

# **Radar Detachments on the West Coast of Canada**

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Shortly before Japan carried out an aggressive attack on Pearl Harbor that drew the Americans into war, the United States government approached the Canadian government with a proposal to use electronic aeroplane detectors (radar) to extend the umbrella of protection north along the west coast of British Columbia. The cooperative agreement was based on Canada providing base sites along the west coast of the province, constructing the buildings, and furnishing all the necessary materials and supplies to operate each base. The Americans would then provide the detection equipment and send trained personnel to instruct the Canadian operators. An agreement of this nature would complete the chain of radio defence already in place on the west coast of the United States and on the coast of Alaska.

Prime Minister MacKenzie King acknowledged that the adoption of an "early-warning" system was necessary if Canada hoped to protect the vast length of her Pacific coastline. The Canadian Section of the Permanent Joint Board on Defence followed the Prime Minister's lead and ruled that the United States War Department's request to install the aeroplane detectors be approved. The Board issued a comprehensive outline for their conditions:

That the United States detachments (approximately 50 of all ranks for each detector) are to be under the command of Air Officer Commanding, Western Air Command;

That Canadian technical personnel be attached for the purpose of instruction to each United States detachment numbers, and times to be decided jointly by the Air Officer Commanding Western Air Command and the officers commanding each United States Detachment;

That the RCAF will take over the handling of the detectors as soon as the Canadian personnel are adequately trained, and the Air Officer Commanding Western Air Command is prepared to assume the responsibility;

That RCAF Service Corps will provide subsistence for United States personnel on the usual accounting basis;

That Canada shall provide the accommodation required in accordance with arrangements made between the Air Officer Commanding Western Air Command and the General Commanding Second Air Force United States Army. Such accommodation to be provided from Canadian or United States sources, in whichever may produce the quickest results, but with ownership remaining in Canada.

Once the agreement had been ratified, two sites were initially chosen at a projected cost of \$125,000.00 for each detector station; one at the northern tip of Vancouver Island at Cape Scott, and the second near Mount Arrowsmith on the Nanaimo-Alberni road. It was obvious from the start of this plan that more than two detector stations were needed. The RCAF ordered an investigation of other possible sites and prepared to expand the number of detachments.

Group Captain AH Hull ordered his staff at Western Air Command in Victoria to undertake an investigation of radar detection sites in the Queen Charlotte Islands. At the Department of National Defence for Air in Ottawa, Wing Commander DG Williams reviewed the group Captain's recommendations submitted on June 18, 1942:

1 - A party consisting of S/L GM Fawcett, F/L RD Hansen, and F/O Robinson, of the Works & Buildings Branch attached to the Works Construction Unit, have made a thorough investigation of the (Queen Charlotte Island) sites. The purpose of the investigation was to ensure that the sites were suitable for the equipment which is to be installed and also to ensure that the necessary access and camp construction was feasible from the point of view of Works and Buildings.

2 - **Langara Island:** the site seems be entirely satisfactory from the technical point of view. The station, when installed, will see well into Dixon Entrance and straight down the West Coast of Graham Island. The camp may be located in a natural hollow close to the operations site so that no difficulties regarding high voltage power transmission will be encountered. The only exceptions to this submission is the building site, which, it is felt, would be desirable to change in order that high voltage power transmission would not be required. In view of the urgency it is felt now that the whole job should be undertaken by the Number 1 Works Construction Unit, who are ready to commence work. Urgently required from Ottawa is the authority to proceed.

