

Henrick Northumberland Co. 7-137

80 ft + 1 Level

YEAR - -	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	MEANS.
January - -							.85	1.35	.40	.92	
February - -							.89	1.15	.25	.66	
March - - -							2.98	1.53	.64	1.10	
April - - -							1.41	2.65	.94	1.06	
May - - - -							1.15	1.12	2.37	.25	
June - - - -							2.19	2.34	1.99	1.55	
July - - - -							.94	.97	1.88	3.43	
August - - -							3.20	2.19	3.66	1.56	
September -							3.49	4.20	2.03	1.64	
October - - -							.80	.89	3.58	2.50	
November - -							.86	2.10	2.92	1.72	
December - -							3.82	.28	1.85	2.45	
TOTALS -							22.58	20.77	22.51	18.84	

6-8 Type 7-76
Nat Club Trans

Rainfall at *Howick* *Northumberland*

60

1 m W of Sea.

Fred & Moore

12.5 66

10 65 68

129 65

Diameter of Gauge, in.

Height above Ground, ft. in.

Above Mean Sea Level, 12.0... ft. 68

YEAR - -	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	MEANS.
January - -				1.56	1.05	1.86	2.24	4.97	1.90	2.68	
February - -				.21	2.90	.70	2.24	.71	1.32	1.34	
March - - -				.95	2.75	.96	3.62	1.75	1.59	1.33	
April - - - -				.96	.35	1.02	1.73	1.63	2.85	1.17	
May - - - - -				1.35	1.65	5.06	.99	1.87	.70	2.26	
June - - - - -				3.22	.52	.55	1.47	1.34	.37	1.79	
July - - - - -				1.06	.64	2.18	4.62	3.80	.78	.43	
August - - -				2.57	1.62	4.25	2.81	2.49	3.06	1.55	
September -				3.10	2.40	.32	3.76	2.34	3.85	3.31	
October - - -				3.12	4.24	7.11	1.94	1.43	2.26	2.19	
November -				1.24	1.51	3.13	1.18	.43	2.53	2.39	
December -				2.49	2.38	1.42	2.28	2.22	4.01	2.22	
TOTALS -				21.83	22.01	20.64	28.88	24.98	25.22	22.66	

g about 1 m from the sea a thin plantation about 40 yds distant.
Returns go back some years but Dr Grey has no confidence in them before 1863.

Up to Oct: 1865 the g. was a 12" float with its mouth 4 ft above the ground, outside the garden, with a thin belt of trees 120 ft off in N & E and a high garden wall 35 ft to the W of it.

In Nov: 1865 and thenceforward an 8 in 12 1/2 g. was partly sunk in the garden, surrounded by moss to prevent splashing - walls to N & E distant about 35 ft - the gauges agree.

RAINFALL AT *Howick*

Lat.....

Lon.....

County of.....

Northumberland

Rain Gauge, by.....

Observed.....

Leah Green, N. B.

Diameter.....	.8	.	.	.	.	.	.	.	.	.	.	.
Height.....	.42	.	.	.	.	.	.	.	.	.	.	.
Altitude.....	121	.	.	.	.	.	.	.	.	.	.	.
YEAR.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....	1.74	.94	2.85	1.24	1.59	2.99	.67	3.53	3.34	1.59	2.048	
February.....	2.76	2.85	2.74	2.35	1.10	1.76	4.14	1.90	1.16	3.55	2.431	
March.....	.97	.62	4.13	2.10	.72	.78	2.69	3.19	1.22	.84	1.726	
April.....	.46	3.66	1.99	.80	1.46	1.03	3.66	4.05	1.11	2.15	2.037	
May.....	1.48	1.28	2.82	1.49	2.39	.75	1.34	2.88	2.61	2.73	1.977	
June.....	.78	1.39	1.47	1.19	.43	2.83	3.02	1.66	2.60	3.80	1.917	
July.....	.62	4.15	2.70	3.11	1.96	2.33	1.53	3.46	.60	5.56	2.602	
August.....	1.00	1.33	2.63	2.75	3.17	1.70	2.41	6.89	5.16	3.63	3.067	
September.....	1.44	3.19	5.00	2.35	1.70	3.20	3.32	2.25	2.59	.86	2.590	
October.....	2.88	2.95	6.88	3.23	1.31	3.66	1.65	4.48	2.48	.91	3.033	
November.....	3.47	1.28	4.04	1.86	4.07	4.24	4.55	2.04	5.54	3.06	3.418	
December.....	5.39	1.88	4.07	.97	4.99	2.06	8.13	1.99	4.48	1.14	3.510	
TOTALS.....	22.99	25.52	41.32	23.44	24.89	27.23	37.11	38.32	32.89	29.82	30.353	

1871 Gauge about 1 mile W from the Sea & 12 yards S of a wall 10 ft. high 14 yds W from a wall 10 ft. high 40 yds S & 80 yds W from a thin belt of deciduous trees

Howick church 500 yds E.S.E.

