

RAINFALL at Cairdale House GrainCounty of WestmorlandObserver F. H. Hill & Sons.River Basin 1. EdenSnowdon Rain Gauge, by M+Z  
after Bradford

Diameter ...									6"		
Height .....									1-0		
Altitude ...									1638		
Year ...	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	MEANS.
January ...										6.14	
February ...										1.34	
March .....										4.44	
April .....										2.52	
May .....										1.45	
June .....										2.89	
July .....										1.58	
August .....										4.77	
September...										4.63	
October ...									# 11.89	2.63	
November ..									6.72	5.00	
December...									7.30	10.67	
TOTALS ...										47.13	

Reported from Quoy: 30" too fast.

+ 14.11.19 In railed in enclosure, 50 yds. N of stream, landslopes slightly to S.E. Second rate exposure owing to sweep of wind. Recommended moving 50 yds S.W. to side of stream, nearly level ground well sheltered all round.

H. Lewis said (XII-21) all recommendations have been carried out

Date.	Lat. N.	Long.	Railway Station.	Distance.	Direction.	Church.	Distance.	Direction.

RAINFALL at Cawdale Beck Howe GrainCounty of WestmorlandObserver Messrs G. H. Hill & Sons G.E.River Basin Eden 1.L. Holme Lewis CE (1921)Donardale Rain Gauge, by 129 ft.  
Coppin Bradford.Manchester Corp. W.W.

Diameter ...	5										
Height .....	1	0									
Altitude ...	1638						1642				
Year .....	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930 MEANS.
January ...	9.06	7.29	4.12	5.14	5.61	5.23	7.72	5.58	8.62	1.45	13.28
February ...	7.64	2.4	5.19	7.28	8.2	8.45	4.92	2.57	3.55	1.10	.86
March .....	11.40	7.57	3.86	3.46	1.37	1.97	1.32	5.00	6.75	.46	4.72
April .....	6.72	1.09	4.13	3.45	2.78	4.98	3.04	2.48	1.40	1.87	2.52
May .....	8.93	3.91	1.57	3.24	5.59	6.66	2.61	2.02	1.35	4.75	5.57
June .....	1.95	.30	2.58	1.78	1.93	.20	5.11	4.03	5.05	1.90	2.98
July .....	7.92	2.54	6.40	2.86	5.45	1.74	3.65	4.90	3.60	6.35	4.78
August .....	3.95	6.94	3.81	11.46	3.88	4.48	5.01	8.98	7.05	6.06	11.59
September...	3.10	1.70	4.67	6.84	7.57	4.07	4.85	6.53	2.68	2.60	4.30
October .....	2.91	2.15	2.29	12.06	5.58	6.36	3.96	3.00	14.78	8.24	12.24
November...	7.10	2.20	3.18	6.23	3.65	1.92	7.47	4.15	10.97	14.60	6.43
December...	6.99	5.64	11.88	5.76	14.20	6.27	.83	1.60	4.82	14.50	7.20
TOTALS...	77.67	41.63	53.62	69.56	58.43	50.42	50.49	55.84	70.62	63.88	76.17

1920. Gauge inspected 14.11.19. see last sheet.

Rejected from Survey: 30" too closePosition 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	Parish Church.	Distance from gauge	Direction

RAINFALL at Cawdale Beck (House Grain)County of Westmorland,Observer Manchester Corpn. W.W.River Basin Eden-1

Type of Gauge.....

Annual Average.....in. based on.....years obs. un-weighted. Period of average.....Ref.....

660604/26.

Diameter	5.										
Height	1.0.										
Altitude	1642.	1130 <sup>*</sup>									
Year	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	Means
January	4.45	16.81	14.10	11.76	3.20	10.50	11.27	11.80	14.95	2.82	10.66
February	3.97	.16	6.94	.43	10.48	3.93	7.80	3.55	9.64	2.91	6.98
March	.92	4.80	6.26	4.30	2.53	4.11	2.62	5.10	6.50	8.40	4.54
April	2.82	7.53	2.67	5.19	6.68	1.69	4.40	.70	2.80	2.97	3.75
May	4.36	4.45	3.49	5.93	.87	2.20	3.41	5.25	1.14	1.96	3.06
June	6.54	3.30	2.40	6.75	6.15	3.86	1.80	8.60	4.95	1.19	4.56
July	5.98	7.30	5.45	1.72	2.27	8.92	2.64	8.95	9.12	6.68	5.93
August	5.56	1.50	3.41	6.41	2.85	2.46	3.60	3.81	3.93	2.35	3.58
September	2.65	6.60	2.73	9.25	12.43	7.17	5.09	2.90	2.43	6.58	5.73
October	4.26	12.25	6.15	13.28	11.95	7.58	4.72	17.19	4.18	11.00	9.25
November	15.27	5.60	2.51	1.30	6.30	7.90	1.47	14.30	13.55	9.46	7.66
December	4.10	13.48	.59	13.70	3.85	13.16	3.32	7.40	4.10	6.43	7.03
TOTALS	60.88	83.78	56.70	80.02	69.56	73.48	52.14	89.55	80.29	62.75	70.95

\* Gauge moved in January 1930. Inc 892

Record prior to 1932 rejected as "far too small"; due to overexposure.

