed after the buttons had been pushed.

All very safe though, everything had been judged safe by the experts before any troops were involved and all precautions taken. The fire that destroyed the messing tent at roadside following the air drop was an unfortunate happening. That the distance from the blast was more or less the same as that where the troops were held in waiting didn't follow that they were in any danger. We all had protective clothing when we entered the decontamination area didn't we? The presence of radio active dust, shown when the clothing was removed in the decontamination vans, prior to showering, doesn't really mean that the suits weren't fail proof. Anyway once you showered, and showered and showered the Geiger counter now showed that the dust had been washed down the drains.

We were given special film badges, white rectangular metal with pink inserts. These were worn on the jacket at all times, except when working then the jacket was hung on the nearest point or placed on the ground. I suppose the film badge still worked in these situations. I could have found out up till only a few years ago, I had mine for years and years after. I wonder why it was taken from me in 1956 for testing. As a special piece of magic all of us entering for duty in the contaminated area were issued with a pencil shaped silver coloured dosimeter.

This device was to be checked every half or hour by peering through the end of the device where a scale could be seen. If this scale showed a certain reading one had to leave the area immediately and report to the decontamination centre. This might be o.k. if one had for transport a truck or Landrover but what if you had been taken miles away to operate a bulldozer. These aren't the fastest of devices and when one is in a panic when the dosimeter shows a dangerous reading it isn't the pleasantest trip. Arriving in a great cloud of dust, off with the gas mask, shaking hand over the dosimeter to the expert. "No worries, can't depend on these things, here's another, off you go."

Protective clothing, in one end of the rows of decontamination vans looking like a bronze digger, boots, shorts, jackets and hats, out the other end like an astronaut. New underwear, socks, double thick white coveralls complete with full hood, short gum boots with over socks, gloves and to complete the outfit a tight fitting gas mask. Now off you go and do your manual labour in the desert heat. In my case, and others, off you go on your heated dust producing earthmoving machine and dig out those instruments, clear away that debris. It's o.k. we'll stay back here in the air conditioning and make sure all the results of our successful tests are collated and we can pat each other on the back.

Back at the site those funnily dressed colonials are taking off their gas masks to wipe the perspiration from their faces and out of their eyes. If they are not closely supervised they will even take the masks off to work. What of the plant operators, they aren't supervised, they know what their duties are. Well they take the bloody masks off and roll their overalls down.

Otherwise, without being over dramatic, they will drown in their own perspiration as it fills the mask to the mouth level and any way once the glass eyepieces fill up how can they now see?

And the all pervading fine dust enters and settles on and in every pore of the body. I wonder how this by now known radioactive dust knows not to leave the signed area of the decontamination area. What of the drivers in their vehicles driving up to the fence is the dust they bring in taken back to the village or is the dust that I bring from the contaminated area on my dozer wind blown over the fence onto their trucks. I'm sure the experts have worked this out, no worries. What of the wind storms I suppose there is some way they are made to skirt the village?

Back at the Village all is serene. The mess is filled with backslapping and good cheer. The tests have been a great success, surely royal honours will follow.

And so it continued until the four bombs had been exploded, two on the towers, one from the air and one from ground level.

Once all the instruments and equipment had been recovered from the forward area there was no necessity to keep the Field Squadron at Maralinga. Most of the navy and air force had by now left and it was with little or no regrets that we trooped down to the airfield to board the awaiting Hastings aircraft. The threatened kit inspection didn't take place so one can but wonder how many radio active souvenirs were packed away in our large aluminum trunks.

Ken Menro

My Story

My name is Paul, I joined the Royal Air Force in 1956 at age 17 and 7 months, after basic training and trade training I was posted to RAF West Raynham (now closed) in Norfolk until early 1958 when I was posted to Christmas Island.

