

719
1915-1916
St George Bay
Reclamation.

St Georges Bay
Reclamation.

719

1915 - 1916
St George Bay
Reclamation.

St Georges Bay
Reclamation.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent.

To

12th October 1916

THE ENGINEER.

Cost of Excavating Sandstone from Campbell's Point and Tipping in Reclamation at St. George's Bay.

Week ending 10th October 1916.

Labour & teams, excavating & trucking	£ 25. 7. 10
10% War bonus to employees	1. 6. 3
Explosives used, gelignite etc.	1. 7. 6
Gear, tools and stores say	15. 0
Interest & depreciation on plant	1. 15. 10

Total cost £ 30. 12. 5

Amount of sandstone etc. excavated from cliff and tipped in reclamation 288 cub. yds.

∴ cost of handling = $2\frac{1}{2}$ per cub. yd.

Average distance trucked about 840 feet.

Note. One and a half days work lost owing to heavy rain.

A Broadbent.

288) $\frac{28 \cdot 10}{20}$ 0
570 2/-

Auckland Harbour Board.

MEMORANDUM.

FROM

L. A. Broadbent

To

19th October 1916

THE ENGINEER.

Cost of Excavating Sandstone from Campbell's Point
and Tipping in Reclamation
at St. George's Bay.

Week ending 17th October 1916.

Labour & teams, excavating & trucking	£ 30. 14. 0
10% War bonus to employees	2. 10. 3
Explosives used, gelignite &c.	2. 13. 6
Gear, tools & stores say	1. 0. 0
Interest & depreciation on plant	1. 15. 10

Total cost £ 38. 13. 7

Amount of sandstone excavated from cliff and
tipped in reclamation 386 cub. yds.

∴ cost of handling = 2/- per cub. yd.

Average distance trucked about 880 feet.

L. A. Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

L. Broadbent

To

30th October 1916

THE ENGINEER.

Cost of Excavating Sandstone from Campbell's Point and Tipping in Reclamation at St. George's Bay.

Week ending 24th October 1916.

Labour & teams, excavating & trucking	£ 16.5.1
10% War bonus to employees	1.3.7
Explosives used, none.	—
Gear, tools & stores say	8.0
Interest & depreciation on plant	1.15.10

Total cost £ 19.12.6

Amount of sandstone excavated from cliff and tipped in reclamation 162 cubic yards.

∴ cost of handling = $2\frac{1}{5}$ per cub. yd.

Average distance trucked about 900 feet.

Note. One day's work lost on account of rain, and one day owing to holiday, also work now consists of trimming up face of cliff to a safe batter.

L. Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A. Broadbent

To

31st August 1916

THE ENGINEER.

Cost of Excavating Sandstone from Campbell's Point
and Tipping in Reclamation,
at St. George's Bay.

Week ending 29th August 1916.

Labour & teams excavating & trucking	£ 61. 2. 7
10% War bonus to employees	4. 8. 8
Explosives used, gelignite &c.	3. 0. 6
Gear, tools & stores say	2. 5. 0
Interest & depreciation on plant	1. 15. 10

Total cost £ 72. 12. 7

Amount of sandstone &c. excavated from cliff and tipped in reclamation = 804 cub. yds.

∴ cost of handling = $1/9\frac{3}{4}$ per cub. yd.

Average distance trucked abt. 630 ft.

Note. Full time worked during this week.

A. Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A. Broadbent.

To

12th September 1916

THE ENGINEER.

Cost of excavating Sandstone from Campbell's Point
and Tipping in Reclamation
at St. George's Bay.

Week ending 5th September 1916.

Labour & teams excavating & trucking	£ 58. 9. 6
10% War bonus to employees	4. 9. 10
Explosives used, gelignite &c.	4. 10. 0
Gear, tools and stores say	2. 15. 0
Interest & depreciation on plant	1. 15. 10

Total cost £ 72. 0. 2

Amount of sandstone excavated from cliff and tipped in reclamation = 822 cub. yds.

∴ cost of handling = $\frac{1}{2}$ per cub. yd.

Average distance trucked about 650 feet.

Note. Full time worked during this week.

A. Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent.

To

18th Sept. 1916

THE ENGINEER.

Cost of Excavating Sandstone from Campbell's Point
and Tipping in Reclamation
at St. George's Bay.

Week ending 12th Sept. 1916.

Labour & teams, excavating & trucking	£ 56 · 16 · 3
10% War bonus to employees	4 · 14 · 11
Explosives used, pelignite &c.	3 · 8 · 6
Gear, tools & stores say	1 · 10 · 0
Interest & depreciation on plant	1 · 15 · 10

Total cost £ 68 · 5 · 6

Amount of sandstone excavated from cliff and tipped
in reclamation 670 cub. yds.

∴ cost of handling = $\frac{1}{2}/0\frac{1}{2}$ per cub. yd.

Average distance trucked about 650 feet.

Note. Increased cost per cub. yd. is due to one day's tipping being
lost on account of rain, and also to work being carried on short
handed at the face owing to about 15 men being away forming
Quay St. Cut.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

21st September 1916

THE ENGINEER.

Cost of Excavating Sandstone from Campbell's Point
and Tipping in Reclamation
at St. George's Bay.

Week ending 10th Sept. 1916.

Labour & teams, excavating & trucking	£ 52. 16. 3
10% War bonus to employees	3. 19. 9
Explosives used, gelignite etc.	2. 3. 0
Gear, tools & stores say	1. 10. 0
Interest & depreciation on plant	1. 15. 10

Total cost £ 62. 4. 10

Amount of sandstone excavated from cliff and tipped in reclamation 606 cubic yds.

∴ cost of handling = $2\frac{10}{8}$ per cub. yd.

Average distance trucked about 670 feet.

Note. Increased cost per cub. yd. is due to being short handed at the face.

A Broadbent

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

28th Sept. 1916

THE ENGINEER.

Cost of excavating Sandstone from Campbell's Point
and Tipping in Reclamation
at St. George's Bay.

Week ending 26th Sept. 1916.

Sabour & teams, excavating & trucking	£47. 1. 9
10% War bonus to employees	3. 12. 4
Explosives used, gelignite &c.	3. 18. 6
Gear, tools & stores say	1. 5. 0
Interest & depreciation on plant	1. 15. 10

Total cost £57. 13. 5

Amount of sandstone excavated from cliff and tipped
in reclamation 562 cub. yds.

∴ cost of handling = $2/0\frac{2}{3}$ per cub. yd.

Average distance trucked about 670 feet.

Note. High cost per yd. is due to being short handed at the face.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

5th October 1916

THE ENGINEER.

Cost of Excavating Sandstone from Campbell's Point
and Tipping in Reclamation
at St. George's Bay.

Week ending 3rd October 1916.

Labour & teams, excavating & trucking	£33. 10. 3
10% War bonus to employees	2. 11. 7
Explosives used, gelignite &c.	18. 0
Gear, tools and stores say	1. 0. 0
Interest & depreciation on plant	1. 15. 10

Total cost £39. 15. 8 /

Amount of sandstone excavated from cliff and tipped in Reclamation 376 cubic yards.

\therefore cost of handling = $2\frac{1}{2}$ / $1\frac{3}{8}$ per cub. yd.

Average distance trucked about 780 feet.

Note. One day's work was lost owing to heavy rain.

A Broadbent

Auckland Harbour Board.

MEMORANDUM.

FROM

A. Broadbent

To

24th August 1916

THE ENGINEER.

Cost of excavating Sandstone from Campbell's Point
and Tipping in Reclamation
at St. George's Bay.

Week ending 22nd August 1916.

Sabour and teams, excavating and trucking	£ 56 . 1 . 1
10% War bonus to employees	4 . 5 . 10
Explosives used, gelignite	3 . 1 . 0
Gear, tools and stores say	2 . 0 . 0
Interest and depreciation on plant	1 . 15 . 10

Total cost £ 67 . 3 . 9

Amount of sandstone etc. excavated from cliff
and tipped in reclamation 698 cub. yds.

∴ cost of handling = $\frac{2}{11}$ per cub. yd.

Average distance trucked about 630 feet.

Note. One day's work was lost on account of heavy rain,
and work was hindered by muddy state of ground.

A. Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A. Broadbent

To

11th May 1916

THE ENGINEER.

Cost of Excavating Sandstone from cliff
and Tipping in Site of Roadway
at St. George's Bay Reclamation.

Week ending 9th May 1916.

Labour & teams, excavating & trucking	£68.17.7
Explosives used, powder, gelignite etc.	8.9.6
Gear, tools and stores say	3.0.0
Interest and depreciation on plant	1.9.6

Total cost £81.16.7

Amount of sandstone etc. excavated from cliff and
tipped in site of roadway 1054 cub. yds.

∴ cost of handling: $1\frac{1}{6}\frac{2}{3}$ per cub. yd.

Average distance trucked about 435 feet.

A. Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

E. Broadbent

To

17th May 1916

THE ENGINEER.

Cost of Excavating Sandstone from cliff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 16th May 1916.

Labour & teams, excavating & trucking	£ 50 . 6 . 2½
Explosives used, powder, gelignite etc.	1 . 11 . 0
Gear, tools and stores say	2 . 5 . 0
Interest & depreciation on plant	1 . 9 . 6
Total cost	<u>£ 55 . 11 . 8½</u>

Amount of sandstone etc. excavated from cliff and tipped in site of 40 ft. roadway 660 cubic yards.

