

How much did Gander's first Airport cost?

Version v2

(By RG Pelley, bobsganderhistory, 2024-07-09)

When Hattie's Camp, where construction started in the spring of 1936, was completed as the Newfoundland Airport in Gander on 03 October 1939, it was the largest in the world. It was made of good materials in line with its projected future as the hub for eventual large-scale transatlantic aviation traffic. While money was not wasted, it was available sufficient to do a good job.

But how much did it cost?

When Hall and Vatcher did the initial study of a location, they included a list of probable itemised costs for different tradesmen and materials. They obviously could not give the total cost as the British government, as primary underwriters, had not yet settled on a design for the airport. The probable unit costs as given by TA Hall, engineer, were as follows:

COST OF WORKS:

As the cost of the works will depend entirely on the design, which must of necessity be made in England, I thought that, perhaps, a few notes on costs in this country might be of service to whoever may be charged with the preparation of Estimates. With that in view I submit the following:-

Felling, stumping, burning forest and collecting boulders - per acre.....	\$70.00
British Portland Cement in 400 lbs. nett steel barrels, landed St. John's and freighted to the airport.....	2.70 per barrel
Sand can be obtained from the shores of Gander Lake but it may be cheaper to obtain it from the Newfoundland Railway who would load and freight to the airport for	2.35 per ton
Collecting, crushing and screening rock to several sizes at the airport would cost	95¢ to 1.00 " "
Retread tar macadam made with Colas Emulsion, thickness compacted 3 inches. All materials for above, per super, yard.....	.45
Labour.....	.22

Undressed lumber in scantlings, per 1000 P.B.M.	\$20.00 to \$30.00
Dressed T. & G. Board, per 1000, P.B.M.	25.00 * 35.00
Clapboard * * *	25.00
Roofing Felt, per square	3.00
Nails per lb.	.05

WAGES:

The following are some current rates of wages:

Concrete Superintendent	.50¢	per hour
Foreman over common labour	.36	" "
Mason	.50	" "
Blacksmith	.36	" "
* Helper	.27	" "
Carpenter	30¢ to .45	" "
Mechanic	30¢ * .42	" "
* Helper	27¢ * .30	" "
Motor Machine Operator	34¢ * .44	" "
Teamster 25¢, Horse 20¢	.45	" "
Labourer	25¢ * .30	" "
Blaster	.34	" "
Timekeeper	\$75.00 to \$100.00	per month
Cook	75.00	" "
Storekeeper	100.00	" "

I shall be glad to furnish any further information required.

I have the honour to be,
Sir,
Your obedient servant,



While these individual costs are of historical interest, they do not reveal the total cost when completed. One investigation done by the British government was the Hudson-Kitts report of 1938 which gave an estimate of probable cost in Nfld dollars. According to "The History of the Canadian Dollar", by James Powell, 2005, Newfoundland's currency having been made consistent with Canada's in 1895, the Newfoundland dollar was worth roughly \$1.014 Canadian dollars. In dollars of 2024, this would come to approximately \$20.90. The two following pages show their detailed calculations.

ESTIMATES FOR CONSTRUCTION AND EQUIPMENT OF
NEWFOUNDLAND AIRPORT

<u>Item No.</u>		\$
		3,400.
1.	{ Survey	25,000.
2.	{ Land Acquisition	37,000.
3.	{ Cutting & burning brushwood & trees	165,000.
4.	{ Excavation, including grubbing roots, etc.	82,600.
5.	{ Scarifying and Reshaping	581,000.
6.	{ Production of Stone	514,500.
7.	{ Bituminous Concrete	73,800.
8.	{ Seal Coat to Runways	228,000.
9.	{ Drainage of Aerodrome	600,000.
10.	{ Plans and Machinery	329,000.
11.	{ Repairs to Constructional Plant	10,000.
12.	{ Railway Sidings	56,500.
13.	{ Temporary Buildings	62,200.
14.	{ Administrative Building	68,500.
15.	{ Power House and Plant	26,000.
16.	{ Boiler House and Plant	121,100.
17.	{ Hangar	9,000.
18.	{ Garage	72,000.
19.	{ Married Quarters	323,650.)
20.	{ Electrical Services	-
21.	{ W/T Services	20,000.
22.	{ Roads & Foul & Storm Water Drainage	25,000.
23.	{ Water Supply	251,300.
24.	{ Overhead Expenses	-----
	Carried forward	3,684,550.

