

Figure 1. Schematic overview of the beach profile at Easington.



Figure 2. Layout and local topography survey site at Easington



Figure 3. Examples of shear waves gathered on beach and till platforms at Easington.



Cone Resistance (MPa)

Figure 4. Examples of penetrometer profile on beach and till platforms at Easington.



Figure 5. Field and inverted shear wave velocities with cone resistance profiles used as inversion aids.

Seawater value - 5.15 22 . Submersed Sand value - 21.17 22

Figure 6. Resistance probe schematic and measurements along y=12m at the survey site.

Figure 7. Radar sections through the beach at Easington.

Figure 8. 3D perspective view of conductivity model draped beneath topography. View is along y-direction and extends from (-2.5, 0.0) to (40, 24) m in local coordinates. The thickness is 7.5 m. Conductivities range from 20 mS/m (blue) to 2400 mS/m (red).

Figure 9. 2D visualisation and interpretation of field data using Rockworks 2004 GIS. (a) ERT-1 resistivity model along y = 12 m, and (b) ERT-2 resistivity model along x = 12 m.

0.7 1 2 4 7 12 20 35 60 104 158

Figure 10. Integration of electrical imaging section (ERT-1), cone penetration profile (blue curve) and shear wave velocity profile (red curve) data for two positions located along y = 12 m at x = 36 m and at x = 48 m using Rockworks 2004 GIS.

Plate 1. Beach profile at Easington looking south. Picture, taken during July 2004. Inset shows a gravel layer exposed on the lower foreshore Gunn et al., (2005)

Plate 2. Beach profile at Easington looking south. Picture, taken during October 2004. Gunn et al., (2005)

Chaotic scatterers on radar: Boulders in diamicton

Plate 3. Example of the near-surface heterogeneity in the till platform near the survey site at Easington.