∴ cost of handling = $\frac{5}{8} \frac{1}{4}$ per cub. yd.

Average distance trucked about 445 feet.

Note. Increased cost per cub. yd. is due to two days' work being lost owing to heavy rain, and ground being heavy to work for several days after rain.

E. Broadbent

Auckland Harbour Board.

MEMORANDUM.

FROM

E. A. Broadbent.

To

27th May 1916

THE ENGINEER.

Cost of Excavating Sandstone from Cliff
and Tipping in Site of 40 ft. Roadway
at St. George's Bay Reclamation.

Week ending 23rd May 1916.

Labour & teams, excavating & trucking	£ 76 · 11 · 10½
Explosives used, powder, gelignite &c.	5 · 17 · 6
Gear, tools &c. say	3 · 10 · 0
Interest and depreciation on plant	1 · 9 · 6

Total cost £ 87 · 8 · 10½

Amount of sandstone excavated from cliff and tipped
in site of 40 ft. roadway 1032 cubic yards.

∴ cost of handling = $2\frac{1}{8}\frac{1}{2}$ per cub. yd.

Average distance trucked about 455 feet.

Note. Increased cost per cub. yd. is due to extra men
being employed shifting blacksmith's shed and pulling up
disused truck rails.

E. A. Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

31st May 1916

THE ENGINEER.

Cost of Excavating Sandstone from Cliff
and Tipping in Site of 40 ft. Roadway
at St. George's Bay Reclamation.

Week ending 30th May 1916.

Sabour & teams, excavating & trucking	£ 69 · 12 · 8 ³ / ₄
Explosives used, powder, gelignite etc.	8 · 8 · 0
Gear, tools and stores say	3 · 5 · 0
Interest & depreciation on plant	1 · 9 · 6

Total cost £ 82 · 15 · 2³/₄

Amount of material excavated from cliff and tipped in
site of 40 ft. roadway 928 cubic yards.

∴ cost of handling = $1/9\frac{3}{8}$ per cub. yd.

Average distance trucked about 525 feet.

Note. Increased cost per cub. yd. is due to men being employed
removing men's change shed, and also to work being hindered
owing to rain on Monday last.

A Broadbent

Auckland Harbour Board.

MEMORANDUM.

FROM

A. Broadbent.

To

7th June 1916

THE ENGINEER.

Cost of Excavating Sandstone from Campbell's Point
and Tipping in Site of 40 ft. Roadway
at St. George's Bay Reclamation.

Week ending 6th June 1916.

Labour and teams, excavating and trucking	£ 67. 0. 3/4
Explosives used, powder, gelignite etc.	14. 9. 0
Gear, tools and stores say	2. 5. 0
Interest & depreciation on plant	<u>1. 9. 6</u>
Total cost	<u>£ 85. 4. 3/4</u>

Amount of sandstone excavated from cliff and tipped on site of 40 ft. roadway 872 cubic yards.

∴ cost of handling = $1/11\frac{3}{4}$ per cub. yd.

Average distance trucked about 580 feet.

Note. The increased cost per cub. yd. is due partly to one day's work being lost for the holiday on the King's birthday, and partly to about twice the usual quantity of explosives being used on account of the shot fired at the south-west corner of the excavation on the 2nd inst.

A. Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

14th June 1916

THE ENGINEER.

Cost of Excavating Sandstone from Campbell's Point
and Tipping in Site of Roadway
at St. George's Bay Reclamation.

Week ending 13th June 1916.

Labour & teams, excavating & trucking	£ 77. 0. 5
10% War bonus to labourers	5. 1. 2½
Explosives used, powder, gelignite etc.	7. 12. 6
Gear, tools and stores say	3. 0. 0
Interest & depreciation on plant	1. 15. 10

Total cost £ 94. 9. 11½

Amount of sandstone etc. excavated from cliff and tipped in site of 40ft. Roadway 964 cubic yards.

∴ cost of handling = $1/11½$ per cub. yd.

Average distance trucked about 650 feet.

Note. 10% War bonus to labourers increases cost by 1¼ per cubic yard, also tipping was stopped for half a day owing to heavy rain.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

22nd June 1916

THE ENGINEER.

Cost of excavating Sandstone from Campbell's Point
and Tipping in Site of Roadway
at St. George's Bay Reclamation.

Week ending 20th June 1916.

Labour and teams, excavating and trucking	£ 93. 8. 3
10% War bonus to labourers	6. 8. 8½
Explosives used, powder, gelynite ^{etc} etc.	3. 17. 9
Gear, tools and stores say	12. 1. 0
Interest & depreciation on plant	5. 10. 0
	1. 15. 10

Total cost £ 119. 3. 9½

£ 123. 1. 6½

Amount of sandstone excavated from cliff and tipped in site of 40 ft. roadway 1457 cubic yards. lect B

∴ cost of handling = $1 \frac{1}{7} \frac{1}{8}$ ^{of 184} per cub. yd.

Average distance trucked about 700 feet.

Note. Men worked full time during this week.

A Broadbent

Note. This is practically the last material from Campbell's Point tipped on the site of the 40 ft. Roadway

Auckland Harbour Board.

MEMORANDUM.

FROM

A. Broadbent

To

29th June 1916

THE ENGINEER.

Cost of Excavating Sandstone from Campbell's Point.
and Tipping in Reclamation
at St. George's Bay.

Week ending 27th June 1916.

Labour and teams excavating and trucking	£ 53.3.6
10% War bonus to labourers	3.13.2
Explosives used, powder, gelignite etc.	3.17.6
Gear, tools and stores say	1.15.0
Interest and depreciation on plant	1.15.10

Total cost £ 64.5.0

Amount of sandstone etc. excavated from cliff and tipped
in reclamation 568 cubic yards.

∴ cost of handling = $2\frac{10}{38}$ per cub. yd.

Average distance trucked about 400 feet.

Note. Increased cost per cub. yd. is due to three days tipping being
lost on account of rain and also owing to a gang of about ten men
being employed laying rails during one of the wet days.

A. Broadbent.

Note. Practically all material hereafter
will be tipped as filling in the reclam-
ation.

Auckland Harbour Board.

MEMORANDUM.

FROM

A. Broadbent.

To

6th July

1916

THE ENGINEER.

Cost of Excavating Sandstone from Campbell's Point and Tipping in Reclamation at St. George's Bay.

Week ending 4th July 1916.

Labour & teams, excavating & trucking	£ 55 3 3
10% War bonus to labourers	3 15 10
Explosives used, powder, gelignite &c.	2 4 6
Gear, tools and stores say	2 0 0
Interest and depreciation on plant	1 15 10

Total cost £ 64 19 5

Amount of sandstone excavated from cliff and tipped
in reclamation 651 cubic yards.

∴ cost of handling = $\frac{2}{10}$ per cub. yd.

Average distance trucked about 400 feet.

Note. High cost per cub. yd. is due to two days work being lost on account of wet weather, and the ground being so muddy as to hinder trucking and tipping during the four days when work was carried on.

A. Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A. Broadbent.

To

13th July 1916

THE ENGINEER.

Cost of Excavating Sandstone from Campbell's Point
and Tipping in Reclamation
at St. George's Bay.

Week ending 11th July 1916.

Labour & teams, excavating & trucking	£ 62. 5. 8
10% War bonus to employees	4. 8. 0
Explosives used, powder, gelignite etc.	4. 10. 0
Gear, tools and stores say	2. 8. 0
Interest & depreciation on plant	1. 15. 10

Total cost £ 75. 7. 6

Amount of sandstone etc. excavated from cliff and tipped in reclamation 780 cub. yds.

∴ cost of handling = $1\frac{10}{11}$ per cub. yd.

Average distance trucked about 430 feet.

Note. High cost per cub. yd. is due to two days work being lost on account of heavy rain, and the ground being so muddy as to hinder trucking and tipping during the remainder of the time.

A. Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

20th July 1916

THE ENGINEER.

Cost of Excavating Sandstone from Campbells Point
and Tipping in Reclamation
at St. Georges Bay.

Week ending 18th July 1916.

Labour & teams, excavating & trucking	£94. 14. 8
10% War bonus to employees	7. 11. 2
Explosives used, powder, gelignite &c.	4. 2. 0
Gear, tools and stores say	4. 0. 0
Interest & depreciation on plant	1. 15. 10

Total cost £112. 3. 8

Amount of sandstone etc. excavated from cliff and tipped
in reclamation 1278 cubic yards.

∴ cost of handling = $\frac{1}{9}$ per cub. yd.

Average distance trucked about 440 feet.

Note. Full time was worked during this week.

A Broadbent

Auckland Harbour Board.

MEMORANDUM.

FROM

A. Broadbent

St. George's Bay Reclamation

To

27th July 1916

THE ENGINEER.

Cost of Excavating Sandstone from Campbell's Point
and Tipping in Reclamation
at St. George's Bay.

Week ending 25th July 1916.