Item No. -----		\$
	Brought forward	3,684,550.
25.	Contingencies	75,000.
		----- 3,759,550.
26.	Botwood Base	72,325.
27.	Botwood W/T	22,150.
28.	Gleneagles and Gander Lake	36,500.
29.	Office Furniture & Equipment, Household Furniture & Utensils	19,325.
30.	Telephone between Botwood, Gleneagles and Airport	25,000.
31.	Teleprinter and Teleprinter circuits	9,000.
32.	Operation and Maintenances costs to 31 August, 1939:-	
	Airport	35,600. + 1000
	Botwood	13,350.
	Gander Lake	3,750.
		----- \$3,996,550. 52700
		----- -----

From this total of 3 996 550\$, an amount of 107 720\$ must be subtracted for the costs exclusively related to Botwood (Botwood base at 72 325\$, W/T at 22150 \$ and operations/maintenance at 13 345). This leaves a total cost, estimated in 1938, as 3 887 870\$. Using the ratio 1938-2024 of 20.90\$, we come out a total in today's dollars as 81 256 483\$

A year later, on 03 May 1939, the estimated costs were again analysed ,as the work was to be competed in the fall of the same year. It was not easy, however, to correlate the earlier figures of the Nfld government with those of the British. The reason for this was that the *British basis for calculating the exchange rate between the pound sterling and the Newfoundland dollar was the*

average of buying and selling rates on the date of the advances to the Crown Agents. The exchange rate used by Newfoundland was something else, rather incomprehensible to the Brits, and probably based on some mainland exchange rate, perhaps Montreal or New York. This is what was said in a letter of 03 May 1939 from the Department of Civil Aviation of the Air Ministry to the Treasury Chambers at Whitehall:

The fact that Air Ministry accounts are kept in sterling and those of Newfoundland in dollars gives rise to a number of differences on conversion. As regards advances to cover payments made by Newfoundland our practice is to convert to dollars at the mean of the buying and selling rates on the date of the advance to the Crown Agents. It is clear, however, that Newfoundland convert at rates which we cannot identify and which may be related to New York or Montreal quotations. It is also doubtful whether they have followed any consistent basis of conversion. Conversely, we have paid (in sterling) in this country for equipment which forms part of the divisible expenditure and it has so far not been possible to ascertain the basis of Newfoundland's treatment of expenditure of this kind.

Given as well that accounting practices at Newfoundland Airport were considered by Britain to be inadequate, this was examined by the highest authorities within the Air Ministry. It was considered "that it was really essential for the final clearance of the financial details between the two Governments that a responsible officer from the Airport Accounting Staff should be sent over here for a brief visit to discuss and agree with our own finance and accounting people all outstanding accountancy questions."

As well, "We also think it very desirable that the opportunity should be taken of this official's visit to agree broadly on the form of accounting which will be adopted by the Airport Authorities when Newfoundland assumes control and when we become liable for one half of the annual maintenance costs, and to discuss the procedure to be adopted in future."

It should be noted that in early 1939, the British government was becoming increasingly aware of developments on the neighbouring continent. Though Neville Chamberlain, after his meeting with Hitler, spoke of "Peace in our time", others knew that war was inevitable and that reducing costs immediately to support future war expenditures was critical. At this juncture, Gander however was not yet considered to be a "war priority", as no land-based aircraft were considered able to successfully travel the North Atlantic in the best of circumstances and even less in winter. In fact, the RAF insisted that the safest way to bring aircraft across was by boat, even after Hudson bombers were successfully ferried across in November 1940.

