

NRAO ONLINE 17 Tizard Visit, August 1943

TIZARD'S visit to Australia 1943¹

In 1943, the Australians requested that advice from Sir Henry Tizard would be helpful in various matters involved in the aircraft industry and the use of radar, especially RCM, Radar Counter-Measures. Memories of Tizard's cogent advice to Madsen in the first months of 1940 were still prevalent. Clark (1965, page 353):

... [B]y the summer of 1943 (northern summer, July-August), the Australians had good cause for thinking that they could make use of a man such as Tizard ... [There] was an uneasy lack of satisfactory inter-Service cooperation [in Australia] ... Australia had a greater need than the UK to wage war with combined operations and little time to organise. The situation was therefore one in which Tizard's advice would be of particular value ... [Sir Henry Tizard's brief] was "to advise the CSIR generally on scientific development in Australia and particularly on their scientific work in relation to the Pacific war" ... To many Australians he appeared to be the man with the magic wand who could conjure results from very little indeed.

Tizard arrived in Brisbane on 28 August 1943; he was met by Rivett (White was already in the UK, ESM_ 9.7, having left the US on 21 August). Tizard would remain in Australia for 4 to 5 weeks; his exact departure date is uncertain. The purpose of his visit was reciprocal: he sent information to the Air Ministry about Australian research and advised the Australians on numerous topics.

One of the first tasks that Tizard faced in Brisbane was to sort out a major communication problem. He found that when he went to an initial meeting in Brisbane at GHQ (General Headquarters of the US and Australian Military) the vast documentation on Operations Research effecting RCM from the UK had not reached the military authorities in Australia. No technical or operational documents describing the experience on radio and radar countermeasures had ever reached Brisbane. Tizard discovered that the UK Military sent these

¹ Sources for the Tizard visit are the detailed account of R.W. Clark in his biography, *Tizard*, (Clark, R. W., & Waterhouse, R. (1965). Tizard. *Physics Today*, 18(8), 49) and Evans (Evans, W. F. (1970). "History of the radiophysics advisory board 1939-1945." Melbourne (Australia): CSIRO, 233 p. 215). In addition the Documents (from Evans, RAB, 1970) No. 37, 45 (Rivett to White 21 August 1943), Document 47 (Tizard to Rivett, a report of his visit 28 September 1943) and Document 50 (Rivett to White 18 November 1943), Tizard remained as an advisor to MAP and Chairman of the [UK] Aeronautical Research Committee after the Tizard Mission activities of 1940.

to RPL in Sydney. "... [A] mass of useful data was languishing in the RPL [in Sydney] whose staff did not appreciate its value to operational units." They had failed to pass this on to the Australian Military.

Tizard addressed RCM matters in detail (Clark, p. 358):

... [A]t the RPL he laid down the best lines for carrying out inter-Service radio counter measures, recommending that operational flights with flying laboratories should be made over such strongly defended areas as Truk Island and Rabaul. Only thus, by probing the most strongly defended Japanese areas, by watching for new frequencies ... would it be possible to keep one step ahead in the evolving radio [and radar] war.

Tizard was also invited to attend the 29th meeting of the RAB (17 September 1943) to give advice on expanded RCM. It was a complex problem, involving coordination between radar and the communication services in the three branches of the Australian Services and their US counterparts.

On 28 September 1942, Tizard wrote Rivett from Melbourne (CSIR Head Office) with a summary of his frustrating experience in Australia with RCM issues². He found immediately that although coordination between the Australian Army and CSIR and the US Forces was satisfactory, the cooperation with the RAAF and RAN was disappointing. "As far as the Army is concerned, I think there is every chance of getting them to make fullest use of CSIR in the right way, provided ... RPL does not act too often in an independent manner ..."

But the Air Force (RAAF) was a special problem. Tizard had discussed RCM with this group in Brisbane and concluded that "you will never get really good cooperation on the general operational problems from the RAAF while [their] present organisation remains in being."³

Tizard ended with strong advice for Madsen and Rivett:

I repeat that the RPL will have to go slow on this [interactions with the Military on operations research], in spite of their very natural eagerness. I am afraid of them stirring up irritations that already exist. All three Services are up against them to a varying extent. I think the only way you will get the RCM right is to agree to induce the

² Tizard left about this time to return to the UK; he was back in the UK in early to mid-October.