Labour + teams, excavating + trucking	£ 90.16.1
10% war bonus to employees	7. 2. 9
Explosives used, powder, gelignite &c.	5. 4. 6
Gear, tools and stores say	3. 10. 0
Interest + depreciation on plant	1. 15. 10

Total cost £108. 9. 2

Amount of sandstone etc. excavated from cliff and tipped in reclamation 1214 cubic yards.

∴ cost of handling = $1/3\frac{1}{2}$ per cub. yd.

Average distance trucked about 460 feet.

Note. Full time was worked during this week.

A. Broadbent

Auckland Harbour Board.

MEMORANDUM.

FROM

J. A. Broadbent

To

16th August 1916

THE ENGINEER.

Cost of excavating Sandstone from Campbell's Point and Tipping in Reclamation at St. George's Bay.

Week ending 1st August 1916.

Labour & teams, excavating & trucking	£ 88. 7. 5
10% War bonus to employees	6. 18. 5
Explosives used, gelignite &c.	4. 18. 6
Gear, tools & stores, say	4. 0. 0
Interest & depreciation on plant	1. 15. 10

Total cost £106. 0. 2

Amount of sandstone &c. excavated from cliff and tipped
in reclamation 1196 cub. yds.

∴ cost of handling = $\frac{106.02}{1196} = 1/9\frac{3}{8}$ per cub. yd.

Average distance trucked about 490 feet.

Note. Full time worked during this week.

J. A. Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

L. A. Broadbent

To

21st August 1916

THE ENGINEER.

Excavation of Sandstone from Campbell's Point &c.

Sir,

I beg to report that, owing to wet weather no material was excavated from Campbell's Point during the week ending the 8th inst.

Thus the only cost for this week was the charge for interest and depreciation on the plant on the job, which amounted to £1.15.10.

L. A. Broadbent

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

17th August 1916

THE ENGINEER.

Cost of Excavating Sandstone from Campbell's Point
and Tipping in Reclamation
at St. George's Bay.

Week ending 15th August 1916.

Labour & teams excavating & trucking	£ 70. 0. 2
10% War bonus to employees	5. 18. 11
Explosives used, gelignite etc.	3. 12. 0
Gear, tools and stores say	2. 15. 0
Interest & depreciation on plant	1. 15. 10

Total cost £84. 1. 11

Amount of sandstone etc. excavated from cliff and tipped in reclamation 904 cub. yds.

∴ cost of handling = $\frac{8. 0. 0}{10^4}$ per cub. yd.

Average distance trucked about 600 feet.

Note. Full time worked during this week.

A Broadbent

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent.

To

15th December 1915

THE ENGINEER.

Cost of Excavating Sandstone from bliff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 14th December 1915.

Labour and teams, excavating and trucking	£ 74 · 10 · 5½
Explosives used, powder, gelignite &c.	6 · 3 · 0
Gear, tools and stores say	4 · 10 · 0
Interest and depreciation on plant	2 · 7 · 2

Total cost £ 87 · 10 · 7¼

Amount of sandstone tipped in site of embankment
1236 cubic yards.

∴ cost of handling material = 1/5 per cub. yd.

Length of outer embankment 475 feet.

Note. Working conditions good during week.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

22nd December 1915

THE ENGINEER.

94581

Cost of Excavating Sandstone from Bluff.
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 21st December 1915.

Labour & teams, excavating & trucking	£ 79 3 5 ³ / ₄
Explosives used, powder, gelignite &c.	8 6 0
Hear, tools and stores say	4 0 0
Interest & depreciation on plant	2 7 2

Total cost £ 93 16 7³/₄

Amount of sandstone tipped in site of embankment
1276 cubic yards.

∴ cost of handling = $1/5\frac{3}{8}$ per cub. yd.

Length of outer embankment 540 feet.

A Broadbent

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

12th January 1916

THE ENGINEER.

Cost of excavating sandstone from bluff
and tipping in site of embankment
at St. George's Bay Reclamation.

Week ending 28th Dec. 1915

Labour & teams, excavating and trucking	£ 38.2.7 ³ / ₄
Explosives used, powder, gelignite &c.	2.1.0
Gear, tools and stores say	1.10.0
Interest & depreciation on plant	2.7.2

Total cost £44.0.9³/₄

Amount of sandstone tipped in site of embankment
614 cubic yards.

∴ cost of handling = $1/5\frac{1}{4}$ per cub. yd.

Length of outer embankment 560 feet

Note. Excavation work carried on for 2½ days only.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

12th January 1916

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 4th January 1916

Labour & teams, excavating & trucking	£ 14. 16. 4 $\frac{1}{4}$
Explosives used, powder, gelignite &c.	1. 0. 6
Gear, tools and stores say	10. 0
Interest & depreciation on plant	2. 7. 2

Total cost £ 18. 14. 0 $\frac{1}{4}$

Amount of sandstone tipped in site of embankment
188 cubic yards.

∴ cost of handling = $\frac{1}{2}$ p. per cub. yd.

Length of outer embankment 565 feet.

Note. Excavation work carried on for 1 day only.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A. Broadbent.

To

12th January 1916

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 11th January 1916.

Labour & teams, excavating & trucking	£ 68. 10. 4 $\frac{1}{4}$
Explosives used, powder, gelignite etc.	5. 12. 6
Gear, tools and stores say	4. 0. 0
Interest & depreciation on plant	2. 7. 2

Total cost £ 80. 10. 0 $\frac{1}{4}$

Amount of sandstone tipped in site of embankment
1148 cubic yds.

\therefore cost of handling = $1\frac{1}{4}\frac{1}{8}$ per cub. yd.

Length of outer embankment about 600 feet.

A. Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

19th January 1916

THE ENGINEER.

Cost of Excavating Sandstone from bluff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 18th January 1916.

Sabour & teams excavating & trucking	£ 67. 10. 10½
Explosives used powder, gelignite &c.	4. 19. 0
Gear, tools and stores say	3. 10. 0
Interest & depreciation on plant	2. 7. 2

Total cost £ 78. 7. 0½

Amount of sandstone tipped in site of embankment
1042 cubic yards.

∴ cost of handling = $\frac{2}{6}$ per cub. yd.

Length to tip-head on outer embankment 640 ft. abt.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

L. A. Broadbent.

To

26th January 1916

THE ENGINEER.

Cost of Excavating Sandstone from Bluff and Tipping in Site of Embankment at St. George's Bay Reclamation.

Week ending 25th January 1916.

Labour & teams excavating & trucking	£ 56 · 10 · 0 ³ / ₄
Explosives used, powder, gelignite &c.	6 · 6 · 0
Gear, tools and stores say	4 · 10 · 0
Interest & depreciation on plant	2 · 7 · 2
Total cost	<u>£ 69 · 14 · 0³/₄</u>

Amount of sandstone excavated and tipped in site of embankment 1094 cubic yards.

∴ cost of handling = $1\frac{1}{3}\frac{3}{8}$ per cub. yd.

Distance from face of cliff to tip-head on outer portion of embankment is about 660 feet.

Note. Weather conditions were good during week.

L. A. Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

2nd February 1916

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 1st February 1916.

Labour and teams excavating and trucking	£45. 19. 8½
Explosives used, powder, gelignite &c.	12. 0. 0
Gear, tools and stores say	2. 0. 0
Interest and depreciation on plant	2. 7. 2

Total cost £62. 6. 10½

Amount of sandstone excavated and tipped in site of embankment 774 cubic yards.

∴ cost of handling = $1 \frac{0}{7} \frac{3}{8}$ per cub. yd.

Average distance trucked about 500 feet.

Note. The increased cost per cubic yard is owing to four large shots, containing a total of 405 lbs. of powder being fired. These shots have brought down a large quantity of material which has not yet been tipped on the embankment.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

8th February 1916

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankment,
at St. George's Bay Reclamation.

Week ending 8th February 1916.

Sabour and teams excavating and trucking	£ 53 . 6 . 5
Explosives used, powder, gelignite etc.	3 . 12 . 0
Gear, tools and stores say	3 . 10 . 0
Interest and depreciation on plant	2 . 7 . 2

Total cost £ 62 . 15 . 7

Amount of sandstone excavated and tipped in site of embankment 882 cubic yards.

∴ cost of handling = $1\frac{1}{5}$ per cub. yd.

Average distance trucked about 525 feet.

Note. One day's work lost on account of heavy rain.

A Broadbent

Auckland Harbour Board.

MEMORANDUM.

FROM

L.A. Broadbent

To

16th February 1916

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 15th February 1916.

Labour and teams, excavating and trucking	£ 54 · 13 · 4 ³ / ₄
Explosives used, powder, gelignite &c.	2 · 17 · 6
Gear, tools and stores say	4 · 0 · 0
Interest and depreciation on plant	2 · 7 · 2

Total cost £ 63 · 18 · 0³/₄

Amount of sandstone excavated and tipped in site of embankment 920 cubic yards.

∴ cost of handling = 1⁰/₄³/₄ per cub. yd.

Average distance trucked about 600 feet.

Note. One day's work lost on account of holiday for picnic.

L.A. Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

H Kemp

To

February 26th 1916

THE ENGINEER.

