

## Lowther Castle

Josiah Parkes Esq for Lt Lowther

W<sup>m</sup> Bonny W

+ Ground 4 ft

+ Sea Level 840 ft

YEAR - -	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	MEANS.
January - -	7.03			7.72	3.29						
February - -	2.27			2.88	2.94						
March - - -	4.51			1.77	2.81						
April - - -	1.66			2.96	1.41						
May - - - -	2.57			2.27	1.20						
June - - - -	6.39			4.32	3.57						
July - - - -	2.64			1.26	1.48						
August - - -	5.09			3.82	1.51						
September -	1.25			6.33	4.83						
October - -	6.20			5.64	4.63						
November -	2.18			3.57	5.00						
December -	3.54			3.22	2.41						
TOTALS -	45.33			45.76	35.08						

1860 agrees with ppt by S. Marshall

# RAINFALL AT Louth Castle [Perrin] 70

Lat..... Lon..... County of... Westmorland  
 Rain Gauge, by..... Observer... M<sup>r</sup> W. Shand

Diameter.....						8	.	.	.	.	
Height.....					3.6	4.	3.6	.	.	.	
Altitude.....					750		.	.	.	.	
Year.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....					4.74	6.57	1.41	7.35	2.63	.87	
February.....					3.01	.69	4.00	2.91	1.85	2.05	
March.....					2.82	1.39	4.04	2.17	2.04	2.83	
April.....					3.05	.83	1.60	2.17	1.91	1.94	
May.....					1.48	1.86	.78	2.36	4.58	1.85	
June.....					1.56	4.31	2.10	1.56	2.30	3.06	
July.....					1.62	3.27	2.07	4.07	1.03	5.17	
August.....					4.48	1.94	4.23	2.45	3.68	7.04	
September.....					5.29	2.91	4.23	4.56	4.69	2.49	
October.....					9.67	2.97	3.58	6.70	4.81	1.34	
November.....					2.75	2.45	3.36	8.44	2.46	1.38	
December.....					2.79	2.04	6.69	3.34	2.92	2.88	
TOTALS.....		(158.00)			43.26	31.23	38.09	48.08	34.90	32.90	(38.64)

1870-1873 computed from Great Strickland  
 & Brougham Hall

# RAINFALL AT Lowther Castle

80

Lat. \_\_\_\_\_

Lon. \_\_\_\_\_

County of Westmorland

Rain Gauge, by \_\_\_\_\_

Observer W. N. Shand

Eden - 1

Mr. F. Clarke

Diameter ....	8											
Height .....	3.0					3.6		4.0	3.6			
Altitude ....	700											
Year .....	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	MEANS.	
January ....	.91	.14	(2.22)	7.60	6.32	1.88	3.08	3.29	2.19	4.58		
February ....	5.33	3.55	(2.33)	5.96	5.70	5.71	2.40	1.99	1.26	1.12		
March .....	2.07	3.87	(2.25)	3.04	3.38	1.26	2.94	1.97	2.32	1.55		
April .....	2.69	1.33	(4.22)	1.74	1.17	.49	5.65	1.85	2.03	2.39		
May .....	.34	2.12	(.89)	1.13	1.65	1.89	5.87	1.69	2.75	3.19		
June .....	4.06	2.72	(3.40)	3.44	.89	1.03	1.65	.14	1.29	1.12		
July .....	4.83	3.71	(4.62)	4.31	5.30	1.34	4.48	2.14	5.64	2.45		
August .....	1.29	4.95	(3.07)	1.52	.50	2.22	.98	1.86	2.96	4.10		
September ....	4.01	3.95	(2.07)	4.56	2.50	3.45	4.14	4.35	.68	1.77		
October .....	1.60	2.25	(2.74)	4.33	1.43	6.01	6.70	1.86	2.93	5.37		
November ....	3.99	7.36	(5.72)	4.77	3.57	3.16	3.50	3.46	6.58	1.91		
December ....	1.42	5.04	(3.37)	2.96	3.83	2.06	5.84	4.18	5.22	2.95		
TOTALS ....	32.54	40.99	(37.00)	45.36	30.24	30.50	47.23	28.78	35.85	32.50	36.69	

1882 estimated from Beighton Hall

Rejected from survey : 6" too low.