RAINFALL AT *Howick Hall*

Lat. _____

Lon. _____

County of

Northumberland

Rain Gauge, by _____

Observer *St. Hon. Earl Grey, &c.**Coquett 5*

Diameter	8										
Height	10										
Altitude	121	1									
Year	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	MEANS.
January	51	1.63	.62	1.93	3.30	1.02	2.32	1.45	1.24	1.27	1.529
February	1.99	3.15	.76	2.46	1.22	1.22	1.08	.34	1.28	1.01	1.451
March	2.01	2.99	1.64	2.36	2.63	1.67	3.08	1.67	3.18	2.42	2.365
April	1.22	1.17	3.48	1.25	1.80	2.40	1.36	.83	1.48	2.63	1.762
May	1.48	2.38	2.03	1.57	1.13	3.08	3.18	1.60	.97	2.46	1.988
June	1.55	1.44	4.21	2.80	.84	1.14	1.51	.25	2.44	.58	1.676
July	3.05	3.22	3.16	4.61	3.33	1.58	3.65	2.75	4.60	3.06	3.301
August .....	.74	6.29	2.75	1.73	.78	1.81	1.08	1.80	1.78	3.74	2.250
September	4.94	5.29	1.02	3.47	1.99	3.43	2.16	5.40	1.55	1.66	3.121
October	3.66	3.09	3.50	1.94	1.66	3.41	4.32	2.18	.93	3.96	2.865
November	4.02	3.01	3.25	1.57	1.91	1.76	3.47	2.75	4.50	.59	2.683
December	3.63	2.66	4.36	2.02	2.12	.83	3.71	3.42	1.44	2.00	2.619
TOTALS	28.80	36.32	30.78	27.71	22.71	23.35	31.22	24.44	25.39	25.38	27.610

1880. *Howick*

500 yards S.E.

Wall 10ft high 30ft N

" 10ft " 42ft E

RAINFALL AT Howick Hall

Lat.

Lon.

County of Northumberland

Rain Gauge, by

Observer R. Nor-Earl GreyCognet - 5.W. H. Osborn N. H. Lamb

Diameter ..	8										
Height	0 10										
Altitude ..	121 ft										
Year	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	MEANS.
January ..	3.00	1.75	1.19	3.62	2.25	.67	2.33	1.65	1.54	1.22	1.922
February ..	5.45	2.31	1.46	1.27	3.41	1.17	1.36	1.21	1.08	2.08	2.080
March	2.37	2.05	1.18	1.10	1.95	2.32	1.39	1.28	3.34	5.83	2.281
April	1.32	1.28	1.89	1.92	1.56	2.66	1.05	1.66	1.45	3.06	1.785
May	1.11	2.53	3.04	1.56	3.21	.87	7.69	3.46	2.11	2.38	2.796
June	3.32	1.30	3.16	2.48	2.20	.39	1.77	4.49	.58	1.85	2.154
July	1.98	1.60	3.48	4.96	1.51	1.40	.84	1.52	2.15	3.42	2.286
August	4.97	2.39	1.54	3.66	3.56	3.84	4.26	2.23	1.83	3.10	3.138
September ..	.96	1.43	1.11	2.70	1.24	1.60	.52	.46	1.93	2.38	1.433
October	5.59	1.99	2.02	7.75	.80	4.46	5.17	5.03	2.03	2.66	3.753
November ..	3.84	4.61	1.83	2.75	4.45	5.22	2.37	2.28	1.72	1.29	3.036
December ..	2.19	4.91	3.87	2.86	2.43	.74	2.47	3.01	4.22	3.54	3.024
TOTALS ..	36.10	28.15	25.77	36.63	28.60	25.34	31.22	28.28	23.98	32.81	29.688

1900 Howick Church 500 yards S.E.

Garden Wall 10 ft high 30 to 42 ft N + E.