Cost of Excavating Sandstone from Cliff
and Tipping in Site of Embankment
at St. Georges Bay Reclamation

Week ending 22nd February 1916

	£	s	d
Labour & teams excavating & trucking	60	7	8½
Explosives used, powder, gelignite etc	3	13	0½
Gear, tools and stores say	3	10	0
Interest & depreciation on plant	2	7	2
Total cost	£ 69	17	11

Amount of sandstone excavated and tipped in site of embankment = 1056 cubic yards

∴ Cost of handling = $\frac{5}{4}^d$ per cubic yard

Average distance trucked about 600 feet

H Kemp

Auckland Harbour Board.

MEMORANDUM.

FROM

H Kemp

To

3rd March 1916

THE ENGINEER.

Cost of Excavating Sandstone from Cliff
and Tipping in Site of Embankment
at St. Georges Bay Reclamation

Week ending 29th February 1916

Labour & teams excavating & trucking	£ 5 d 60-9-3 ¹ / ₄
Explosives used, powder, gelignite etc.	nil
Gear, tools and stores say	3-10-0
Interest & depreciation on plant	2-7-2
Total cost	£ 66-6-5 ¹ / ₄

Amount of sandstone excavated & tipped
in site of embankment 1174 cubic yards

∴ Cost of handling = ^{5 d}1-1¹/₂ per cubic yard

Average distance trucked about 620 feet.

H Kemp

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

9th March 1916

THE ENGINEER.

Cost of excavating Sandstone from bliff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 7th March 1916.

Labour and teams, excavating and trucking	£ 57. 16. 1 ³ / ₄
Explosives used, powder, gelignite etc.	1. 3. 6
Gear, tools, stores etc. say	3. 0. 0
Interest and depreciation on plant	2. 7. 2
Total cost	£ <u>64. 6. 9³/₄</u>

Amount of sandstone excavated and tipped in the site of the embankment 910 cubic yards.

∴ cost of handling = $\frac{2}{5}$ per cub. yd.

Average distance trucked 500 feet.

Note. One day's work lost on account of heavy rain.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

L. A. Broadbent.

To

15th March 1916

THE ENGINEER.

Cost of Excavating Sandstone from cliff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 14th March 1916.

Labour & teams excavating & trucking	£ 58. 17. 11 ¹ / ₄
Explosives used, powder, gelignite etc.	2. 4. 0
Gear, tools and stores say	3. 5. 0
Interest & depreciation on plant	2. 7. 2

Total cost £ 66. 14. 1¹/₄

Amount of sandstone excavated and tipped in site
of embankment 928 cubic yards.

∴ cost of handling = $\frac{1}{5}$ per cub. yd.

Average distance trucked about 400 feet.

L. A. Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

E. Broadbent

To

22nd March 1916

THE ENGINEER.

Cost of Excavating Sandstone from Cliff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 21st March 1916.

Labour & teams, excavating & trucking	£ 44.5.0½
Explosives used, powder, gelignite etc.	3.7.0
Gear, tools & stores say	2.15.0
Interest & depreciation on plant	2.7.2

Total cost £ 52.14.2½

Amount of sandstone excavated and tipped in site of
embankment 696 cubic yards.

∴ cost of handling = $1\frac{1}{6}$ per cub. yd.

Average distance trucked about 500 feet.

Note. One day's work lost on account of heavy rain.

E. Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

29th March 1916

THE ENGINEER.

Cost of Excavating Sandstone from bliff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 28th March 1916.

Sabour & teams, excavating & trucking	£ 40 · 15 · 5¼
Explosives used, powder, gelignite etc.	3 · 17 · 0
Gear, tools & stores say	2 · 0 · 0
Interest & depreciation on plant	1 · 9 · 6
Total cost	<u>£ 48 · 1 · 11¼</u>

Amount of sandstone excavated and tipped in site of embankment 626 cubic yards.

∴ cost of handling = $1/6\frac{1}{2}$ per cub. yd.

Average distance trucked about 570 feet.

Note. The increased cost is due to there being insufficient men at present to work the face to the best advantage.

Some of the men that are away are working for Mr. Verran, and others are working for Mr. Batey.

A Broadbent

Auckland Harbour Board.

MEMORANDUM.

FROM

E. Broadbent

To

5th April 1916

THE ENGINEER.

Cost of excavating Sandstone from bluff
and tipping in Site of embankment
at St. George's Bay Reclamation.

Week ending 4th April 1916.

Labour & teams, excavating & trucking	£ 49 . 19 . 3/4
Explosives used, powder, gelignite etc.	5 . 9 . 6
Gear, tools and stores say	3 . 0 . 0
Interest and depreciation on plant	1 . 9 . 6

Total cost £ 59 . 18 . 3/4

Amount of sandstone excavated and tipped in site
of embankment 724 cubic yards.

∴ cost of handling = $1\frac{1}{8}$ per cub. yd.

Average distance trucked about 600 feet.

Note. The increased cost is due to about half of the
men being away for part of the week.

E. Broadbent

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

12th April 1916

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 11th April 1916.

Labour and teams, excavating and trucking	£ 64 · 3 · 1/2
Explosives used, powder, gelignite etc.	5 · 18 · 0
Gear, tools and stores say	3 · 0 · 0
Interest and depreciation on plant	1 · 9 · 6

Total cost £ 74 · 10 · 7/2

Amount of sandstone excavated and tipped in site of embankment 812 cubic yards.

∴ cost of handling = $1 \frac{10}{100}$ per cub. yd.

Average distance trucked about 630 feet.

Note. Increased cost per yd. is mainly due to one day's work being lost on account of heavy rain.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

EA Broadbent

To

19th April 1916

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 18th April 1916.

Labour and teams, excavating and trucking	£ 62.10.9
Explosives used, powder, gelignite &c.	8.7.6
Gear, tools and stores say	3.5.0
Interest and depreciation on plant	1.9.6

Total cost £ 75.12.9

Amount of sandstone excavated and tipped in site of
embankment 938 cubic yards.

∴ cost of handling = $1\frac{7}{8}$ per cubic yard.

Average distance trucked about 650 feet.

EA Broadbent

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

26th April 1916

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 25th April 1916.

Labour and teams, excavating and trucking	£ 41. 14. 1
Explosives used, powder, gelignite &c.	5. 4. 0
Gear, tools and stores say	2. 0. 0
Interest & depreciation on plant	1. 9. 6

Total cost £50. 7. 7

Amount of sandstone excavated and tipped in site of
embankment 650 cubic yards.

∴ cost of handling = $1\frac{1}{6}\frac{1}{2}$ per cub. yd.

Average distance trucked about 500 feet.

A Broadbent

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

31st May 1916

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 2nd May 1916.

Labour and teams excavating and trucking	£ 66.8.0
Explosives used, powder, gelignite &c.	6.5.6
Gear, tools and stores say	2.10.0
Interest and depreciation on plant	1.9.6

Total cost £ 76.13.0

Amount of sandstone excavated and tipped in site
of embankment 884 cubic yards.

∴ cost of handling = 1⁰/₈ per cub. yd.

Average distance trucked about 420 feet.

Note. Increased cost per yard is due to work being considerably hampered owing to the soft state of the ground due to the recent heavy rain.

A Broadbent

Note. This is practically the last material from Campbell's Point tipped in the Embankment.

Auckland Harbour Board.

MEMORANDUM.

FROM

A. Broadbent

To

25th September 1915

THE ENGINEER.

Cost of Excavating Sandstone from Cliffs
and Tipping in Site of Embankments
At St. George's Bay Reclamation.

Week ending 27th Sept 1915.

Labour and teams excavating and trucking	£71.17.0 ⁴
Explosives used, powder, gelignite &c.	4.6.0
Gear, tools and stores say	5.0.0
Interest and depreciation on plant	2.4.2

Total cost £83.7.2

Amount of material tipped in embankments
1218 cubic yards.

∴ Cost of handling material = $\frac{83.7.2}{1218}$ per cub. yd.

Length of main embankment 1000 feet at east end.
" " outer " 150 "

Note. Fairly good weather conditions during week.

A. Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A. Broadbent

To

6th October 1915

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankments.
at St. George's Bay Reclamation.

Week ending 5th October 1915.

Labour and teams, excavating and trucking	£ 75 · 17 · 2½
Explosives used, powder, gelignite etc.	4 · 13 · 0
Gear, tools and stores say	5 · 0 · 0
Interest and depreciation on plant	2 · 4 · 2

Total cost £ 87 · 14 · 4½

Amount of material tipped in embankments
1254 cubic yards.

∴ cost of handling material = $\frac{2}{1} \frac{1}{4} \frac{1}{2}$ per cub. yd.

Length of main embankment 1020 feet, at east end.
" " outer " 176 "

Note. Weather conditions were good during week.

A. Broadbent

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

13th October 1915

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankments
at St. George's Bay Reclamation.

Week ending 12th Oct. 1915.

Labour & teams, excavating & trucking	£ 77. 12. 4
Explosives used, powder, gelignite &c.	5. 16. 0
Gear, tools and stores say	4. 0. 0
Interest and depreciation on plant	2. 4. 6

Total cost £ 89. 12. 10.

Amount of material tipped in embankments
1268 cubic yards

∴ cost of handling material = $\frac{1}{5}$ per cub. yd.

Length of main embankment 1030 feet at east end
" " outer " 205 "

Note. Weather conditions were good during last week.