# RAINFALL AT Lowther Castle [Penrith]

Lat. \_\_\_\_\_ Lon. \_\_\_\_\_ County of Westmoreland

Rain Gauge, by \_\_\_\_\_ Observer Mr. F. Clarke

Eden - 1

Diameter ....	8										
Height .....	3 6					3 0				3 6	
Altitude ....	750 <sup>T</sup>									760	
Year .....	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	MEANS.
January ....	7.79	2.85	2.04	1.84	7.96	1.63	2.05	1.05	2.34	7.25	3.680
February ....	.48	.17	2.42	5.06	8.35	1.08	2.06	2.77	3.98	5.00	3.134
March .....	2.94	1.89	.92	1.65	5.09	4.63	4.96	6.52	1.20	2.76	3.256
April .....	2.35	1.00	.70	.54	2.40	1.64	2.35	2.30	3.29	2.75	1.932
May .....	2.87	2.42	3.41	2.08	2.64	1.69	.59	1.19	2.30	3.85	2.304
June .....	2.71	1.93	4.62	2.03	2.08	.96	3.02	3.07	2.32	.88	2.362
July .....	2.02	5.04	.80	3.52	3.02	5.53	3.35	1.16	1.46	4.58	3.048
August .....	3.75	7.07	6.24	4.12	3.70	3.87	1.90	5.98	4.33	1.32	4.228
September....	1.69	6.31	5.62	3.71	.57	2.82	6.57	3.90	1.10	5.42	3.771
October .....	3.22	7.57	6.54	4.05	4.24	4.53	6.47	2.98	3.02	2.41	4.503
November....	6.53	4.88	3.08	2.75	6.72	6.67	1.46	3.46	4.11	6.38	4.604
December ....	.50	7.58	.87	5.93	5.24	3.27	4.91	8.83	5.84	1.84	4.481
TOTALS ....	36.85	48.71	37.26	37.28	52.01	38.32	39.69	43.21	35.29	44.44	41.306

*Repeled from Survey 6" too low.*

# RAINFALL AT Lowther Castle [Penrith]

Lat. \_\_\_\_\_ Lon. \_\_\_\_\_ County of Westmoreland

Rain Gauge, by \_\_\_\_\_ Observer Mr F Clarke

Sheet - 1.

Diameter ..	8										
Height ....	3.0	5.0		4.0							
Altitude ..	750 I			760							
Year ....	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	MEANS.
January ..	4.01	2.26	2.17	4.01	5.56	1.68	5.22	.82	2.43	2.17	3.033
February ..	3.92	1.00	.73	7.40	4.22	2.18	1.64	2.38	3.15	1.73	2.835
March ....	.45	2.97	2.22	10.59	1.67	3.31	2.07	2.62	2.73	1.56	3.019
April .....	2.31	2.74	1.98	1.95	3.07	2.80	1.15	.91	1.76	2.29	2.096
May .....	2.65	1.54	2.29	3.00	2.26	.94	4.59	3.99	1.85	1.37	2.448
June .....	2.96	1.69	1.33	1.45	2.94	1.88	.88	3.32	1.32	2.34	2.011
July .....	1.56	1.87	3.80	2.95	1.54	1.05	1.40	1.23	1.93	3.86	2.119
August ....	5.66	3.07	1.88	3.50	3.63	3.90	4.04	1.79	2.39	2.97	3.283
September ..	2.02	1.65	2.12	5.00	1.29	2.68	.99	.31	2.87	2.33	2.126
October ....	6.40	3.31	2.72	7.98	.97	2.28	5.42	4.68	1.09	5.22	4.007
November ..	2.37	4.92	2.46	3.02	3.46	3.26	2.88	2.65	1.69	1.45	2.816
December ..	6.65	4.31	4.71	3.21	3.19	1.65	2.13	6.23	1.13	3.88	3.709
TOTALS ..	40.96	31.33	28.41	54.06	33.80	27.61	32.41	30.93	24.34	31.17	33.50

1903 Lowther Church 1 mile N.W.  
 Clifton Lowther Station 2 " N.E.  
 Gauge in open garden

Revised from survey : 6° too low.

Hub

RAINFALL at Loughmacleck [Penit]County of WestmorlandObserver Mr F. Clarke Mr J. Jeffrey 1914River Basin Eden 1Residing Rain Gauge, by N+Z

Diameter ...	8										
Height .....	4 0										
Altitude ...	760 T										
Year ...	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	MEANS.
January ...	3.90	1.18	3.50	3.73	1.21	(3.54)					
February ...	5.69	3.40	2.71	3.34	7.45	(6.87)					
March .....	2.21	1.62	3.85	4.58	4.82	(1.19)					
April .....	2.63	1.94	.85	5.69	1.20	(2.07)					
May .....	1.65	2.83	1.58	1.68	2.00	(1.67)					
June .....	1.10	3.77	3.91	1.10	1.63	(.75)					
July .....	2.72	.49	2.45	.14	2.62	(4.22)					
August .....	4.70	2.68	4.53	1.27	2.32	(2.62)					
September ..	.25	3.40	1.72	2.45	1.83	(1.19)					
October ...	1.81	2.98	2.66	3.79	.81	(.88)					
November ..	2.20	4.82	3.16	3.87	5.87	(1.46)					
December ...	3.23	9.00	4.54	5.01	9.87	(7.54)					
TOTALS ...	32.09	38.11	35.46	36.65	41.63	34.0					