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	Parish Church.	Distance from gauge	Direction



Station No. TF 473623RAINFALL at Caudale Beck (House Grain)

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County of WestmorlandObserver Manchester Corps (W)River Basin Eden - 1

Type of Gauge

Annual Average ..... in. based on ..... years obs. un-weighted. Period of average ..... Ref. ....

676 computed by Mr Connish (1944)

FR200487/20

File No. 600524/36

172.487/32

Diameter	5"				601	352					
Height	1'0"					1					
Altitude	<del>1130'</del> 676					41					
Year	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	Means
January	1.57	7.25	14.12	9.10	6.40	10.40	11.06	16.55	4.83	4.49	85.77
February	7.15	2.27	6.05	3.32	7.55	(5.50)	(2.20)	6.40	6.46	9.76	56.66
March	3.08	5.20	2.95	1.32	5.32	4.38	(8.00)	7.05	1.78	5.68	44.76
April	2.12	6.22	5.10	3.73	3.53	2.06	15.43	2.33	8.10	4.64	55.26
May	3.87	7.21	6.90	2.47	5.19	1.97	4.07	2.68	3.97	3.15	41.48
June	.18	1.12	5.35	4.40	4.80	5.21	4.78	8.78	8.7	2.03	39.52
July	1.82	3.97	3.80	3.94	3.65	5.78	3.71	2.90	3.41	5.20	38.18
August	9.48	7.75	9.77	4.80	2.05	8.62	20	10.83	3.63	8.78	65.91
September	1.86	8.25	7.90	7.95	7.10	11.40	6.15	7.95	1.15	(12.43)	72.12
October	7.10	6.95	11.80	7.63	9.45	1.28	1.52	5.22	10.14	(5.47)	66.56
November	5.76	1.80	5.38	14.32	5.52	16.30	10.08	5.22	12.15	6.58	78.11
December	5.32	13.35	6.20	8.24	5.05	8.70	3.30	12.40	12.75	3.00	78.31
TOTALS	49.31 M.	71.34 M	85.32 M	71.22 M	60.61 M	81.60 M	70.50 M	90.29 M	69.24 M	71.21 M	720.64

1946 Feb. amended - gauge tampered with

1947 Feb. March est. sum.

1950 Sept - Oct approximated. Slightly low years total.

30004

00144

20004

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. 3683 T.F.

39

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RAINFALL at Cawdale Beck (Howe Grain)County of WestmorlandObserver Manchester Corpn. W.W.River Basin Eden-1Type of Gauge Bradford (om inspection)Annual Average 68.3 in. based on 20 years obs. un-weighted. Period of average 1881-1905 Ref. P.B. 633" " 71.04 " " 35 " " 1916-57 " " 1916-57 " " 1916-57 " " 1916-57" " 74.00 " " 24 " " 1932-57 " " 1916-57 File No. 1916-57

Diameter ...	5"				601	352					
Height ...	1' 0"					1					
Altitude ...	1130'					51					
Year ...	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	Means
January ...	6.32	6.50	2.60	6.40	7.15	5.10	15.40	9.20	6.88	11.95	77.50
February ...	(8.00)	1.55	2.54	(6.50)	3.15	1.35	8.84	8.40	1.50	11.15	52.98
March ...	(6.00)	4.05	1.06	(6.20)	2.00	3.10	6.15	1.72	5.45	2.38	38.11
April ...	(6.90)	5.12	5.63	.98	1.75	1.52	.88	2.25	7.45	6.38	38.86
May ...	2.30	(3.30)	3.70	5.50	6.95	4.00	3.20	6.64	1.35	2.73	39.67
June ...	2.00	3.84	3.10	4.15	3.65	4.80	1.50	5.99	6.10	4.55	39.58
July ...	3.80	2.98	6.70	4.42	2.20	5.75	4.35	5.70	5.05	5.40	46.85
August ...	6.40	6.88	6.20	6.68	2.50	9.15	7.38	5.00	1.22	3.77	55.18
September ...	11.58	6.40	9.00	12.20	3.65	6.50	6.75	9.95	1.17	(5.00)	72.20
October ...	1.20	10.30	4.20	15.65	5.25	4.95	8.15	6.70	8.77	5.55	70.72
November ...	17.25	3.90	10.70	18.00	4.05	3.10	2.73	.87	11.70	17.75	90.05
December ...	16.75	6.50	5.00	9.80	11.35	11.50	9.15	6.85	16.20	10.00	103.10
TOTALS ...	88.50	(61.32)	60.43	96.48	53.55	66.82	74.48	69.27	72.84	87.11	724.80
	M	M	M	M	M	M	M	M	M	M	

1954 Rejection app.

42004

30004

00104

Inspected July 1956 W. D. Ellis. Gauge sound. Site of slightly W of E

1960 Sept 1st M03 gauge tampered with.

34004

\* Note This gauge is near Cawdale Beck but not in Howe Grain.

Position of Station on Ordnance One-Inch map :

No. of Map 83National Grid Reference 35/478.176

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

Summary of Earlier Records from 10-year Sheets :

Record D, or d	1910-19	1920-30	1931-40	1941-50	1951-60
	Cump 1918	✓	✓	✓	