A Broadbent

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

20th October 1915

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankments
at St. George's Bay Reclamation.

Week ending 19th October 1915.

Labour and teams excavating and trucking	£ 81. 13. 11
Explosives used, powder, gelignite &c.	3. 12. 0
Gear, tools and stores say	5. 0. 0
Interest and depreciation on plant	2. 4. 6

Total cost £ 92. 10. 5 ✓

Amount of material tipped in embankments
1442 cubic yards

∴ cost of handling material = $\frac{1}{3\frac{1}{3}}$ per cub. yd. ✓

Length of main embankment 1040 feet at east end
" " outer " 235 "

Note. Good working conditions during week

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

27th October 1915

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankments
at St. George's Bay Reclamation.

Week ending 26th October 1915.

Labour and teams excavating and trucking	£ 63 · 11 · 2 ¹ / ₄
Explosives used, powder, gelignite &c.	6 · 8 · 6
Gear, tools & stores say	3 · 0 · 0
Interest and depreciation on plant	2 · 4 · 10

Total cost £ 75 · 4 · 6¹/₄ ✓

Amount of material tipped in embankments
1112 cubic yards.

∴ cost of handling material = $\frac{s.d.}{1}$ $\frac{1}{4}$ per cub. yd.

Length of main embankment, east end 1055 feet
" " outer " 262 feet.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent.

To

3rd November 1915

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankments
at St. George's Bay Reclamation.

Week ending 2nd Nov^r 1915.

Labour & teams, excavating & trucking	£ 83. 3. 3 $\frac{1}{4}$
Explosives used, powder, gelignite &c.	7. 9. 0
Gear, tools and stores say	5. 15. 0
Interest and depreciation on plant	2. 4. 10

Total cost £ 98. 12. 1 $\frac{1}{4}$

Amount of material excavated and tipped in
embankments 1502 cub. yds.

\therefore cost of handling material = $1\frac{1}{3}\frac{1}{4}$ per cub. yd.

Length of main embankment east end 1057 feet.
" " outer " 290 feet.

Note. Full time worked during last week.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

11th November 1915

THE ENGINEER.

Cost of Excavating Sandstone from bluff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 9th November 1915.

Labour and teams, excavating & trucking	£ 61. 17. 5 ³ / ₄
Explosives used, powder, gelignite &c.	5. 16. 6
Gear, tools and stores say	2. 10. 0
Interest and depreciation on plant	2. 5. 6

Total cost £ 72. 9. 5³/₄

Amount of material tipped in site of embankment
976 cubic yards.

∴ cost of handling material = $2\frac{1}{5}\frac{3}{4}$ per cub. yd.

Length of main embankment, east end 1057 feet.

" " outer " 310 feet.

Note. One and a half days work lost on account of rain.

A Broadbent

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

17th November 1915

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankments,
at St. George's Bay Reclamation.

Week ending 16th November 1915

Labour and teams, excavating and trucking	£ 76. 10. 8
Explosives used, powder, gelignite etc.	8. 0. 0
Gear, tools and stores say	4. 10. 0
Interest and depreciation on plant	2. 5. 6

Total cost £ 91. 6. 2

Amount of material tipped in site of embankments
1364 cubic yards.

∴ cost of handling material = $\frac{1}{4}$ per cub. yd.

Length of outer embankment 340 feet
Distance from original line of cliff to where tipping on main
embankment 1070 feet.

A Broadbent

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

24th November 1915

THE ENGINEER.

Cost of Excavating Sandstone from bluff
and Tipping in Site of Embankments
at St. George's Bay Reclamation.

Week ending 23rd November 1915.

Labour and teams excavating and trucking	£ 81. 7. 9 ³ / ₄
Explosives used, powder, gelignite etc.	5. 13. 9
Gear, tools and stores say	3. 0. 0
Interest and depreciation on plant	2. 6. 5

Total cost £ 92. 7. 11³/₄ ✓

Amount of material tipped in site of embankments
1340 cubic yards.

∴ cost of handling material = $1\frac{7}{8}$ per cub. yd. ✓

Length of outer embankment 365 feet
" " run on main embankment 1090 feet.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent.

To

1st December 1915

THE ENGINEER.

Cost of excavating Sandstone from bluff
and tipping in site of Embankments
at St. Georges Bay Reclamation.

Week ending 30th November 1915.

Labour and teams excavating and trucking	£ 80 . 2 . 6
Explosives used, powder, gelignite &c.	3 . 9 . 0
Gear, tools and stores say	3 . 5 . 0
Interest and depreciation on plant	2 . 6 . 5

Total cost £ 89 . 2 . 11

Amount of material tipped in site of embankments
1232 cubic yards.

∴ cost of handling material = $1/5\frac{2}{3}$ per cub. yd.

Length of outer embankment 400 feet
" " run on main embankment 1090 feet.

Note. Half a day's work lost on account of heavy rain.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

Broadbent

To

8th December 1915

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Weeks ending 7th December 1915.

Labour and teams excavating and trucking	£ 81.10.6 $\frac{1}{4}$
Explosives used, powder, gelignite &c.	6.8.6
Gear, tools and stores say	3.10.0
Interest and depreciation on plant	2.7.2

Total cost £ 93.16.2 $\frac{1}{4}$

Amount of material tipped in site of embankment
1234 cubic yards.

\therefore cost of handling material = $1\frac{1}{64}$ per cub. yd.

Length of outer embankment 435 feet.

A. Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent.

To

14th July 1915

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in site of Embankment
at St. George's Bay Reclamation.

Week ending 13th July 1915.

Labour & teams, excavating & trucking	£ 68. 8. 8 ¹ / ₄
Explosives used, powder, gelignite &c.	2. 0. 0
Beer, tools and stores, say	4. 0. 0
Interest & depreciation on plant	1. 2. 6

Total cost £ 75. 11. 2¹/₄ ✓

Amount of material tipped in embankment
1116 cubic yards.

∴ cost of handling material = 2¹/₄ per cu. yd.

Length of embankment 816 feet.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

21st July 1915

THE ENGINEER.

Cost of Excavating Sandstone from Cliff
and Tipping in Site of Embankment.
At St. George's Bay Reclamation.

Week ending 20th July 1915.

Sabour & teams, excavating & trucking	£ 100 · 10 · 2½
Explosives used, powder, gelignite &c.	2 · 10 · 0
Leas, tools and stores say	5 · 0 · 0
Interest & depreciation on plant	1 · 9 · 1
Total cost	<u>£109 · 9 · 3½</u>

Amount of material tipped in embankment
1942 cubic yards

∴ cost of handling material = 1 15/8 per cu. yd.

length of embankment 362 feet.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

28th July 1915

THE ENGINEER.

Cost of Excavating Sandstone from bluff
and Tipping in site of Embankment
at St. George's Bay Reclamation.

Week ending 27th July 1915

Sabour & teams, excavating & trucking	£ 70 . 2 . 0½
Explosives used, powder, gelignite &c.	3 . 0 . 6
Gear, tools, stores &c. say	3 . 0 . 0
Interest & depreciation on plant	1 . 9 . 1

Total cost £ 77 . 11 . 7½.

Amount of material tipped in embankment
1154 cubic yards.

Length of embankment 887 feet.

∴ cost of handling material = 1/4½ per cu. yd.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

7th August 1915

THE ENGINEER.

Cost of Excavating Sandstone from bluff
and Tipping in Site of Embankment.
At. St. George's Bay Reclamation.

Week ending 3rd August 1915.

Labour + teams, excavating + trucking	£102. 15. 0
Explosives used, powder, gelignite &c.	6. 6. 0
Beer, tools + stores say	4. 10. 0
Interest + depreciation on plant	1. 15. 0

Total cost £115. 6. 0 ✓

Amount of material tipped in embankment
1790 cubic yards.

∴ cost of handling material = 1/3 1/2 per cu. yd.

Length of embankment 925 feet.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

EA Broadbent

To

13th August 1915

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 10th August 1915

Labour & teams, excavating & trucking	£ 84. 3. 1/4
Explosives used, powder, gelignite &c.	3. 16. 6
Gear, tools and stores say	2. 10. 0
Interest & depreciation on plant	1. 15. 0

£ 92. 4. 7/4

Amount of material tipped in embankment
1178 cubic yards

∴ cost of handling material = $\frac{1}{6}\frac{3}{4}$ per cu. yd.

Length of embankment 945 feet.

EA Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

18th August 1915

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 17th August 1915.

Labour and teams, excavating and trucking	£ 90 · 19 · 9½
Explosives used, powder, gelignite &c.	6 · 9 · 6
Gear, tools and stores say	2 · 15 · 0
Interest and depreciation on plant	1 · 15 · 0

Total cost £ 101 · 19 · 3½

Amount of material tipped in embankment 1254 cubic yards.

∴ cost of handling material = 1/7½ per cu. yd.

Distance from original line of western side of Campbell's Point to place where tipping on outer line of rails about 300 feet.

Sitto on inner line of rails about 430 feet.

Note. Increase in cost is due to the wash-out of part of the embankment on Saturday last, as men had to be taken from the face to pick up rails, form new tip-head &c.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

25th August 1915

THE ENGINEER.