1914 from house 20 ft high 40 ft N

Rejected from survey : 6" too low

Date.	Lat. N.	Long.	Railway Station.	Distance.	Direction.	Church.	Distance.	Direction.
	54.39.	2.40	Ripponden	2 m	NE	Loughmacleck	1 m	NW



## RAINFALL at LOWTHER CASTLE

County of WESTMORLAND

Observer M<sup>B</sup> J. JEFFREY

River Basin EDEN - 1

for Earl of Lonsdale

Clydesdale Rain Gauge, by

An. Av. 1916-50 42.15"

Diameter ...						5						
Height .....						1.0						
Altitude ...						760						
Year .....	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930.	MEANS.
January ...						7.01	6.36	4.95	9.63	.77	7.45	
February ...						6.52	3.78	1.74	4.35	.84	.45	
March .....						1.52	2.09	4.45	5.08	.14	2.96	
April .....						4.35	2.69	2.87	1.05	1.43	1.65	
May .....						4.79	1.84	2.25	1.61	2.92	1.79	
June .....						.16	3.57	2.89	5.32	1.69	1.99	
July .....						1.59	3.51	5.38	2.85	3.05	3.97	
August .....						2.80	3.89	7.45	6.31	4.46	8.73	
September...						4.24	4.47	5.97	1.65	1.92	3.40	
October .....						5.39	3.95	6.39	8.50	6.02	6.26	
November...						1.42	9.21	3.04	7.71	7.38	5.19	
December...						5.24	.98	1.46	3.74	10.16	6.21	
TOTALS...	No record kept during 1915 - 1924					46.15	46.44	45.84	57.20	44.78	50.05	
						D	D	D		D	D	

Note Record C1874 but ceased during war period 1915-1924  
See encl 6A File 688/24/26

Wine Jar 4 ft. high. 40 ft. N.

1930 Inspected June. Exposure & gauge satisfactory

Previous record 1874-1914 Rejected from survey: 6" too low. Re. new record 1925-32 = 41.8" O.K.

Position of Station on reduced Ordnance Survey  
Map, 2 miles to 1 inch Series

No. of Map

Reference No.

Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Direction	Parish Church.	Distance from gauge	Direction
1925			CLIFTON & LOWTHER					

RAINFALL at Penrith (Lowther Castle)County of WestmorlandObserver Mr. J. JeffreyRiver Basin Eden - 1Type of Gauge London BA 1942Annual Average 41.8 in. based on 8 years obs. un-weighted. Period of average 1925-1932 Survey Ref. Ar. W. She42.151916-50688124/26

Diameter	5.										
Height	1.0			1.6		1.0					
Altitude	760.			750							
Year	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	Means
January	3.97	9.41	6.85	5.42	2.40	6.98	5.84	6.75	6.92	(1.15)	
February	3.33	.11	4.24	.18	6.13	2.53	4.23	1.36	4.24	1.16	
March	.90	2.15	2.68	2.56	1.35	2.88	2.10	2.06	3.94	4.01	
April	2.43	4.55	1.45	3.43	4.23	1.11	2.07	.33	1.24	2.25	
May	2.66	3.33	3.64	3.46	.80	1.63	2.45	2.33	.59	1.33	
June	4.82	2.55	2.30	1.98	3.86	3.11	1.46	4.33	2.79	.98	
July	4.28	5.24	2.88	1.74	1.80	5.34	2.06	5.14	4.14	4.76	
August	4.05	.95	2.22	3.58	1.84	1.49	2.10	3.56	2.14	1.38	
September	2.04	4.54	1.95	4.64	7.12	4.33	3.11	2.13	1.68	4.26	
October	2.39	6.96	4.01	7.68	8.24	4.56	2.62	11.49	3.11	5.59	
November	9.00	2.90	1.87	.59	4.39	4.48	.96	8.51	6.51	5.32	
December	3.34	5.97	.52	7.74	2.52	7.56	2.82	4.61	1.96	3.84	
TOTALS	43.21	44.66	34.61	43.00	44.68	45.98	31.82	54.20	39.26	36.03	
	D.	D.	D.	D.	D.	D.	D.	D.	D.	D.	