1903 Little Mill Station 1 1/2 miles W

1909 Trees 60-80 ft high 40-80 yards N.W.

RAINFALL at Howick HallCounty of NorthumberlandObserver R. H. Earl Gray G.C.M.S.River Basin Coquet & C 5W. H. Lambert
John Wright (19)

Rain Gauge, by _____

Diameter ...	8											
Height	0.10											
Altitude ...	121 $\bar{\pi}$											
Year ...	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	MEANS.	
January ...	2.78	2.47	3.56	3.57	(1.69)	3.02	1.18	2.44	3.50	3.81		1093
February ...	2.92	.74	3.01	.76	(1.64)	3.64	2.38	1.11	1.00	2.23		672
March .....	.53	2.08	2.10	2.89	(2.84)	2.51	3.14	1.84	.90	1.65		753
April	1.56	1.44	.18	3.37	(.65)	.75	.74	2.50	2.50	1.51		725
May	2.34	.67	2.23	3.43	(1.33)	1.26	2.78	1.40	3.00	.57		778
June	1.25	6.09	5.40	1.77	(2.97)	1.05	3.16	.82	.40	.69		507
July	2.22	.75	4.42	.47	(1.93)	2.99	4.06	1.75	3.00	1.33		1015
August	3.76	2.76	4.71	1.02	(1.72)	3.31	3.61	6.29	1.20	2.36		1346
September ..	1.51	2.33	2.92	2.30	(1.04)	2.15	2.49	1.10	5.10	1.92		1061
October ...	3.08	3.62	3.42	1.61	(2.50)	2.13	3.42	2.57	3.20	4.11		1330
November ..	4.05	2.98	2.57	1.94	(3.79)	2.21	3.18	1.81	1.00	4.41		1040
December ...	2.31	3.79	1.10	1.74	(3.95)	5.21	4.29	1.86	2.20	4.01		1236
TOTALS ...	28.31	29.72	35.62	24.87	22.8 (26.05)	30.26	34.43	25.49	N.R. (27.00)	28.60		11552

1913 Wells 10 ft high 10-14 yards N + E

10

14

E

1914 728 computed from Alnwick Castle.
1918

Date.	Lat. N.	Long.	Railway Station.	Distance.	Direction.	Church.	Distance.	Direction.
1911			Little mill	1½ mi	WNW	St Michaels Howick	500 yds	SE.

RAINFALL at Howick Hall GardensCounty of NorthumberlandObserver Mr. John Wright - (Gen. G. Earl Grey)River Basin Coquet & E. 5E. Woodman

GLAISHER Rain Gauge, by _____

Diameter ...	8											
Height	0.10											
Altitude ...	120							121				
Year	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930. Means.	
January ...	1.94	3.96	2.80	1.50	2.41	1.54	3.70	2.13	3.78	2.37	2.68	288.1
February ...	1.17	.18	2.80	4.30	1.40	3.75	2.87	1.14	.85	1.55	1.15	211.6
March	3.29	.84	1.80	1.10	.93	1.92	.33	2.45	3.46	.13	2.11	182.6
April	2.16	.75	2.40	2.30	1.60	2.47	1.96	1.69	1.77	1.37	1.89	203.6
May	3.69	1.53	1.90	2.37	6.27	2.81	2.42	2.39	.84	1.38	1.05	256.5
June .....	.74	.72	1.40	1.26	3.23	.16	2.81	3.08	6.09	1.98	1.00	224.7
July	3.75	2.59	6.60	1.32	3.55	2.71	4.36	2.92	2.01	3.92	5.21	370.0
August	2.50	5.36	1.60	4.67	2.57	2.42	2.85	5.16	3.99	3.62	4.70	394.4
September...	2.87	1.26	3.70	2.65	2.84	3.55	3.99	4.85	1.19	.80	3.23	329.3
October	2.57	3.48	2.40	2.81	4.47	1.97	4.66	1.86	2.42	2.90	2.65	320.9
November...	.87	1.95	1.40	4.10	1.55	2.43	5.14	3.61	3.15	3.86	3.63	316.4
December...	4.53	1.17	3.20	4.03	2.66	3.81	.84	3.22	1.91	4.26	3.78	335.1
TOTALS...	30.08	23.79	31.00	32.41	33.48	31.59	35.93	34.56	31.26	28.24	32.88	345.42

1920 Wall 10 ft high 10 yds S & 14 yds E

1926 " " " " N. and E.