³ This may be an oblique reference to problems collaborating with the Director of Radar, Wing Commander Pither. However, Pither was to go to the UK on an exchange with the RAF within a few months, October 1943, returning December 1944.

Americans to consent to a formation of a joint committee, and I am very much afraid that the good work of the RPL will fail to have its full effect on the Australian Services unless the human problems are solved ...

Clark (1965, Tizard, p. 359) summarised the visit to Australia:

Tizard's work in Australia had been a success, as was his post-war work there, partly because he worked at the Australians' own level of innocence and honesty. No-one could claim that they lacked at this period their own fair quota of personal and political intrigue. But it was bred less surely into the system than it was in Britain, it was less inevitable, and in spite of it there was an atmosphere about high-level negotiations to which Tizard warmed.

Then on 18 November 1943, Rivett wrote White (in the US for the second time on his US and UK trip) informing him of Tizard's negative opinion concerning collaboration with the RAAF and the RAN:

... [But] the plain fact of the matter is that, while [collaboration] is fairly satisfactory so far as the Army is concerned, it is far from being so in those matters into which the RAAF and the RAN enter. The relations between our American Allies and the [Navy and Air Force] are quite different from those which exist with the Army. One of the things which Tizard was continually up against during the course of his visit was complete inability to secure from [RAN and RAAF] accurate information concerning operational needs [blamed by these two Services on the lack of information from the US Forces].

On 8 December 1943 Rivett wrote to White, just returned to Australia from the US:

Of the correctness of your view that the CSIR Laboratories can contribute a very great deal indeed to the success of the Pacific War, there can be no doubt at all. When Tizard was here, we had several discussions about the best way in which we could develop our usefulness. Much ... depends on our power to convince the Services that we really can contribute something; they seem just a trifle slow in appreciating this possibility.

The Australian's interactions with Tizard were to be important but hardly decisive in 1943. But afterwards in the 1950s as the Giant Radio Telescope (later the Parkes telescope) was being planned and financed, Tizard's advice was invaluable, assisted by his friendship from his former Tizard Mission associate E.G. Bowen (Chapters 27 and 29).

Tizard's Comments to Rivett in 1944 concerning the Future of RPL as the War Ended

Tizard⁴ wrote Rivett on 8 August 1944 “about reinforcement of your Radio Research Group at Sydney” (possible personnel from TRE to visit Australia). His forecasts about the coming end of the Pacific war were prescient:

A lot has happened since I was in Australia [August-September 1943], and Sydney is now further off from the war than ever. Also the Japanese war is going much more quickly in the right direction than many people thought, and I flatter myself that my own forecasts have been pretty accurate up to now. The result is that Sydney is about twice as far from the Japanese war as TRE Malvern is from the war in Russia, and I cannot see how TRE could be of great use to the Russian war by staying at Malvern. It makes me very doubtful whether the Sydney group now has a great part to play in the war against Japan. It is doing good work now in co-operation with the RAAF: can it do much more?

Broadly speaking, it seems to me that what one has to do against Japan is to use what already exists, or what is in the early stages of production, in the right way. The scientific war is, to all intents and purposes, over, unless one is being much too optimistic. Where the scientist will now come in, is in helping to deal with problems in detail as they arise when equipment is used against the enemy; so the scientist wants to be as near the front line as possible, in order to know what the problems are. This means the right kind of operational research, and enough of it.

I understand that a good many men at T.R.E. would jump at the idea of going to Australia after the European war is over, if they felt that they would be employed when they were there on problems of importance to the Japanese war. I could not give them that guarantee now. Could you?

If you are thinking of strengthening your radio research so as to deal with post-war problems, then I should have a good many suggestions to make, but I am not sure that the TRE people want to go to Australia for post-war work.

Thus, Tizard was stressing to Rivett that he could not depend on the UK to staff the post-war RPL. However, two of the key personnel of Pawsey’s radio astronomy group in the 1945-1950 era were two young men from the British Royal Navy: Paul Wild and John Bolton.

⁴ Evans (1970, RAB), Supplementary Document 57.