Despite the difficulties of exchange rates and accounting differences, the Air Ministry, in the same docket, gave a breakdown of total costs.

Newfoundland Air Base.

The following is a statement of the estimated capital cost of the ground facilities required (including radio stations) showing how the provisional sum apportionable between the Air Ministry and the Newfoundland Government in the ratio 5 : 1 has been arrived at:-

Works Services.

Hatties Camp.

1) Preparation of aerodrome	£198,700	
2) Power supply, lighting etc.	£ 64,400	
3) Administrative buildings etc.	£ 10,250	
4) Water supply and fire protection	£ 2,000	
5) Landlines	£ 2,000	
6) Snow clearing equipment & transport	£ 8,000	
7) Hangar	£ 19,000	
	£299,350	
8) Contingencies	24,950	
	£324,300	(a)
		£ 2,750 (b)
<u>Gandar Lake</u>		£ 15,000 (c)
<u>Botwood base</u>		£ 3,500 (d)
<u>Temporary long-range W/T station at Botwood.</u>		£345,550
Total, work services		

Amount of the above attributable to W/T stations
(and therefore wholly the liability of the Air Ministry in the first instance)

Of (a)	£20,400
Of (b)	£ 250
Of (c)	£ 750
Of (d)	£ 3,500
Total	£24,900

Thus the total cost of works services apportionable in the ratio 5 : 1 is £320,650.

Marine Equipment

Gandar Lake	£ 2,800
Botwood base	£ 4,300
	£ 7,100

Summary

Works services	£320,650
Marine equipment	£ 7,100
<u>Total</u>	£327,750

Air Ministry contribution £273,125

Newfoundland Government contribution £ 54,625

Their total cost for the set-up of the Newfoundland Airport, including three smaller items for Botwood, comes out to 327750 pounds sterling, of which 54625 pounds were paid for by the Newfoundland government. This is consistent with the ratio of 1 to 5 used as a basis for cost sharing during the construction period.

If we extract the amounts for Botwood (main base 15000, temporary radio/transmission 3500, marine items 4500), the total cost for Newfoundland Airport comes out to a shade over 300000 pounds sterling (304750).

One pound sterling in 1939 would be 82 pounds today giving a cost today of 24,989 500 pounds. The exchange rate today is 1.75 Canadian dollars to the pound, giving a total cost of 43 731 625 million in today's Canadian dollars.

This amount of 43.7m\$ in today's Canadian dollars, or even 81.7m may not seem like a lot of money for the world largest airport at that time. However, in the period 1935 to 1939, just after the stock market crash of 1929, there were no unions to deal with; living conditions did not give rise to claims to a Social Affairs ministry; there were no tariffs at the border and little in terms of transaction taxes. In today's world, the cost would have been proportionally much higher.

This figure for 1939 was only half of the estimate from a year earlier. A quick study was made to examine a few of the individual discrepancies. The rate used to change dollars to pounds was one dollar equals 0.56 pound (where one pound equals 1.75 dollars).

The first cost to be examined was the cost of preparation and installation of the runway. The total of items 1 to 9 in the 1938 report covering this aspect amount to 1,340,000\$ or 780,640 pounds. The report of 1939 (item 1) gives a much smaller amount of only 193,700 pounds.

The next to be looked at was the Administration Building. The report of 1938 gives the cost at line 14 as 62,200\$, which would be 34,832 pounds. The 1939 report gives it at only 10200 pounds.

A third item studied was the hangar (later known as Hangar 20). The 1938 report gave the cost as 121,100\$ or 67,816 pounds. The cost in the 1939 report was only 19,000 pounds.