Trees 70-80 " 30 " N. & N.E.

Buildings 20 ft high, 20 yds E.

1922 roughly computed

from annual met. 7/3

months for Ashby/6

Position of Station on reduced Ordnance Survey } No. of Map _____
Map, 2 miles to 1 inch Series

Reference No. _____

Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Direction from gauge	Parish Church.	Distance from gauge	Direction from gauge
1920			Little Mill	1 1/2 mi	S.W.	Howick	500 yds	S.E.

RAINFALL at Howick Hall Gardens,County of NorthumberlandObserver The Rt. Hon. Earl Grey,River Basin Coquet & C. - S.Type of Gauge Glaisher.Annual Average 28.2 in. based on 35 years obs. un-weighted. Period of average 1881-1915 Ref. Ben

Diameter	8.							10	9			
Height	0.10.			9					10			
Altitude	21.			120				112	110			
Year	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	Means	
January	3.20	3.24	1.25	1.88	1.73	1.81	4.26	3.23	2.59	5.23	2.35	2757
February	2.00	1.50	.55	2.51	4.2	1.34	3.11	3.38	.70	1.10	2.38	1699
March	2.10	.82	3.04	1.18	3.01	1.55	2.44	5.07	.63	2.27	3.34	2335
April	4.30	3.17	1.88	2.28	5.71	4.05	4.81	8.4	.21	1.09	.73	2154
May	5.50	2.97	4.06	1.30	1.18	1.73	1.43	2.42	2.08	1.06	.76	1898
June	4.30	3.39	1.19	1.10	2.39	2.56	2.59	1.94	2.32	2.16	.85	2099
July	6.70	2.14	2.99	2.20	1.98	1.06	2.92	2.06	2.61	2.83	7.42	2821
August	2.60	3.56	2.21	1.99	3.16	2.92	1.45	3.15	2.52	1.12	1.28	2337
September	6.20	2.64	3.94	1.56	1.63	2.91	3.34	1.50	2.52	2.27	2.74	2505
October	6.20	1.68	4.87	4.38	3.81	3.56	1.65	3.05	3.76	3.31	2.62	3269
November	4.30	4.47	.99	2.98	3.12	3.34	2.78	1.55	2.66	2.28	3.97	2814
December	2.30	1.72	1.35	1.76	4.31	3.11	1.51	5.88	2.52	1.78	2.43	2737
TOTAL	(51.80)	31.30	28.31	25.12	32.45	29.94	28.46	35.07	26.63	26.50	30.87	29465

1931. Wall 12' high 30' N. Wall 12' high 20' E. Belt of trees 50' N.

* 1932. Annual total 5' too high.

1934 Belt of trees 40 yds N.

1936 Wall 10' high 30' N. Wall 10' high 42' E. Trees 80 yds E. Trees 40 yds N.

1937 Belt of trees 40' high 40 yds N.

1938 Wall 10' high 14 yds W. Wall 10' high 18 yds N.

entire data 3592/18

Position of Station on reduced Ordnance Survey Map, } No. of Map..... Reference No.....
1 mile to 1 inch Series

Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Direction from gauge	Parish Church.	Distance from gauge	Direction from gauge
1931.			Little Mill	1 m	N.W.	Howick	400 yds	S.E.

Station No. M 3592RAINFALL at Hamrick Hall Gardens

41

County of NorthumberlandObserver The Rt Hon Earl GreyRiver Basin Crook & C. S.Type of Gauge GlaisherAnnual Average 28.2 in. based on 35 years obs. un-weighted. Period of average 1821-1915 Ref B of NFile No. 236894/33