Cost of Excavating Sandstone from Bluff and Tipping in Site of Embankment at St. George's Bay Reclamation.

Week ending 24th August 1915.

Labour & teams, excavating & trucking	£ 63. 6. 5 $\frac{3}{4}$
Explosives used, powder, gelignite &c.	2. 16. 0
Gear, tools and stores say	2. 0. 0
Interest and depreciation on plant	1. 15. 0
	—
Total cost	<u>£ 69. 17. 5$\frac{3}{4}$</u>

Amount of material tipped in embankment
966 cubic yards.

\therefore cost of handling material = 1 $\frac{5}{8}$ per cu. yd.

Distance from original line of Campbell's Point (west side) to place where now tipping on outer line of rails about 470 feet.

Iditto on inner line of rails about 690 feet.

Note. One and a half days work lost on account of heavy rain, and work impeded for one day after rain, owing to very muddy state of ground.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent.

To

1st September 1915

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankment.
At St. George's Bay Reclamation.

Week ending 31st August 1915.

Labour & teams, excavating & trucking	£ 81. 6. 8
Explosives used, powder &c.	4. 8. 0
Gear, tools and stores say	3. 0. 0
Interest and depreciation on plant	1. 15. 0

Total cost £ 90. 9. 8 ✓

Amount of material tipped in embankment
1204 cubic yards.

∴ cost of handling material = $\frac{90.9.8}{1204}$ per cu. yd.

Distance from original line of western side of Campbell's Point to place where tipping on outer line of rails about 480 feet, and on inner line of rails about 750 feet.

Note. Labour includes £12. 11. 0 for extra works, relaying rails and forming magazine in cliff.

Thus if this amount is taken off, cost of excavating &c. equals $\frac{90.9.8}{1204}$ per cubic yard.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

8th September 1915

THE ENGINEER.

Cost of Excavating sandstone from bliff
and Tipping in site of Embankment
at St. Georges Bay Reclamation.

Week ending 7th September 1915.

Labour and teams, excavating and trucking	£ 75 · 6 · 1
Explosives used, powder, gelignite &c.	5 · 17 · 0
Gear, tools and stores say	3 · 10 · 0
Interest and depreciation on plant	1 · 15 · 0

Total cost £ 86 · 8 · 1 ✓

Amount of material tipped in embankment
1250 cubic yards.

∴ cost of handling material = 1/4⁵/₈ per cu. yd.

Length of main embankment 930 feet
" " outer " 108 "

A Broadbent.

Note. Full time was worked during this week, the working conditions being fairly good.

AB.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

16th September 1915

THE ENGINEER.

Cost of Excavating Sandstone from bluff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 14th September 1915.

Labour and teams, excavating and trucking	£ 67. 19. 9/4
Explosives used, powder, gelignite &c.	2. 15. 0
Beer, tools and stores say	2. 10. 0
Interest and depreciation on plant	1. 18. 8
Total cost	<u>£ 75. 3. 5/4</u>

Amount of material tipped in embankments
260 cubic yards.

∴ cost of handling material = 1/6 3/4 per cub. yd.

Length of main embankment 265 feet
" " outer " 116 "

Note. One day's work was lost on account of heavy rain,
thus increasing the cost per cubic yard.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

22nd September 1915

THE ENGINEER.

94591

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankments.
At St. George's Bay Reclamation.

Week ending 21st September 1915.

Labour and teams, excavating & trucking	£ 57.13.0 ³ / ₄
Explosives used, powder, gelignite &c.	3.2.0
Gear, tools and stores say	3.0.0
Interest and depreciation on plant	1.18.8

Total cost £ 65.13.8³/₄ ✓

Amount of material tipped in embankments
910 cubic yards.

∴ Cost of handling material = $\frac{2.10}{15\frac{3}{8}}$ per cub. yd.

Length of main embankment 985 feet (east end)
" " outer " 135 "

Note. One day's work was lost on account of heavy rain during the morning.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent.

To

April 1915

THE ENGINEER.

Cost of Excavating Sandstone from bluff
and Tipping in site of Embankment
at St. George's Bay Reclamation.

Week ending 27th April 1915

Labour and teams, excavating, carting etc.	£ 70. 7. 7
Explosives used, powder, gelignite etc.	12. 13. 0
Gear, tools and stores say	3. 0. 0
Interest and depreciation on plant	12. 7

Total cost £ 86. 13. 2

Amount of material tipped in embankment
1152 cubic yards.

∴ cost of handling = 1/6 per cu. yd.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent.

To

6th May 1915

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankment
At St. George's Bay Reclamation.

Week ending 4th May 1915

Labour & teams, excavating, carting &c.	£ 82. 12. 11
Explosives used, powder, gelignite &c.	9. 0. 0
Gear, tools and stores say	3. 10. 0
Interest & depreciation on plant	12. 7

Total cost £ 95. 15. 6 ✓

Length of embankment 392 feet.

Amount of material tipped in embankment
1396 cubic yards.

∴ Cost of handling = $1\frac{1}{4}\frac{1}{2}$ per cu. yd.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent.

To

12th May 1915

THE ENGINEER.

Cost of Excavating Sandstone from Bluff.
and Tipping in Site of Embankment.
at St. George's Bay Reclamation.

Week ending 11th May 1915

Labour and teams, excavating and carting	£ 55. 4. 9½
Explosives used, powder, gelignite &c.	9. 5. 0
Gear, tools and stores say	2. 10. 0
Interest and depreciation on plant	12. 8

Total cost £ 67. 12. 5½ ✓

Length of embankment 435 feet.

Amount of material tipped in embankment
392 cubic yards.

∴ cost of handling = 1/6½ per cu. yd.

Note. The increase in the cost per cubic yard is due to practically all work having to be stopped for two days during the week on account of the heavy rain experienced, and also to the ground being very heavy to work the day after the rain.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent.

To

19th May 1915

THE ENGINEER.

Cost of Excavating Sandstone from Cliffs
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 18th May 1915.

Labour & teams, excavating & carting	£ 87 · 17 · 10 $\frac{1}{4}$
Explosives used, powder, gelignite &c.	11 · 19 · 6
Gear, tools and stores say	4 · 0 · 0
Interest and depreciation on plant	13 · 6

Total cost £104 · 10 · 10 $\frac{1}{4}$

Length of embankment 490 feet.

Amount of material tipped in embankment
1410 cubic yards.

\therefore cost of handling = 1 $\frac{5}{8}$ per cu. yd.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

26th May 1915

THE ENGINEER.

Cost of Excavating Sandstone from bluff
and Tipping in Site of Embankment.
At St. George's Bay Reclamation.

Week ending 25th May 1915

Labour + teams, excavating + carting	£ 86.13.3½
Explosives used, powder, gelignite &c.	10.12.6
Gear, tools and stores	5.0.0
Interest and depreciation on plant	15.5

£ 103.1.2½ ✓

Length of embankment 540 feet

Amount of material tipped in embankment
1430 cubic yards

∴ cost of handling = 1/5¼ per cu. yd. ✓

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

E. A. Broadbent.

To

2nd July 1915

THE ENGINEER.

Cost of Excavating Sandstone from Cliff
and Tipping in site of Embankment
at St. George's Bay Reclamation.

Week ending 1st June 1915

Labour & teams, excavating & carting	£82. 3. 3
Explosives used, powder, gelignite &c.	10. 11. 6
Gear, tools and stores say	4. 0. 0
Interest & depreciation on plant	15. 5

Total cost £97. 10. 2.

Length of embankment 595 feet.

Amount of material tipped in embankment
1388 cubic yards.

∴ cost of handling = $1\frac{1}{4}\frac{2}{3}$ per cu. yd.

E. A. Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

9th June 1915

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 8th June 1915

Labour & teams, excavating & carting	£ 71. 6. 0 $\frac{3}{4}$
Explosives used, powder, gelignite etc.	6. 10. 6
Gear, tools and stores say	3. 10. 0
Interest & depreciation on plant	19. 5

£ 82. 5. 11 $\frac{3}{4}$ ✓

Length of embankment 638 feet.

Amount of material tipped in embankment
1146 cubic yards

∴ cost of handling = 1/5 $\frac{1}{2}$ per cu. yd. ✓

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

E. Broadbent.

To

16th June 1915

THE ENGINEER.

Cost of Excavating Sandstone from Cliff
and Tipping in Site of Embankment
At St. George's Bay Reclamation.

Week ending 15th June 1915

Labour & teams, excavating & trucking	£ 94.19.3
Explosives used, powder, gelignite &c.	9.14.0
Gear, tools and stores say	4.0.0
Interest & depreciation on plant	19.5

Total cost £109.12.8 ✓

Amount of material tipped in embankment
1470 cubic yards.

∴ cost of handling = 1⁵/₈ per cu. yd.

Length of embankment 700 feet.

E. Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

E. A. Broadbent

To

23rd June 1915

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in Site of Embankment
at St. George's Bay Reclamation.

Week ending 22nd June 1915.

Labour & teams, excavating & trucking	£ 53 · 3 · 9 $\frac{1}{4}$
Explosives used, powder, gelignite &c.	3 · 15 · 6
Gear, tools & stores say	1 · 10 · 0
Interest & depreciation on plant	19 · 9

Total cost £ 59 · 9 · 0 $\frac{1}{4}$ ✓

Amount of material tipped in embankment
722 cubic yards.