3 - **Buck Point:** the site which was originally intended for a station, at about the entrance to the Skidegate Channel, appears to be unsatisfactory because of the difficulty in building roads. The only harbour suitable for serving such a station is Armentieres Channel, between Chaatl Island and Moresby Island. This, however, is 8 miles airline from the proposed site and, moreover, the land is so steep that it is considered that any road to the site would be at least 12 miles long, and a minimum of three large trestles would need to be constructed. It is the opinion of the Works and Building representative that such a road would cost a minimum of \$30,000.00 per mile and take six to eight months to build. No other access is available due to the steepness of the land and the heavy swell which rolls in from the Pacific continuously. It is therefore intended to put this station on **Marble Island**, which lies about three or four miles off the entrance to Skidegate Channel. This site will be quite good from a technical point of view and the station, which will have a height of about 425 feet, will have a good view up and down the coast. Before any work can proceed, two small boat landings, suitable for beaching a small scow and a small boat, must be constructed. These must also be provided with some sort of breakwater to keep the ordinary swell out. If these two landings are provided, it is considered that access to the island could be available at all times, except during the most severe storms in the winter - which are said to last for two or three days at a time. When landings have been provided, an aerial tramway would have to be erected in order to get to the actual site, which is on top of a knoll. The knoll descends on all sides in the landward direction, at a gradual slope to a cliff approximately 100 feet high. The aerial tramway will have to ascend this cliff and continue up the gradual slope to the site. An

alternative approach would be to build a road from the landing around to the seaward side, and ascend the gradual slope which exists on that side. It is considered by the Works and Building representative that the aerial tramway would be cheaper. No water exists on the island and it would therefore have to be distilled by means of a water distilling apparatus which could be obtained locally. All these serious disadvantages are considered to be easier to overcome than the large disadvantage attached to Buck Point. Moreover the Works and Construction Unit consider this station (Buck Point) to be beyond their scope and if it is decided to go ahead, it will have to be undertaken by a contractor.

4 - **Cape St. James:** located at the southern end of the Island appears to be one of the easiest sites, in that there is no clearing to be done and certain works already exist which could be made use of. The site itself is technically the worst of the three because it is a cliff-edge site and consequently will have gaps in the vertical polar diagram. The height however is about 350 feet and so the gaps should be quite small. If the station were moved back onto Kunghit Island, though, there would be a blind spot about 30 degrees wide in the middle of the sweep. It is considered that such a blind spot would be a very serious drawback and in the present state it could not be supported. The lighthouse on the island is only manned by one keeper and is not considered by the Department of Transport to be a very important light - prior to the war consideration was being given to doing away with it. As it is, the light is useless for a large part of the time because it is in the clouds and there is no fog horn provided. After discussion with the Department of Transport Agent in Prince Rupert, it was concluded that they would accept a proposal for either allowing the Service to take over the light, or to put in an unwatched light tower down on another island. This would leave the light keeper's house for the Service, and the aerials could go on the present site of the lighthouse. The existing boat landing and aerial tramway would have to be improved but this would not be too expensive. Also, no water exists on this island and would have to be distilled. Moreover it is recommended that this station be heated by either coal or oil since wood will be scarce. If the Department of Transport is not open to either of these suggestions there is still room to put the aerials, operations house, and power house on the top of the island. The aerials would have to go in front of the light but they would not interfere with the light, except at large angles of depression. The remainder of the camp would go down beside the boat landing where a certain amount of shelter is to be had.

5 - It is strongly recommended that, with the exception of Marble Island, these stations be undertaken by the Works Construction Unit under S/L Aitkens. They are already doing a very good job in the fastest possible time.

In July 1942, Air Command Headquarters issued an order which established ten (RU) Radar Detection Units in strategic location on the coast of British Columbia: No. 9 RU, Spider Island; No. 10 RU, Cape Scott; No. 11 RU, Ferrer Point; No. 33 RU, Tofino; No. 13 RU, Amphitrite Point. Two radio detachments were stationed closer to the major centers of Victoria and Vancouver: No. 7 RU, Patricia Bay, and No. 8 RU, Sea Island. The sites chosen in the Queen Charlotte Islands were based on Group Captain Hull's report: No. 26 RU, Langara Island; No. 27 RU, Marble Island; and No. 28 RU, Cape St. James. The Radar Units were manned by up to 70 RCAF personnel under the command of an officer of Flight Lieutenant rank.

With the exception of Patricia Bay and Sea Island, the radar units were positioned on sites which commanded an unobstructed sweep of the open ocean. RCAF Radio Detachments found themselves perched on wind swept pinnacles of bare rock on the edge of the wild and often angry Pacific Ocean. High wind, icy rain, dense fog, and the continual bombardment of pounding waves heightened the challenge of maintaining communication with the outside world.