After being kitted out with KD we travelled to Stansted airport where we boarded a BOAC DC 7 C aircraft for New York, our flight took longer than planned due to heavy head winds, but we arrived safely and were transported by USA airforce buses across New York, expecting to go to a service base, but no we went to the Governor Clinton HOTEL a massive multi storey hotel opposite Idlewild railway station. We were supposed to only stay overnight but our plane was delayed and I think we stayed 4 nights in luxury good food an endless cup of coffee and although we had little money we were able to walk the streets and see New York. Eventually we went to the airport, to find Flying Tiger Airlines usually flew freight and so there were no seats only timer benches to sit on, we boarded our Super Constellation and taxied out to the runway, but on pre flight checks there was a load banging noise from one of the engines, so we taxied back, expecting to be taken off, but instead a mechanic, took off the engine cover and proceeded to hit it hard with a large hammer, closed the cover and off we went to Sans Francisco over the Rocky mountains and expecting to see an engine fail or fall off, but we arrived safely, stayed over night in a motel and then on to Honolulu a brief fuel stop and down to Christmas Island.

The first night spent in a transit tent 3 bunks high, there was no provision for drinks of water or anything outside of meal times, I remember buying a tin of Pineapple juice but that did nothing to take the thirst away, the following day we were grouped into 4

and given a tent to erect, ours was tent E15 consisting of two Corporals "Blue" and Air Electrician and the other was Derek Harrison a Ground electrician like myself (he looked after the Airfield lighting) and John an SAC air electrician.

Our daily routine was breakfast 6am bus or truck to the airfield service ground equipment until 1pm and then bus or truck back to main camp for lunch, we did have cold water stations available during work hours however apart from tea time, around 5pm there was no drinking water available

Living in tents was OK cold water for showers and shaving, which could be quite warm depending on the time of day, chemical toilets hessian on three sides but otherwise no privacy, lots of free time in the afternoon, soccer, cricket and swimming, but no one told me Puffer Fish were dangerous.

Our highlights were when the new guys arrived and we watched as all these WHITE people came down the steps, because by now we all had deep tans, the hostess were the highlights, as apart from two elderly WVS ladies the Island was just men. One afternoon, one of the PAN Am Hostess asked why is there always a big crowd when we arrive and depart? We explained, we just liked to see ladies, so as she closed the she said "hey Guys have a good look" and she did a pirouette, which resulted in an almighty Cheer.



Paul going Native outside his tent

You have received many reports of the H bomb and A bomb tests, mine would be likewise. Up early, breakfast, transport to the port put into areas marked out with ropes and wait until told to board the landing craft, not sure what rank the Navy guy on the landing craft was, but we all saluted him, saying Good Morning Admiral, we stayed on the landing craft until the Valiant was in the air and then returned to our marked areas, we watched as the plane moved across the clear blue sky, and my thoughts were, (the Navigator only need to be a little out with his calculations and the Bomb will land on us) we were told to sit with our backs towards ground Zero and close our eyes, put the palms of your hands over your eyes, do not turn to look at the blast until told it is safe to do so. The tannoy said the weapon has left the aircraft and the count down until the Flash, a blinding light where even with your eyes shut and covered by your hands, it was just so bright and you could see the bones in your hand, just like an X-ray, the noise and the blast, is it any wonder I have hearing loss. With the test over it was transport back to main camp and the rest of the day off, which was a laugh as there was nothing much to do.



Electrical and Instrument section under Fit Lt Paxton

sitting far right **Sgt (Rosie) Russel** behind him **Cpl Colin Moules, Harry, Tony Renolds, Roy Clutton**, two I can't recall their names, then myself not sure about the next guy, but then "Blue" miss two and then **Cpl Derek Harrison**, miss one more and then **John** from our tent.

Routine work until the next test, we did manage to get a couple of trips to the port to collect distilled water for the batteries and I did learn how to drive a land rover.

The A bomb tests were by far quieter and less bother, almost like a damp squib after the H bomb.

Yes I was at the Cinema the night the VIKINGS was shown and as per other stories, when the old hag called on Oden during the storm, we were all drenched in a cloud burst in the open air cinema.