∴ cost of handling = 1/7 $\frac{3}{4}$ ✓ per cu. yd.

Length of embankment 725 feet. About 10 feet of end of embankment having been washed away yesterday.

Note. Increase in cost per cubic yard is due to excavation work being able to be carried on for 2 $\frac{1}{2}$ days only during the week, the remainder of the time being too wet to allow of working.

E. A. Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent.

To

30th June 1915

THE ENGINEER.

Cost of Excavating Sandstone from Bluff.
and Tipping in site of Embankment
At St. George's Bay Reclamation.

Week ending 29th June 1915.

Labour & teams, excavating & trucking	£ 98. 6. 4 $\frac{1}{4}$
Explosives used, powder, gelignite &c.	6. 10. 0
Gear, tools and stores say	5. 0. 0
Interest & depreciation on plant	19. 9

Total cost £ 110. 16. 1 $\frac{1}{4}$ ✓

Amount of material tipped in embankment
1532 cubic yards.

∴ cost of handling = 1 $\frac{1}{5}$ $\frac{3}{8}$ per cu. yd.

Length of embankment 765 feet.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

E. Broadbent.

To

7th July 1915

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and Tipping in site of Embankment
at St. George's Bay Reclamation.

Week ending 6th July 1915.

Labour + teams, excavating + trucking	£ 100.17.10 $\frac{1}{4}$
Explosives used, powder, gelignite &c.	6.10.0
Gear, tools and stores say	5.0.0
Interest and depreciation on plant	1.2.6

Total cost £ 113.10.4 $\frac{1}{4}$ ✓

Amount of material tipped in embankment
1580 cubic yards.

∴ cost of handling = 1 $\frac{1}{5}$ ⁰/₄ per cu. yd.

Length of embankment 790 feet.

E. Broadbent.

(See Eng. File 116)
 file 720
 719

ST GEORGES BAY RECLAMATION

Cliff Cutting, Campbell's Point & Tipping on Site of Embankment.

WEEK ENDING	INTEREST & DEPRECIATION	LABOUR EXCAVATING TIPPING &c	EXPLOSIVES	GEAR & TOOLS.		TOTAL COST.	CUBIC YARDS	AVERAGE COST PER CUB. YD.
1916	£ 0 0	£ 0 0	£ 0 0	£ 0 0		£ 0 0		
	92.17.1	3973.13.3	347.5.7	183.15.0	Brought forward.	4597.10.11	62840	1/5.55
April 11.	1.9.6	64.3.1	5.18.0	3.0.0		74.10.7	812	1.10
18	1.9.6	62.10.9	8.7.6	3.5.0		75.12.9	928	1.7 1/2
25	1.9.6	41.14.1	5.4.0	2.0.0		50.7.7	650	1.6 1/2
May 2.	1.9.6	66.8.0	6.5.6	2.10.0	Lost to timber, On Hoff Roadway	76.13.0	884	1.8 1/2
9	1.9.6	65.17.7	8.9.6	3.0.0	do	81.16.7	1054	1.6 1/2
16	1.9.6	50.6.3	1.11.0	2.5.0	do	55.11.9	660	1.8 1/2
23	1.9.6	76.11.11	5.17.6	3.10.0	do	87.8.11	1032	1.8 1/2
30	1.9.6	69.12.9	8.8.0	3.5.0	do	82.15.3	928	1.9 1/2
June 6.	1.9.6	67.0.9	14.9.0	2.5.0	do	85.4.3	872	1.11 1/2
13	1.15.10	82.1.8	7.12.6	3.0.0	do	94.10.0	964	1.11 1/2
20	1.15.10	103.14.8	12.1.0	5.10.0	do	123.1.6	1457	1.8 1/2
27	1.15.10	56.16.8	3.17.6	1.15.0	In reclamation	64.5.0	568	2.3 1/2
July 4.	1.15.10	58.19.1	2.4.6	2.0.0	do	64.19.5	691	1.10 1/2
11	1.15.10	66.13.8	4.10.0	2.8.0	do	75.7.6	780	1.11 1/2
18	1.15.10	102.5.10	4.2.0	4.0.0	do	112.3.8	1278	1.9
25	1.15.10	97.18.10	5.4.6	3.10.0	do	108.9.2	1214	1.9 1/2
August 1.	1.15.10	95.5.10	4.18.6	4.0.0	do	106.0.2	1196	1.9 1/2
8	1.15.10	-	-	-	do	1.15.10	-	-
15	1.15.10	45.19.1	3.12.0	2.15.0	do	84.1.11	904	1.10 1/2
Total to date, -	124.0.11	15280.13.9	459.18.1	237.13.0	do	612.5.9	74722	1.8 1/2
22	1.15.10	60.6.11	3.1.0	2.0.0	do	67.3.9	698	1.11
29	1.15.10	65.11.3	3.0.6	2.5.0	do	72.12.7	804	1.9 1/2
September 5	1.15.10	62.19.4	4.10.0	2.15.0	do	72.0.2	822	1.9
12	1.15.10	61.11.2	3.8.6	1.10.0	do	68.5.6	670	2.0 1/2
19	1.15.10	56.16.0	2.3.0	1.10.0	do	62.4.10	606	2.0 1/2
26	1.15.10	50.14.1	3.18.6	1.5.0	do	57.13.5	562	2.0 1/2
October 3	1.15.10	36.1.10	0.18.0	1.0.0	do	39.15.8	376	2.1 1/2
10	1.15.10	26.14.1	1.7.6	0.15.0	do	30.12.5	288	2.1 1/2
17	1.15.10	33.4.3	2.13.6	1.0.0	do	38.13.7	386	2.0
24	1.15.10	17.8.8	-	0.8.0	do	19.12.6	162	2.5
	141.19.3	5752.1.4	484.18.7	252.1.0		6621.0.2	85096	1/6.7.

ST. GEORGE'S BAY RECLAMATION.

Cliff Cutting, Campbell's Point & Tipping on Site of Embankment.

