

## RAINFALL at Norden Higher Redoubt

County of South Lancashire

Observer

J. Dingleby Esq.

F. Buckley.

River Basin Mersey - Swell 3

Rain Gauge, by Parrella  
7653

Diameter ...		5									
Height .....		1.6					1.2				
Altitude ...			1125								
Year ...	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	MEANS.
January ...	1.82	3.96	4.64	3.56	6.75	3.86	2.81	3.58	4.93		
February ...	5.68	2.20	1.84	2.49	5.06	4.68	1.40	7.31	.97		
March .....	2.45	6.00	4.75	5.85	1.72	2.20	2.27	2.49	4.75		
April .....	2.81	1.09	4.95	1.81	1.89	3.36	1.82	.96	2.74		
May .....	2.26	2.87	3.63	2.74	2.02	3.12	2.08	3.48	2.31		
June .....	4.08	7.33	2.85	3.02	1.58	3.56	2.41	1.80	1.98		
July .....	.40	5.43	1.33	5.70	5.45	2.70	3.25	4.86	2.59		
August .....	2.94	8.42	2.51	4.19	6.70	4.63	7.37	3.83	4.61		
September ..	4.90	2.18	2.21	4.61	.98	3.25	3.13	12.91	2.55		
October ...	3.70	5.62	2.24	2.96	2.05	8.06	10.52	4.76	2.92		
November ..	4.67	3.84	5.64	5.96	2.00	3.47	6.57	2.94	4.17		
December ...	6.83	5.39	2.70	6.05	8.50	3.57	2.75	10.55	8.40		
TOTALS ...	42.54	54.03	39.29	48.94	44.70	46.46	46.38	59.47	42.92		

1910 Wall

5 ft high 75 yards N

Reported from Survey, 6" low.

Date.	Lat. N.	Long.	Railway Station.	Distance.	Direction.	Church.	Distance.	Direction.
1910			Wardleworth	4 $\frac{1}{2}$ 1/2	N. E.	Norden St Pauls	1 1/2	N W

## RAINFALL at Norden Higher Red Lumb

County of S Lancashire

Observer J. S. Diggle Esq C.E. (Engt)

River Basin Mersey - Irwell 3

Haywood &amp; Middleton Water Bd

Rain Gauge, by Casella 7653

Fentonville (Seay &amp; Morgan)

Diameter ...	5"						5"				
Height .....	1.2						1.3				
Altitude ...	1125'						1125'				
Year .....	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	MEAN.
January ...	4.71	7.29	4.38	4.60	3.90	3.53	5.32	4.55	13.21	2.15	5.84
February ...	4.52	6.61	5.54	5.99	1.50	6.96	4.68	2.30	5.64	1.30	3.88
March .....	3.80	3.54	3.72	2.25	1.81	1.77	2.23	4.84	3.13	1.70	2.60
April.....	6.05	1.77	2.90	4.15	2.06	2.54	2.00	2.73	1.28	1.28	2.49
May .....	4.69	3.33	1.95	4.46	5.79	5.34	4.53	1.93	1.33	3.42	1.98
June .....	3.96	4.42	3.20	1.15	3.19	1.11	3.34	5.33	4.44	1.61	2.02
July .....	9.48	1.94	5.84	4.33	5.67	2.29	2.71	3.92	2.64	3.94	6.75
August .....	3.12	7.08	5.30	6.64	8.27	4.50	4.95	7.81	7.29	6.64	8.66
September...	2.95	1.86	5.06	5.68	5.33	4.05	3.85	6.86	0.82	2.18	4.61
October.....	1.69	3.67	1.07	6.91	6.22	5.70	4.05	5.21	6.28	6.80	6.74
November...	2.41	3.42	3.98	7.82	3.13	2.23	6.71	5.18	6.56	8.64	6.69
December...	4.18	7.28	4.65	5.23	5.45	3.18	2.11	1.19	3.33	8.01	4.18
TOTALS...	51.56	42.21	47.59	59.21	52.12	42.20	46.48	51.85	59.45	47.67	52.87

1920 Stone Wall 5ft High 78 yds W

Rejected from Survey. 6" low.

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

Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Direction from gauge	Parish Church.	Distance from gauge
1920			Nordenworth Rochdale	4½ mi	E	Norden	1½ mi E

## RAINFALL at Norden (Higher Red Lumb)

County of South Lancashire

Observer Heywood Water Board

River Basin Mersey, I.K.W.L.L.-3

Type of Gauge Bradford

Annual Average ~~in.~~ in. based on ~~years~~ years obs. unweighted. Period of average 1931-1940 Ref P.B. 350

