

Sediment Analysis of Two Valleys

At the Lochranza Centre, we tend to study deposits from two valleys – Glen Easan and Glen Rosa. Glaciers were the key influence in the formation of Glen Rosa, so pebble A-axis orientation would generally be expected to be in line with the west-northwest to east-southeast direction of the valley. Glen Easan is more complicated, however, having been formed by both glacial and fluvial processes, so the orientation of its pebbles' A-axes may not follow the valley trend as consistently as in Glen Rosa. At the point of data collection Easan's valley trend is broadly southeast to northwest. The A-axis orientation was measured on 36 pebbles at each site.

Glen Rosa	
Pebble Number	A-axis Orientation (°)
1	359
2	198
3	217
4	060
5	073
6	107
7	145
8	109
9	031
10	038
11	112
12	180
13	286
14	148
15	145
16	305
17	330
18	301
19	003
20	009
21	014

Glen Easan	
Pebble Number	A-axis Orientation (°)
1	032
2	058
3	071
4	069
5	024
6	048
7	082
8	075
9	036
10	016
11	011
12	070
13	052
14	090
15	145
16	094
17	106
18	028
19	032
20	044
21	039

22	055
23	105
24	076
25	341
26	103
27	133
28	120
29	209
30	061
31	118
32	128
33	117
34	234
35	252
36	325

22	098
23	058
24	037
25	042
26	026
27	130
28	127
29	082
30	096
31	044
32	056
33	031
34	126
35	027
36	030

The above data for each valley can now be tallied up according to compass bearing.

Compass Direction	A-Axis Trend (°)	Glen Rosa	Glen Easan
N / S	349-011/169-191	4	1
NNE / SSW	012-033/192-213	4	9
NE / SW	034-056/214-236	4	9
ENE / WSW	057-078/237-258	5	6
E / W	079-101/259-281	0	6
ESE / WNW	102-123/282-303	10	1
SE / NW	124-146/304-326	6	4
SSE / NNW	147-168/327-348	3	0