However another report gives an additional set of figures. This document was signed by Sir Humphrey Walwyn, governor of Nfld, and sent to the British Lord Councilor Sir Thomas Inskip, First Viscount of Caldecote, Secretary of State for Dominion Affairs. Page 7 is particularly interesting as it gives the cost as of 31 April 1940 when a certain amount of additional work had been done.

The figures are hard to read, but the total, which appears to be based on basically the same line-item costs as in the other reports, gives a rounded-off total of 3 832 343\$. The table at page 7 is shown below. Use the zoom as necessary.

FINANCIAL AND WORK PROGRESS REPORTS - SEVENHOLM, ND AIRPORT

Item No.	Description of Service	Total Estimate	Total Cost at March 31 1940	Balance at April 1 1940	Total Cost at April 30 1940	Balance at May 1 1940
1.	Survey	3,400.00	3,400.00	Nil	3,400.00	Nil
2.	Land Acquisition	21,000.00	4,000.00	21,000.00	4,000.00	21,000.00
3.	Cutting & Burning Brush and Trees	37,000.00	37,464.84	-464.84	37,464.84	-464.84
4.	Excavation & Grubbing Rocks & Trees	142,000.00	142,604.86	22,325.14	142,604.86	22,325.14
5.	Scarfing & Reshaping	20,000.00	21,044.87	30,845.23	21,044.87	30,845.23
6.	Stone Production	221,000.00	427,121.12	22,222.87	427,121.12	22,222.87
7.	Bituminous Concrete	241,500.00	227,722.24	12,722.66	227,722.24	12,722.66
8.	Seal Coat	72,200.00	112,222.72	-42,222.72	112,222.72	-42,222.72
9.	Drainage	222,000.00	22,222.22	121,211.14	22,222.22	121,211.14
10.	Plant & Machinery	220,000.00	272,222.22	21,222.22	272,222.22	21,222.22
11.	Repairs to Plant	220,000.00	222,222.11	22,222.22	222,222.11	22,222.22
12.	Railway Sidings	10,000.00	7,722.22	2,222.22	7,722.22	2,222.22
13.	Temporary Buildings	22,222.22	22,222.11	-1,222.11	22,222.11	-1,222.11
14.	Administration Building	22,222.22	77,222.22	-12,222.22	77,222.22	-12,222.22
15.	Power House & Plant	22,222.22	71,222.22	-2,222.22	71,222.22	-2,222.22
16.	Boiler House & Plant	22,222.22	22,222.22	2,171.22	22,222.22	2,171.22
17.	Hangers:					
	Erection	21,222.22	24,222.22	-2,222.22	24,222.22	-2,222.22
	Material	22,222.22	Nil	22,222.22	Nil	22,222.22
18.	Garage	2,000.00	Nil	2,000.00	Nil	2,000.00
19.	Warrior Quarters	72,222.22	22,222.22	2,222.22	22,222.22	2,222.22
20.	Electrical Services	122,222.22	122,177.22	-422.22	122,177.22	-422.22
21.	Airport W/T:					
	Joint Liability	112,222.22	122,222.22	-2,222.22	122,222.22	-2,222.22
	U.S. Liability	42,222.22	22,222.22	17,222.22	22,222.22	17,222.22
22.	Roads & Seal & Storm Water Drains	22,222.22	17,222.22	2,222.22	17,222.22	2,222.22
23.	Water Supply	22,222.22	22,222.22	1,222.22	22,222.22	1,222.22
24.	Overhead Expenses	221,222.22	221,222.22	-102,222.22	222,222.22	-102,222.22
25.	Contingencies) Snow Contracting)	72,222.22	24,222.22	27,222.22	24,222.22	27,222.22
26.	Between Base	72,222.22	72,222.22	-4,222.22	72,222.22	-4,222.22
27.	Between W/T	22,122.22	21,222.22	422.22	21,222.22	422.22
28.	Gander Lake	22,222.22	22,222.22	-222.22	22,222.22	-222.22
29.	Office Furniture & Equipment: Household Furniture & Utensils	12,222.22	12,222.22	222.22	12,222.22	222.22
30.	Telephone Between, Airport, Gander	22,222.22	24,222.22	272.22	24,222.22	272.22
31.	Telephone & Teleprinter Circuits	2,222.22	10,222.22	-1,222.22	10,222.22	-1,222.22
32.	Operation & Maintenance Between, Gander, Airport	22,222.22	27,222.22	22,222.22	27,222.22	21,222.22
33.	Blind Landings:					
	Equipment	47,222.22	Nil	47,222.22	Nil	47,222.22
	Installation	22,222.22	12,222.22	12,222.22	12,222.22	12,222.22
34.	Wireless Equipment	222,222.22	Nil	222,222.22	Nil	222,222.22
35.	Stocks on Hand		122,222.22	-122,222.22	22,222.22	-22,222.22
		<u>24,412,722.22</u>	<u>2,222,222.22</u>	<u>272,222.22</u>	<u>2,222,222.22</u>	<u>221,222.22</u>