We had protective clothing, KD shirt and shorts long socks and RAF issue shoes. We had a good Sergeant called Jack, an air Electrician who would come down to the tent after lunch and encourage us to go for walks along the beach, also organised a truck and food so we could go out around the island to explore, found lots of lagoons some of which were connected by under water tunnels, hermit crabs by the million, which disappeared as you approached, only to pop up behind you, or that's how it seemed.

And Land Crabs, huge, one large claw which could be self bitten off if they thought they were in danger, and they smelt really bad when dead.

I always felt sorry for the guys that worked in the cook house, while it was hot enough working outside, it would have been much hotter in the kitchen, the food was basic but we did not go hungry, although Sunday lunch was always the same, Turkey breast with vegetables, not the fresh sort, either frozen or re constituted potatoes, followed by Pineapple and ice cream, could have been worse. Outside the mess hall was big containers of hot water, which we could wash clean our metal dinner trays, however for some reason the water was cold and greasy, so we had to rub the trays in the coral dust and wash off with sea water, not the most hygienic but no one seemed to mind.

MOD always said there was no danger, but when you think that Canberra aircraft flew through the cloud gathering samples from the cloud, then they landed and were washed before setting off for the UK, did no one think that when they went through the

cloud particles of radiation material were attached to the plane and when it landed some radioactive dust could very easily have dropped off on the runway and taxi ways.

Our flight home was by RAF Britannia aircraft, we were late leaving as two army guys had slept in, so instead of going to Honolulu and then the on to Montreal we missed Honolulu and went straight to Montreal (Canada) from being on the equator with temp around 35 degrees to Canada with lots of Snow and MINUS 32 degrees.

I receive my medal, not from the King as original announced, but by 2nd class mail.

Originally my surname was King, service number E 4188745 but on getting married, by Deed Poll changed to Stevens-King to incorporate my wife's maiden name.

I mentioned Cpl Derek Harrison in the beginning of this story and after 65 years with the help of the Oxford Mail and my Daughter who saw the article we are back in touch. So after more than 65 years the memories are still fresh. I wonder how many are still alive?



Exposure Spring 2023 Editorial

A round up of what's been
happening at the CHRC

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Findings from the Veterans Chromosomal study

An overview of the study from the CHRC

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Exposure Editorial Spring 2024



The Chromosomal Study, which looked for chromosomal evidence of historical radiation exposure in British veterans, was published earlier this year. Lawrence et al, was the 3rd publication produced from The Genetic and Cytogenetic Family Trio (GCFT) study, which as many of you are aware, seeks to examine if there is any evidence to support there being a genetic legacy from participation at historical British nuclear test sites.

An overview of Lawrence et al., 2024 is published in this Edition of Exposure in the article titled 'Findings from the Veterans Chromosomal Study'. In brief, we find no difference in the amount of chromosome aberrations in the cohort of nuclear test veterans compared to control veterans, which tells us that for the veterans sampled in this study, we see no evidence of historical exposure to ionising radiation.

This finding is different to the increased occurrence of chromosome aberrations in New Zealand (NZ) test veterans reported by Wahab et al, 2008 (The Rowland study) using the same chromosomal assay. As highlighted in Lawrence et al., further understanding of the process for analysis and reporting are necessary before clarity on the disparity between our two studies can be reached. Instead, our findings are more consistent with French NT veterans, reported by Gregoire et al, 2018.

Overall therefore, we find no evidence to support the notion that, as a cohort, the nuclear test veterans sampled in this study were exposed to radiation at or above the detectable limits of this study.



Steve Bexon / BH Associates

We hope this work reassures veterans and their families and reduces the concern that being present at test sites and witnessing nuclear operations, irrespective of role or duties undertaken, resulted in significant radiation exposure. In reporting this, we do not preclude the possibility that our findings reflect the sampling of veterans who remained alive into their 80s, nor does it infer the same or different outcome would have been seen if veterans who have since passed away had been examined.