1931. Wire fence 4' high 20' N. Wall 16' high 40' E. Trees 18' high 60' S.  
 1934. Wire fence 4' 6" high 40' N.  
 1939. Wall 16' high 40' E. Fence 4' 6" 18' N.  
 1940. Sun pane. east.

Average recorded 1925-1932 = 41.8. O.K.

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.			Blifton & Lowther	1m	N. E.	Lowther	2m	N. W.



Station No. 3689RAINFALL at Perrith (Lowther Castle)

41

County of Westmorland

Observer

Mr. J. JefferyRiver Basin Eden - 1The Eden CatchmentType of Gauge B.A. StandardAnnual Average 41.8 in. based on 8 years obs. ~~un~~-weighted. Period of average 1925-1932 Ref. Survey42.15291916-50File No. 688124/26

Diameter	5"				604	760						
Height	1' 0"					1						
Altitude	750'					41						
Year	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	Means	
January	76	3.72	7.18	4.13	3.36	4.32	5.45	8.82	2.37	2.98		
February	5.27	2.99	3.59	2.06	3.69	3.77	1.13	3.36	3.39	5.19		
March	2.79	2.23	.92	.59	2.13	1.90	6.71	3.41	.95	2.52		
April	.61	3.25	3.18	1.98	1.93	1.26	7.75	2.58	4.41	2.56		
May	2.84	3.27	3.53	1.25	4.25	.77	3.16	2.03	2.68	2.19		
June	.24	.76	3.22	1.98	3.68	3.39	3.20	5.28	.37	1.57		
July	1.53	2.38	1.86	2.83	2.63	3.62	2.90	1.45	2.16	3.95		
August	5.79	4.37	7.07	.97	1.62	4.76	.06	4.52	1.85	6.74		
September	1.06	3.75	4.50	5.21	3.48	6.01	2.83	3.70	1.14	8.07		
October	5.26	3.72	4.38	4.84	6.10	.96	.59	2.83	6.39	3.92		
November	3.09	1.06	3.31	8.43	.40	7.65	4.70	2.52	6.19	3.77		
December	2.33	6.51	2.69	5.45	2.69	4.50	1.69	5.33	7.25	2.48		
TOTALS	31.57	38.01	45.43	39.72	35.96	42.91	40.17	45.83	39.15	45.94		
	d	d	d	d	d	d	d	d	d	d		

1941:- Fence 5' high 30' S.  
 1944 - 5' 8" 60' S.

Position of Station on reduced Ordnance Survey Map, } No. of Map.....

1 mile to 1 inch Series

Reference No. 35-525329

Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Direction from gauge	Parish Church.	Distance from gauge	Direction from gauge
1941			Glifford & Lowther	1 mile	N.E.	Lowther	1 mile	N.W.

BRITISH RAINFALL ORGANIZATION

Station No. 3689

See 3689/1

RAINFALL at Penrith (Lowther Castle)

51

County of WestmorlandObserver Mr. J. Jeffery, Esq.River Basin Eden-1Mr. WalkerType of Gauge SnowdonAnnual Average 41.8 in. based on 2 years obs. un-weighted. Period of average 1881-1915 Ref. S 20043/56File No. 68964/28

Diameter ...	5"				604	760					
Height ...	1' 0"					1					
Altitude ...	760'					51					
Year ...	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	Means
January ...	3.69	.97	*	3.60							
February ...	.80	1.08	3.65								
March ...	1.25	.95	3.85								
April ...	3.66	2.91	.56								
May ...	3.57	2.48	4.34								
June ...	1.93	2.67	2.81								
July ...	2.30	3.10	3.12								
August ...	4.13	4.53	4.85								
September ...	3.67	5.39	6.05								
October ...	7.78	3.53	9.59								
November ...	2.20	4.48	9.40								
December ...	5.62	2.29	4.65								
TOTALS ...	NR	40.60	33.78	56.47							
		d	d	d							

Inspected 28.7.56. in Dark. Gauge sound. Site satisfactory. Position at a. sh. h. Hall (not Lowther Castle) grid ref. 35/515239. Measure flat bottomed, replaced by tapes 31.7.56. (See next sheet).

Position of Station on Ordnance One-Inch map :

No. of Map.....

National Grid Reference 35-025329

Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Direction from gauge	Parish Church.	Distance from gauge.	Direction from gauge.
1952.			Clifton	1 ml.	NE	Lowther	1 ml.	NW

Summary of Earlier Records from 10-year Sheets :

Record D, or d	1910-19	1920-30	1931-40	1941-50	1951-60
3	10.14	25.30	✓	✓	
		✓	✓ but d 40	but d 41-42	