Total

There are however in this total, as in the other reports, amounts for Botwood, though not written in exactly the same manner. For this reason, the total cost for operations and maintenance is

arbitrarily split as 1/5 Botwood as commercial flying there had shut down on 27 June 1939 and the Meteorological and W/T had already been transferred to Gander. In the case of telephone lines between Gander and Botwood, this was split 50-50, as the cost remained even if the line were rarely used.

The Botwood cost would therefore be:

◦ base	75786
◦ W/T	21682
◦ 1/5 of ops/maintenance	5740
◦ 1/2 telephone lines	<u>13000</u>
total	116 208

This would leave a cost for Gander as such at 3 718 635\$. Converted to today's dollars, this equates to 77 719 712\$.

When the RCAF took over on 1 April 1941, they calculated, a year later, an accumulated construction cost of 600 000 pounds. By then the 1st Battalion Black Watch had arrived, the 10 Bomber Reconnaissance Squadron was almost complete and a fair amount of heavy construction had been done as witnessed by a report only three months later. This report, by the Permanent Joint Board on Defense, at a meeting in New York on 9-10 September noted among others the following progress:

- four hangars and the foundations for four more completed
- four quarters for officers, four for NCOs and seven for other ranks in operation
- a mess for each group
- thirteen other buildings
- a 10-inch water from Gander Lake in place
- all railway spur lines completed or nearing completion.

So here are what appear to be the choices (Botwood not included):

Report	Original cost s	Pounds 2024	Dollars today
Hudson-Kitts, 1938	3996550 dollars		81 047 483\$
Air Ministry May 1 938	304750 pounds	24949500 pounds	43 731 625\$
Walwyn 1 Apr 1940	3 718 635\$		77 719 472\$
RCAF 1 Apr 1941	600 000 pounds	49 200 000 pounds	86 100 000\$

It is hard to tell which of these calculations is the most accurate or even if any of them are. It must be remembered that none of the bookkeeping was done by computer. It was all very manual, with accounting principles that may not be well known, by folks who may be better at other work than bookkeeping. However a cost in the region of 80-85m\$ in today's terms seems the most likely.

As an aside, nothing seems to indicate graft or corruption. Part of the reason would be that 1935-39, Gander was an isolated community where pretty much everything came in via a single railway line. Both the British and Newfoundland authorities verified the accounts at different periods. From discussions with "old timers", there may have been some very minor theft but not much else. As one put it, everybody knew everybody, so if you stole a fellow's hat, as soon as you put it on your head, someone would ask, "what are you doing with so and so's hat on?"

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Main Credits

° First and foremost, to Darrell Hillier, MA, who provided a very large part of the source material that the research was based on. Darrell is the author of the book "Crossroads : A history of the Royal Air Force Ferry Command, Gander Unit, 1940-1946"

° Documents on Relations between Canada and Newfoundland, Vol 1, Paul Bridle, Dept of External Affairs,1974

° Various unidentified reports collected over the years