It is worth saying that no individual study, including the GCFT study, will be able to answer the health questions of the nuclear community once and for all, what we are generating here are incremental contributions towards a better understanding.

I would like to finish by reminding you that all our peer-reviewed manuscripts are available in different formats through www.chrc4veterans.uk. Please also refer to our 'Basic Information' series which is available as either flip-books or interactive versions <https://chrc4veterans.uk/knowledge-hub/>

Thank you again to all our volunteers who have contributed to all of our projects and published works. CHRC staff are contactable via email at CHRC@brunel.ac.uk.

Dr Rhona Anderson,
Director, CHRC

Findings from the Veterans Chromosomal study

Veterans of the British nuclear testing programme represent a population of ex-military personnel who had the potential to be exposed to ionising radiation through their participation at nuclear testing sites in the 1950s and 1960s. Questions as to whether veterans could have received sufficient radiation exposure to cause harm and, worry about potential (inherited) legacy in descendants of any historical radiation exposure, remain.

Research undertaken to look for chromosomal evidence of historical radiation exposure in British nuclear test veterans, was published in Journal of Radiological Protection in January of this year. In an effort to share our findings as widely as possible, we summarise our main findings here while the full publication can be accessed from this link Lawrence et al*, 2024 where it is freely available for any reader.

* Lawrence, K. J., Scholze, M., Seixo, J., Daley, F., Al-Haddad, E., Craenen, K., Gillham, C., Rake, C., Peto, J and Rhona Anderson, R.M (2024). M-FISH evaluation of chromosome aberrations to examine for historical exposure to ionising radiation due to participation at British nuclear test sites. Journal of Radiological Protection, volume 44 (1), 01150.
<https://iopscience.iop.org/article/10.1088/1361-6498/ad1743>

Potential for exposure to ionising radiation

External radiation dose estimates recorded at the time of the nuclear tests suggest that exposure would have been limited for the majority of those present. Certain 'special groups' of veterans, identified by the UK Ministry of Defence, were deemed at risk of receiving a higher exposure such as those veterans who were involved in air plume sampling or cleaning of 'sampling' aircraft. Many of the personnel present at test sites were involved in support roles, such as construction or transport, although additionally may have been involved with the tests, including by working in contaminated areas following each test. Such roles may not have been accounted for by the formal categorization into a special group.

Fallout from atmospheric tests (e.g. GRAPPLE series in the South Pacific) and, from radioactivity which was dispersed into the environment during the Maralinga experimental programme in South Australia includes long-lived radionuclides such as Caesium-137, Strontium-90, Uranium-235/238, Plutonium-239, which if inhaled, ingested or otherwise internalized within the body would contribute to chronic radiation exposure. There is no public record of any historical **internal dose** measurements.

Why study veterans' chromosomes?

Ionising radiation exposure can lead to damage to chromosomal DNA which can result in the formation of chromosome aberrations. Fluorescence in situ hybridisation (FISH) based techniques such as M-FISH, which 'paints' individual chromosomes different colours, enables the detection of structural chromosome aberrations such as reciprocal

translocations (see Figure 1 overleaf). The measurement of these aberrations can be used in the assessment of radiation exposures.

Damage to DNA (chromosomes) occurs throughout life from a range of normal cellular, lifestyle, medical and occupational sources, meaning the occurrence of reciprocal translocations in all of us will accumulate with age.

The detection of reciprocal translocations in individuals therefore reflects a lifetime of 'all' of that person's exposures. Complex chromosome aberrations are another type of chromosome aberration which involves more breaks in multiple chromosomes compared to reciprocal translocations. These aberrations are generally thought to arise rarely in general populations but can be seen after exposure to low doses of particular types of radiation, such as α -particle-emitting radiation.