No one visited the coastal radar units unless they had a good reason. But if necessity brought anyone to these remote stations, it only took one trip in to appreciate the difficulty and the danger that detachment personnel dealt with every day. The arrival of the RCAF supply boat was always the highlight of the day, although unloading it was one of the greatest challenges of life on the rocky outposts. Even in calm sea conditions, transferring the supplies from the boat to the shore was a hazardous job. But the whims and moods of Mother Nature had a habit of changing the schedule, and time after time personnel existed on emergency rations because the supply boat could not reach them.

Airman Cy Luce, a clerk accountant at RCAF Coal Harbour, used to go in to Cape Scott on the supply boat to deliver the pay envelopes at No. 10 Radio Detachment:

"There were 50 guys there. They would come out on the beach in January and yell out "Did you bring any beer?". I generally brought back all the money I had taken up - they didn't want it - there was nowhere to spend it.

One guy was so excited about getting leave that on the way out he slipped, and fell in the water. He was lucky we could fish him out of the water - then he had to strip and dry out in the hold of our converted Japanese fish boat."

Luce philosophically regarded the trip as a "work diversion"; the boat often ended up waiting out the weather in Bull Island on Hope Island, and while at sea there was the added bonus of extra rations.

Many of the coastal supply boats were requisitioned vessels operated by the Marine Section of the RCAF. One of these vessels, the 70 ton seiner M-427, BC Star, disappeared and no official explanation was ever recorded. On July 23, 1943, the BC Star, manned by 10 RCAF crewmen, and carrying six passengers, left RCAF Station Bella Bella enroute to No. 28 RU, **Cape St. James**, with a second port of call at Rose Harbour on Kunghit Island. If the weather cooperated the Star would be back in Bella Bella within the week.

By August 3rd, Number 28 RU was running short of construction material and supplies. The Radio Operator contacted RCAF Station Bella Bella and inquired about the arrival of the next scheduled supply boat. This was the first indication that the Star was in trouble. For security reasons, arrivals and departures of the Star were not broadcast, and the ship maintained strict radio silence. With no SOS to describe the search boundaries, there was a large area to be covered. In the intense and lengthy search, little trace of wreckage was found, or any conclusive evidence to explain the tragic loss of the ship.

The usual, unvaried routine at No. 11 RU, **Ferrer Point**, on Nootka Island, was disrupted on the evening of December 18, 1943. Security guards on duty at the docking area watched in disbelief as a barrage of gunfire strafed the surface of the water a short distance from shore. Western Air Command was immediately notified and aircraft were dispatched from both Coal Harbour and Tofino to intercept the attackers. A thorough sweep of the area produced no evidence of a Japanese submarine, and the aircraft returned to their stations. It was discovered later that the whole disturbance was caused by a passing Allied freighter. The freighter's Captain, assuming they were out in the middle of nowhere, ordered his crew to do a little gunnery practice. The incident also gave the startled airmen at the Radar Station some practice in responding to a general alarm. Fortunately, no damage was done.

In the Queen Charlotte Islands, RCAF Station Alliford Bay was the life-line for the three RU Detachments in the area. The Station's supply boat brought rations, mail, and medical assistance, and RU personnel lucky enough to get leave boarded the boat and travelled to Alliford Bay on the first leg of their journey. The tie between the Flying Boat Station and the Radar Units was mutually beneficial. Anti-submarine patrols were limited to flying in daylight hours, and bad weather often interfered with the regular patrol schedule. These factors created long periods of time when it was conceivable that the enemy task force could approach the coast undetected and establish themselves in a sheltered inlet. Alert to large, moving objects approaching the coast, the Radar Detachments held a vital front-line position as coastal watchdogs.

Number 26 Radio Detachment at **Langara Island** was well situated adjacent to the extreme northwesterly tip of the Charlottes. The detachment had an excellent view to the south along the Pacific coast to Graham Island, as well as an unobstructed view of Dixon Entrance, Canada's border with Alaska. However, the small island received a constant lashing from the open sea. Swells, sometimes eight to ten feet high, exploded against the cliffs and boiled around the jagged fingers of rock that skirted the small harbour used as a landing area - a spectacular sight if you were not trying to unload a supply boat. The men got tired of watching the precious mail packet and their supplies plummet to the bottom of the sea. They shared a common determination with other Airmen living in rugged isolation - "where there's a will there's a way" - and devised an ingenious system of block and tackle connected to an overhead cable, which allowed them to lift supplies off the boat and haul them up the slope to high ground.