Diameter	8"											
Height	1' 0"											
Altitude	110'											
Year	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	Means	
January	2.87	3.23	3.40	1.00	4.75	1.17	2.74	7.86	1.03	1.54	2.959	
February	4.91	2.54	.72	1.64	1.62	.68	2.80	1.28	.81	3.53	2.053	
March	2.79	.80	.82	.81	.38	1.21	5.09 *71	.36	1.68	.78	1.434	
April	.74	.77	1.37	2.83	1.54	.92	3.82	2.71	.85	2.81	1.826	
May	1.61	2.47	2.99	2.84	3.94	2.35	1.94	1.39	.63	1.43	2.159	
June	.28	1.66	1.37	2.61	2.53	2.17	1.80	4.02	.97	1.58	1.899	
July	1.85	5.29	1.69	2.39	1.87	3.18	4.45	.84	1.82	3.21	2.659	
August	3.61	2.75	3.87	2.14	3.86	6.22	.11	7.90	2.08	3.63	3.617	
September	.74	2.96	2.83	4.98	2.24	2.90	1.58	2.26	1.03	3.39	2.491	
October	4.15	2.23	2.18	2.97	2.98	.99	.80	2.19	6.96	1.21	2.666	
November	3.26	.79	2.85	4.22	.84	4.17	2.84	1.41	3.08	5.85	2.931	
December	.54	1.86	1.01	2.10	2.37	3.06	1.76	2.45	2.48	2.77	2.040	
TOTALS	27.35 D	27.35 D	25.10 D	30.53 D	28.92 D	29.02 D	29.73 D	34.47 D	23.42 D	31.73 D	287.44	

Mean
annual
by 10/2/71

10

Ref. 12.9 of 236894/33. Autograph gauge kept by Kewmont (Hals) within half a mile.

Position of Station on reduced Ordnance Survey Map, 1 mile to 1 inch Series

No. of Map

Reference No

Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Direction from gauge	Parish Church.	Distance from gauge.	Direction from gauge.

BRITISH RAINFALL ORGANIZATION

Station No. 3592 m

51

RAINFALL at Hawick Hall Gardens

County of Northumberland

Observer The Rt Hon. Earl Grey

River Basin Loquett 96-5

Type of Gauge Glacier

Annual Average 28.2 in. based on 35 years obs. w. weighted. Period of average 1881-1915 Ref. J. N. P.
29.56 " " " " 1916-1950 File No. 236894/33

Diameter ...	8"			001 525								
Height ...	1' 0"			1								
Altitude ...	110'			51								
Year ...	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	Means	
January ...	2.80	2.19	1.14	2.59	1.83	4.04	2.49	2.82	3.56	3.93	27.39	
February ...	2.73	1.01	1.24	2.69	2.84	1.77	2.80	2.95	.24	3.19	21.46	
March ...	3.54	1.86	.13	1.41	1.68	.92	1.95	3.52	.79	1.74	17.54	
April ...	3.18	1.23	2.57	.40	.81	1.15	.36	1.91	2.34	0.70	14.65	
May ...	3.25	1.81	1.77	2.68	1.70	.37	1.95	2.63	.53	1.91	18.60	
June ...	1.74	2.22	2.37	1.62	1.48	1.31	.94	2.16	2.16	1.34	17.34	
July ...	2.17	1.65	3.44	2.01	1.09	3.21	3.08	3.74	1.76	3.47	25.62	
August ...	3.61	2.43	2.79	5.44	.58	7.74	4.84	2.06	.50	2.74	32.73	
September ...	.93	3.47	1.85	2.75	.78	2.66	2.40	2.15	1.04	2.32	20.35	
October ...	.76	3.40	1.49	3.97	2.50	1.65	1.68	1.52	1.73	6.31	25.01	
November ...	6.56	3.71	1.25	3.28	1.80	1.35	1.44	.55	5.75	(3.22)	28.91	
December ...	1.27	4.66	.98	1.49	4.01	2.61	2.06	3.67	4.25	2.15	27.15	
TOTALS ...	32.54	29.64	21.02	30.33	21.10	28.78	25.99	29.68	24.15	33.02	276.75	10
	D	D	D	D	D	D	D	D	D	D		

00024

Bathographic gauge, built by Kew (H.M.) within 5 miles

(8th & Average)

Position of Station on Ordnance One-Inch map :

No. of Map

National Grid Reference NV46247175

Date.	Lat. N.	Long.	Railway Station.	Distance Direction from gauge	Parish Church.	Distance Direction from gauge.

Summary of Earlier Records from 10-year Sheets :

1916-1950, P-accepted

Record D, or d	1910-19	1920-30	1931-40	1941-50	1951-60
C1863	1910-13, 15-17, 19	1920-21, 23-30	✓	✓	
	✓	✓	✓	✓	