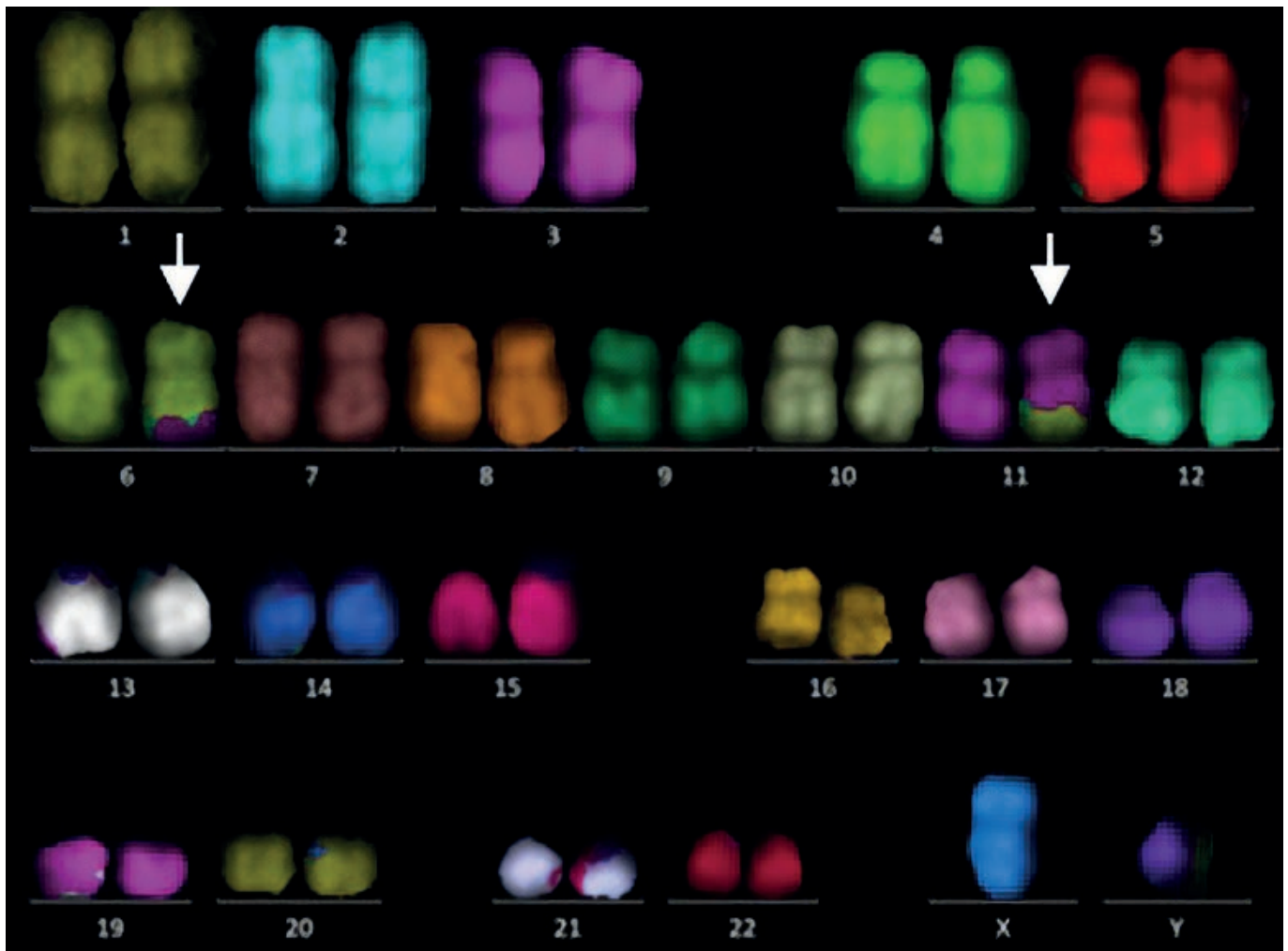


Figure 1

What was the aim of this research?