At 02:35 hours on August 2, 1943, two security guards on patrol at the **Langara Island** dock sighted a long, black oval shape about 400 yards offshore. At exactly the same time the Radio Section reported a high-pitched AC hum that jammed their service. A steady tone, estimated to be about 200 cycles on the R/T channel, and spotted directly on 3615 Kc/s, continued from 05:00 to 05:45 hours. A reasonable explanation seemed to be that a Japanese submarine was attempting to prevent the Radar Section from sending out an alarm.

The whole camp was awakened and put on full alert. The few armaments in the Station stores were handed out and patrols maintained a constant watch for several hours. Demolition charges were set in strategic locations in case the enemy felt like sending a mountain-climbing expedition ashore to invade the station.

Bu 07:35 Canso aircraft were on hand from Alliford Bay, and eight depth charges were dropped. Two Navy patrol boats, one Canadian and one American, arrived later in the day to carry out an anti-submarine sweep of the area. No trace of the submarine was found. The excitement gradually died down and the detachment returned to its ordinary routine - but not for long.

On August 6, at 23:30 hours, another object was sighted on the surface about 300 yards offshore. It remained on the surface for a considerable time and was clearly identified as a Japanese submarine. The general alarm signal was given and patrols were quickly organized, but the Japanese appeared to be uninterested in anything happening on shore. Following these two enemy provocations, the defence capabilities on the Island were strengthened, and anti-submarine patrols, by both marine vessels and aircraft, were intensified.

The radar shack at Number 27 Radar Unit on **Marble Island**, anchored to a rocky knoll at an elevation of 425 feet, had an unobstructed view up and down the coast. The terrain around the site sloped down to cliffs that dropped 100 feet to the sea. During the construction of the station an aerial tramway was installed which laboured up the cliff and followed the incline to the radar shack at the top of the site. Beneath the shack, the barracks and other wood-frame buildings were constructed wherever there was a platform of level ground. In order to reach their "office", the on-duty Radio Operators, regardless of the weather, climbed rough stairs that were gouged out of the bush-covered rock.

The Detachment kept in touch with the RCAF Station at Alliford Bay and looked forward to the arrival of the Station's supply boat. It was necessary to bring the supply boat to a point some distance offshore where it was met by a rubber boat, or a dory from the RU. Every once in a while the small boat capsized forcing the occupants to swim ashore. In one incident, Corporal Edgar A Trethewet dove into the sea and fought the crashing waves in a courageous bid to save a fellow Airman from drowning.

It was a well known fact that living conditions at the **Marble Island** Unit were much worse than they were at either **Langara** or **Cape St. James**. The Airmen at Alliford Bay easily recognized "the look" of fellows coming in from a tour of duty on **Marble Island** - they were really "bushed" and had a glassy stare in their eyes. Number 28 RU at **Cape St. James** also maintained contact with Alliford Bay.

In 1944, William Fawcett Hill, an operations officer at RCAF Station Coal Harbour, applied for a position as Personnel Counsellor at RCAF Station Alliford Bay. Upon his arrival he discovered that he was required to immediately volunteer for a week's posting to No. 28 RU on **Cape St. James** Island. A requisitioned whaling boat transported him to the radar site at the southern end of the island, and since there was no dock, he stood on the deck of the whaling boat and was hoisted about 50 feet over to an elevated platform on shore. Later, someone kindly told him that the previous Personnel Counsellor lost his hold on the hoisting-rope and plunged into the surf. Unfortunately, he had drowned.

The Radar Unit diarist praised the men of the Radio Detachments for their lonely vigilance in the defence of our country:

*"The men serving on these units can be justly proud of the part they played in the defence of their country. For reasons of security their work was not mentioned, nor were they mentioned when honours and awards were being distributed. But they did not fail when faced with difficulties, dangers, isolation and monotony."*