Week Ending	Interest & Depreciation	Labour Excavating Tipping, etc.	Explosives	Gear & Tools	Total Cost	Cubic Yards	Average Cost per C.Y.
From Commencement 16 Feb. to Mar. 9.	0 2.7	89.3.2	18.10.0	2.0.0	109.15.9	856	2-6 $\frac{3}{4}$
16.	0 3.11	54.6.6	15.10.0	1.5.0	71.5.5	736	1-11 $\frac{1}{4}$
23.	0 3.11	52.8.11	6.11.0	1.5.0	60.8.10	564	2-1 $\frac{3}{4}$
30.	0 7.1	56.11.3	9.0.0	1.5.0	67.3.4	760	1-9 $\frac{1}{4}$
April 6.	0 7.1	48.8.5	2.17.7	1.0.0	53.12.1	590	1-9 $\frac{1}{4}$
13.	0 7.1	81.0.5	11.8.3	1.5.0	94.0.9	1168	1-7 $\frac{1}{2}$
20.	0 9.11	84.11.5	8.3.0	1.10.0	94.14.4	1344	1.5
27.	0 12.7	70.7.7	12.13.0	3.0.0	86.13.2	1152	1.6
May 4.	0 12.7	82.12.11	9.0.0	3.10.0	95.15.6	1396	1-24 $\frac{1}{2}$
11.	0 12.8	55.4.9	9.5.0	2.10.0	67.12.5	892	1-6 $\frac{1}{2}$
18.	0 13.6	87.17.10	11.19.6	4.0.0	104.10.10	1410	1-5 $\frac{3}{4}$
25.	0 15.5	86.13.4	10.12.6	5.0.0	103.1.3	1430	1-5 $\frac{1}{4}$
June 1.	0 15.5	82.3.3	10.11.6	4.0.0	94.10.2	1388	1-24 $\frac{1}{8}$
8.	0 19.5	71.6.1	6.10.6	3.10.0	82.6.0	1146	1-5 $\frac{1}{4}$
15.	0 19.5	94.19.3	9.14.0	4.0.0	109.13.8	1470	1-5 $\frac{3}{8}$
22.	0 19.9	53.3.9	3.15.6	1.10.0	59.9.0	722	1-7 $\frac{1}{4}$
29.	0 19.9	98.6.4	6.10.0	5.0.0	110.16.1	1532	1-5 $\frac{3}{8}$
July 6.	1 2.6	100.17.10	6.10.0	5.0.0	113.10.4	1580	1-5 $\frac{1}{4}$
13.	1 2.6	68.8.8	2.0.0	4.0.0	75.11.2	1116	1-24 $\frac{1}{4}$
20.	1 9.1	100.10.3	2.10.0	5.0.0	109.9.4	1942	1-1 $\frac{1}{8}$
27.	1 9.1	70.2.0	3.0.6	3.0.0	77.11.7	1154	1-4 $\frac{1}{8}$
August 3.	1 15.0	102.15.0	6.6.0	4.10.0	115.6.0	1790	1-3 $\frac{1}{2}$
10.	1 15.0	84.3.1	3.16.6	2.10.0	92.4.7	1178	1-6 $\frac{3}{4}$
17.	1 15.0	90.19.10	6.9.6	2.15.0	101.19.4	1254	1-7 $\frac{1}{2}$
24.	1 15.0	63.6.6	2.16.0	2.0.0	69.17.6	966	1-5 $\frac{3}{8}$
31.	1 15.0	81.6.8	4.8.0	3.0.0	90.9.8	1204	1-6.
Sept 7.	1 15.0	75.6.1	5.17.0	3.10.0	86.8.1	1250	1-4 $\frac{1}{8}$
14.	1 18.8	67.19.9	2.15.0	2.10.0	75.3.5	960.	1-6 $\frac{3}{4}$
21.	1 18.8	57.13.1	3.2.0	3.0.0	65.13.9	910	1-5 $\frac{3}{8}$
28.	2 4.2	71.17.0	4.6.0	5.0.0	83.7.2	1218	1-4 $\frac{1}{2}$
Oct 5.	2 4.2	75.17.2	4.13.0	5.0.0	87.14.4	1254	1-4 $\frac{3}{4}$
12.	2 4.6	77.12.4	5.16.0	4.0.0	89.12.10	1268	1-5
19.	2 4.6	81.13.11	3.12.0	5.0.0	92.10.5	1442	1-3 $\frac{3}{8}$
26.	2 4.10	63.11.2	6.8.6	3.0.0	75.4.6	1112	1-4 $\frac{1}{4}$
Nov 2.	2 4.10	83.3.3	7.9.0	5.15.0	98.12.1	1502	1.3 $\frac{3}{8}$
9.	2 5.6	61.17.6	5.16.6	2.10.0	72.9.6	976	1.5 $\frac{3}{8}$
16.	2 5.6	76.10.8	8.0.0	4.10.0	91.6.2	1364	1.4
23.	2 6.5	81.7.10	5.13.9	3.0.0	92.8.0	1090	1.4 $\frac{1}{2}$
30.	2 6.5	80.2.6	3.9.0	3.5.0	89.2.11	1332	1.5 $\frac{3}{8}$
Dec 7.	2 7.2	81.10.6	6.8.6	3.10.0	93.16.2	1234	1.6 $\frac{1}{4}$
14.	2 7.2	74.10.5	6.3.0	4.10.0	84.10.7	1236	1.5
21.	2 7.2	79.3.6	8.6.0	4.0.0	93.6.8	1276	1.5 $\frac{5}{8}$
28.	2 7.2	38.2.8	2.1.0	1.10.0	44.0.10	614	1.5 $\frac{1}{2}$
1916, January 4.	2 7.2	32.9.14.4	1.0.6	0.10.0	18.14.0	188	2.0
11.	2 7.2	68.10.4	5.12.6	4.0.0	80.10.0	1148	1.4 $\frac{1}{8}$
18.	2 7.2	67.10.11	4.19.0	3.10.0	78.7.1	1042	1.6
25.	2 7.2	56.10.11	6.6.0	4.10.0	69.14.1	1094	1.3 $\frac{3}{8}$
February 1.	2 7.2	45.19.9	12.0.0	2.0.0	62.6.11	774	1.7 $\frac{1}{8}$
8.	2 7.2	53.6.5	3.12.0	3.10.0	62.15.7	882	1.5 $\frac{5}{8}$
15.	2 7.2	54.13.5	2.17.6	4.0.0	63.18.1	920	1.4 $\frac{1}{2}$
22.	2 7.2	60.7.9	3.13.0	3.10.0	69.17.11	1056	1.4
29.	2 7.2	60.9.3	.	3.10.0	66.6.5	1174	1.1 $\frac{1}{2}$
March 7.	2 7.2	57.16.2	1.3.6	3.0.0	64.6.10	910	1.5
14.	2 7.2	58.17.11	2.4.0	3.5.0	66.14.1	928	1.5 $\frac{1}{4}$
21.	2 7.2	44.5.1	3.7.0	2.15.0	52.4.3	696	1.6 $\frac{3}{8}$
28.	1 9.6	40.15.5	3.17.0	2.0.0	48.1.11	626	1.6 $\frac{1}{2}$
April 4.	1 9.6	49.19.3	5.9.6	3.0.0	59.18.3	724.	1.7 $\frac{1}{8}$
comes forward	92.17.1	3973.13.3	327.5.7	183.15.0	4597.10.11	62040	1 $\frac{7}{55}$

£3732.5.6

50678

Auckland Harbour Board.

MEMORANDUM.

FROM

719

A Broadbent

To

10th March 1915

THE ENGINEER.

FIRST REPORT

Cost of Excavating Sandstone from Campbell's Point Bluff, and tipping on site of Embankment at Reclm. St. George's Bay.

(From commencement of work to 9th March 1915.)

Plant employed

2 end-tipping trucks of capital value	£33.0.0
Interest and depreciation at say 20% per annum for 1 week	= £ 2.8
Labour excavating, tipping etc.	89.3.2
Explosives used powder, gelignite etc.	18.10.0
Gear tools and stores say	2.0.0

Total cost £109.15.10

Amount of material dumped in embankment
856 cubic yards

∴ cost of handling = 2/6³/₄ per cu. yd.

Note. The cost of working the material is now about 1/5 per cu. yd.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

18th March 1915

THE ENGINEER.

Cost of Excavating Sandstone from Bluff
and tipping in Site of Embankment
at Reclamation St. George's Bay.

Week ending 16th March 1915

Sabour excavating tipping &c.	£ 54. 6. 6 $\frac{1}{4}$
Explosives used, powder gelignite &c.	15. 10. 0
Gear, tools and stores say	1. 5. 0
Interest and depreciation on plant	3. 11

Total cost £ 71. 5. 5 $\frac{1}{4}$ ✓

Amount of material tipped in embankment
736 cubic yards.

∴ cost of handling = 1 $\frac{11}{16}$ ✓ per cu. yd.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent.

To

25th March 1915

THE ENGINEER.

Cost of Excavating Sandstone from Cliffs
and Tipping in site of Embankment.
At Reclamation St. George's Bay.

Week ending 23rd March 1915

Labour excavating, tipping etc.	£ 52. 8. 11½
Explosives used	6. 11. 0
Gear, tools and stores say	1. 5. 0
Interest and depreciation on plant	3. 11

Total cost £ 60. 8. 10½

Amount of material tipped in embankment
564 cubic yards.

∴ Cost of handling = $\frac{d. 10.}{2} \frac{1}{4}$ per cu. yd.

Note. The increase in cost is chiefly due to the wet weather experienced during last week.

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

A Broadbent

To

1915

THE ENGINEER.

Cost of Excavating Sandstone from Cliffs
and Tipping in site of Embankment
at Reclamation St. George's Bay.

Week ending 30th March 1915.

Labour & teams, excavating, carting &c.	£ 56 · 11 · 3 $\frac{1}{2}$
Explosives used, powder, gelignite &c.	9 · 0 · 0
Wear, tools and stores say	1 · 5 · 0
Interest & depreciation on plant	7 · 1

£ 67 · 3 · 4 $\frac{1}{2}$ ✓

Amount of material tipped in embankment
760 cubic yards.

∴ cost of handling = 19 $\frac{1}{2}$ per cu. yd. ✓

A Broadbent.

Auckland Harbour Board.

MEMORANDUM.

FROM

R. A. Basley

5th Georges Bay

To

THE ENGINEER.

7th April 1915

Cost of excavating Sandstone from Cliff and tipping in site of
embankment at Reclamation 5th Georges Bay. Week ending 6th April 1915

Labour and teams, excavating, carting etc.	£ 48.9.5
Explosives used, powder, gelignite etc.	3.17.7
Gear, tools, and stores say	1.0.0
Interest and depreciation on plant	7.1
	<u>£ 53.13.1</u>

Amount of material tipped in embankment. 590 cub. yds.
∴ Cost of handling = $19\frac{1}{2}$ per cub yd.

Auckland Harbour Board.

MEMORANDUM.

FROM

R. A. Basley

St Georges Bay



TO

THE ENGINEER.

14th April 1915

94592

Cost of excavating Sandstone from Cliff and tipping in site
of embankment at Reclamation St Georges Bay Week ending 13th April

Labour & teams excavating carting etc	81.0.5 ¹ / ₄
Explosives used, powder, gelignite etc.	11.8.3
Gear, tools, & stores say	1.5.0
Interest & depreciation on plant	7.1
Total cost	£ 94.0.9 ¹ / ₄

Amount of material tipped in embankment. 1168 cubic yards
∴ Cost of handling = 1/7¹/₃ per cubic yard.

Auckland Harbour Board.

MEMORANDUM.

FROM

e Broadbent.

To

22nd April 1915

THE ENGINEER.

Cost of Excavating Sandstone from bluff
and Tipping in Site of Embankment.
at Reclamation St. Georges Bay.

Week ending 20th April 1915

Labour and teams, excavating carting etc.	£ 84 · 11 · 4½
Explosives used, powder, gelignite etc.	8 · 3 · 0
Gear, tools and stores say	1 · 10 · 0
Interest and depreciation on plant	9 · 11

Total cost £94 · 14 · 3½

Amount of material tipped in embankment
1344 cubic yards.

∴ cost of handling = 1/5 per cu. yd.

e Broadbent.