S15/15/28

Diameter	5'										
Height	1.3										
Altitude	1125										
Year	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	Means
January	5.68	5.80	2.90	3.41	2.27	5.37	4.62	6.14	5.78	8.24	
February	5.31	2.25	4.52	5.6	6.08	2.90	6.41	2.29	5.53	2.89	
March	4.46	2.94	3.22	2.86	1.80	2.96	2.31	1.94	2.89	3.65	
April	3.77	4.26	2.10	2.61	3.80	1.32	3.78	.77	2.26	2.93	
May	3.19	5.66	1.92	8.39	.92	1.26	2.22	3.68	1.85	1.02	
June	6.55	.92	1.86	2.84	2.22	4.08	2.21	5.10	4.09	.99	
July	5.04	4.26	3.29	2.84	2.11	4.64	2.86	5.15	7.33	4.80	
August	5.91	1.25	2.38	8.16	1.94	3.53	2.64	4.93	3.72	2.35	
September	3.73	5.12	1.92	4.05	8.71	5.88	2.10	2.10	1.49	5.44	
October	2.69	8.90	4.87	6.33	9.94	6.35	2.24	11.22	2.47	5.38	
November	10.78	3.55	2.19	2.87	5.02	6.90	2.09	5.62	8.63	8.40	
December	2.56	2.46	.61	7.16	4.31	4.94	4.36	5.73	4.19	5.82	
TOTALS	55.67	45.37	31.78	40.57	49.12	50.13	37.84	54.27	50.23	45.89	
	m	m	m	m	m	m	m	m	m	m	

Inspected 17/9/37 g in fence 15' diameter and 6' high - over-exposed to S.  
 New site selected for g. some 150 yds S of old site c. 15 yds from wall in natural  
 hollow with a minimum of slope to S. Turf wall still essential.

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
			Wardleworth	42m	E(1940)	Norden	12m. E(1940)

BRITISH RAINFALL ORGANIZATION, EXHIBITION ROAD, LONDON, S.W.7.

Station No. 2895

## RAINFALL at Norden (Higher Red Lumb)

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County of South Lancashire

Observer Leyland Water Bd.

River Basin Mersey - Irwell - 3

Middleton

A 1950

Type of Gauge Bradford

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

File No. 81515/28

Diameter	5"	361	810								
Height	1' 3"			1			1' 2"				
Altitude	1125'			64							
Year	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	Means
January	.89	4.07	6.16	6.52		5.45	3.86	10.04	3.16	2.75	
February	5.95	2.07	2.89	2.48		6.28	.53	3.37	3.45	6.19	
March	4.09	3.71	1.41	.71		1.49	5.60	1.67	2.06	3.21	
April	2.22	2.47	2.87	3.45		1.52	3.57	1.87	4.22	3.29	
May	2.84	1.90	2.97	3.71		1.23	2.48	2.25	3.96	1.72	
June	.31	.81	4.29	3.05		4.05	2.85	6.10	.71	3.45	
July	3.10	5.42	3.56	4.36		4.93	3.92	2.79	2.81	6.19	
August	5.62	5.22	6.85	3.82		7.94	.34	5.80	4.69	7.58	
September	1.13	2.41	5.65	5.98		8.28	3.08	3.65	1.69	8.28	
October	5.15	6.99	3.98	5.42		1.55	.92	3.48	5.82	3.23	
November	3.84	1.46	3.71	8.62		7.46	6.87	2.65	6.86	6.87	
December	2.41	4.66	2.52	5.17		3.83	3.85	4.19	7.23	3.43	
TOTALS	40.16	41.19	46.86	53.35	NR	54.01	37.87	48.06	46.66	56.19	
	n.p.	n.p.	n.p.	n.p.		n.p.	n.p.	n.p.	n.p.	n.p.	

1942 n.p. low

1943 n.p. low

1944 n.p. low

1946 n.p. low

1947 n.p. low

1948 Jan - April still a little low, otherwise record looks OK.

1950 n.p. low.

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	Parish Church.	Distance from gauge	Direction
1941			Ramsbottom	4 m.	N.W.	Norden	2 1/2 m.	S.

Station No. 2895

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RAINFALL at Norden (Higher Red Lamb)

County of S. Lancashire

Observer Heywood &amp; Middleton Water Board.

River Basin Mersey-Towle - 3

Type of Gauge Bradford

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

Ref.

File No. 815115/28

Diameter ...	5"		561	810							
Height ...	1' 0"			1							
Altitude ...	1125			51							
Year ...	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	Means
January ...	5.12	5.84	1.88	4.51	3.95						
February ...	2.52	1.52	1.97	3.49	2.38						
March ...	5.03	3.09	2.00	3.76	2.14						
April ...	2.58	3.86	3.45	.98	2.80						
May ...	1.93	2.51	2.42	4.00	4.18						
June ...	1.63	4.31	2.82	4.27	4.11						
July ...	3.40	3.04	5.78	6.94	1.25						
August ...	5.71	6.85	5.19	5.33	1.25						
September ...	4.11	4.43	4.15	5.62	4.18						
October ...	8.5	5.41	2.01	8.47	2.54						
November ...	9.38	2.68	5.73	6.75	2.60						
December ...	8.64	4.83	2.00	7.15	6.44						
TOTALS ...	50.90	48.37	x	39.40	60.27	34.99					
					no plow	no plow					
					n.p.	n.p.					

1951 nplow.

1952 n.p. low.

1953 nplow

1954 n.p. low.

1955 n.p. low.

Inspected June 1956 by Deeks. Gauge stem loose. Site of 520. Moved to green field 400 s.w. Recom

Position of Station on Ordnance One-Inch map :			No. of Map .....	National Grid Reference 34/839660			
Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Direction	Parish Church.	Distance from gauge.
1951			Ramsbottom	4 m.	N.W.	Norden	3 km S.

Summary of Earlier Records from 10-year Sheets :

Record D. or d	1910-19	1920-30	1931-40	1941-50	1951-60
	1911	✓	✓	41-44 46-50 n.p. 42-44 46-47 — 44-50	