Unbranched

(a) Rocking

Rubble

Sand

Near-bed wave orbital velocity (m/s)

(b) Transport

Rubble

Sand

Rubble length

4–8 cm

9–15 cm

16–23 cm

24–39 cm

(c) Flipping

Rubble

Sand

iv. Rubble length

4–8 cm

9–15 cm

16–23 cm

24–39 cm