The Genetic and Cytogenetic Family trio (GCFT) study is the first study to obtain blood samples from a group of British nuclear test veterans and their families for the purposes of identifying genetic alterations in their descendants which may have arisen due to historical exposure of the veteran father to ionising radiation (for details on participant recruitment see Rake et al, 2022).

<https://iopscience.iop.org/article/10.1088/1361-6498/ac6e10>

The aim of this part of the GCFT study was to analyse veterans blood samples for chromosome aberrations using the technique of M-FISH. The amount (frequency) and type of chromosome aberration detected

in a cohort of test veterans was compared to that seen in control veterans who were not present at nuclear test sites.

Specific questions addressed in Lawrence et al., 2024:

1. is there any chromosomal evidence of historical radiation exposure in the nuclear test veterans?
2. is there any relationship between the occurrence of chromosome aberrations in veteran fathers and the previously reported germline mutations detected in their adult child (Moorhouse et al., 2022)?

<https://www.nature.com/articles/s41598-022-14999-w#citeas>

What did the research involve?

We examined for chromosomal evidence of historical radiation exposure in 48 nuclear test veterans using M-FISH and compared this with a matched group of 38 control veterans who were not present at nuclear test sites.

This involved identifying chromosomal aberrations, if present, in each veteran sample and classifying these according to the type of aberration. This resulted in the amount (or frequency) and type of chromosome aberration to be determined for each veteran.

After completion of analysis, the samples were decoded to allow for a comparison between test veteran and control veteran cohorts.

Comparisons were also made for veterans allocated into previously defined (Rake et al., 2022) 'exposure rank' groups as a proxy for radiation dose and, according to the geographical location of tests attended (Christmas Island, Maralinga, on-board ship).

The M-FISH data was linked, where possible, with the whole genome sequence (WGS) data previously published in Moorhouse et al., 2022 to examine for any relationship between the occurrence of chromosome aberrations in the veteran father and the newly arising germline mutations detected in their adult child.

What did we find?

In total, 9379 and 7698 cells were analysed using M-FISH from 48 nuclear test and 38 control veteran samples, representing veteran servicemen from the Army, RAF and Royal Navy.

We found chromosome aberrations, including reciprocal translocations and complex-type aberrations, in both nuclear test and control veterans' samples. Overall, we found no statistical difference in amount of any chromosome aberration type between the nuclear test and control veteran cohorts.

We found the frequency of reciprocal translocations to be consistent with what might be expected based upon veterans age.

We did find a higher average occurrence of complex chromosome aberrations in a very small subset of nuclear test veterans who had previously been identified as having a higher likelihood for radiation exposure (present at Maralinga and/or present on HMS Diana).

We also observed a higher than expected occurrence of complex aberrations in a number of control veterans.

The M-FISH data was integrated with the de novo germline mutation data previously reported (Moorhouse et al., 2022) for all families where both M-FISH and WGS data was available (28 control and 30 nuclear test families). We found no relationship between the overall burden (or amount) of chromosome aberrations in the veteran father and the germline mutation frequency in their child.

A weak statistical relationship was observed in a small number of families, representing both control and nuclear test veteran, between the veteran father's occurrence of complex chromosome aberrations and the germline mutation sub-type, SBS16, previously reported in Moorhouse et al., 2022.

Self-reported information on clinical conditions of veterans' children or grandchildren was also considered. However, no relationship between chromosome aberration burden in the veteran father, germline mutation frequency and self-reported occurrences of adverse health in descendants was seen.

What does this mean?

Overall, we find no chromosomal evidence of historical radiation exposure in the cohort of British nuclear test veterans sampled here. This is different to the findings and interpretation of the Rowland study of New Zealand test veterans.

Our findings should offer reassurance to veterans that attendance at nuclear tests sites per se was not associated with detectable levels of exposure to radiation.

The higher average occurrence of complex chromosome aberrations which was seen in a very small subset of nuclear test veterans may reflect chronic exposure to internalised long-lived radionuclides from radiation fallout.

A contribution from medical sources e.g. diagnostic examinations cannot be ruled out for both control and nuclear test individual veterans.

SBS signatures are detectable 'patterns' of mutation which remain in the DNA sequence after DNA damage and repair processing. Different SBS signatures are therefore thought to reflect the different types of exposure the cell (and therefore that individual) may have experienced in the past.

The observation here of a weak statistical relationship between complex chromosome aberrations in (both control and nuclear test) veterans and SBS16, may represent a DNA mutational pattern consistent with radiation exposure in the veteran father which is detectable in the germline. This remains to be established.

A small number of families with higher SBS16, representing both control and nuclear test, self-reported adverse health in one of their descendants. Overall, though we saw no relationship between veteran's chromosome aberration burden and germline mutation frequency in families who reported a descendant health concern, suggesting the reported health issues in these families are unlikely to be associated with historical radiation exposure.

“We are; we are really interested!”

- Remember Together introduces young people to nuclear test veterans and their stories

During the second half of 2023 Big Ideas worked with young people in each of the home nations to interview a nuclear test veteran for the Remember Together project.

Remember Together films used the principles of co-production with young people. The Big Ideas team shared historical information with young people prior to filming. They reflected and responded to prepare their questions for the nuclear test veterans.

The films capture these meetings, with authentic intergenerational conversations. CEO of Big Ideas, Dr Virginia Crompton, who is a Senior Research Fellow at the Institute of Historical Research, University of London, reflects:

“

It is a conversation between different generations that give these films their emotional heart and power.

In my view, there is always a place for story telling in history.”

Find out more here <https://www.big-ideas.org/remember-together-nuclear-test-veterans-take-part/>



Big Ideas

From the first, introducing this little known chapter in British post-war history to young people has been the aim of Remember Together. A day of schools' events was held, teachers across the UK attended with their classes bringing together, with a report on BBC Breakfast on 3 October bringing this story to a wider audience.

<https://twitter.com/VeteransGovUK/status/1709151803504214190>

The Education lead at HMP Haverigg was watching, and contacted the team for a special digital event for their veterans group, according to the Head of Chaplaincy Rev Fr Robert Halshaw the group, “were captivated and moved by what they saw and heard.”

Coming up is a series of events with Age UK groups, and a schools day put together by our wonderful work experience group from local secondary in Newham, School 21.

Watch the taster film here and please contact us using the buttons below for access to the films and resource pack as well as small scale funding to hold your own event.

Get in touch remembertogether@big-ideas.org



With warm thanks to Labrats International, the British High Commission in Fiji, PDI Media and to everyone who has supported this project especially to the Office for Veterans' Affairs Nuclear Test Veterans Community Fund for funding Remember Together.

Dates for Your Diary 2024



Nuclear Community Convention 2024

Full details are on P04 of this issue



All Tests Reunion 2024

Pontins, Sand Bay, Weston-Super-Mare
The adult-only reunion brings together Veterans
and their families for a week-long holiday.

For details call **0203 286 3988**
or visit: www.labrats.international/atr



National Atomic Veterans Awareness Day (NAVAD) 2024

National Memorial Arboretum (NMA) Alrewas.



National Service of Remembrance 2024

Cenotaph, Whitehall, London.

If you have an event planned in 2024 and would like to let the readership know about it, contact us on **0115 888 3442** and leave a message or email editor@exposure.press



Send us your Story

If you have a story that you would like to share and be published in exposure magazine then get in touch with us.

If you have something to say that would be of interest to our reader then why not write about it and send it to us. It doesn't necessarily have to be about your service or the tests, any experience or information you think would be interesting to the community would be welcome.

If you are unsure or need help or advice please call:

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Please clearly leave your name and telephone number and we will get back to you.

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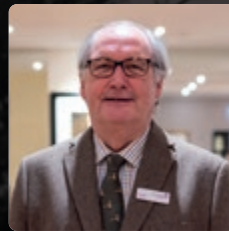
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