

OR/15/017 Field surveys in 2013

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Tappin, D R, Long, D, Carter, G D O. 2015. Shetland Islands Field Trip May 2014 - Summary of Results. *British Geological Survey Internal Report*, OR/15/017.

The first survey on Shetland funded by the NERC Consortium project was undertaken in June 2013 by Prof. Alastair Dawson and Dr Pedro Costa (Dawson and Costa, 2013). Sites on Mainland (Garth's and Scatsta voes) and Yell (Basta Voe, Kirkabister, Whale Firth and Mid-Yell Voe) (Fig. 3) were visited.

Yell



Figure 3 Google Earth Image of Yell with locations of tsunami deposits (in red),

possible deposits (yellow), no deposits (white).

At Mid Yell Voe (Figs. 3 and 4) three sand layers were identified with sedimentary characters diagnostic of palaeotsunami deposits. 14C dating of these sands (Fig. 5) confirmed previous results that the sediments were younger than Storegga, but there was a considerable range in ages. At site Mid Yell 3a 14C age of 780 ± 30 cal yr BP was obtained. From a core south of the road at Site Mid Yell 1 a peat sample below a sand layer returned an age of 6060 ± 40 cal yr BP. At Mid Yell Site 7a, on the northern side of the Voe, a peat sample from below the upper sand returned an age of 5800 ± 40 cal yr BP and a twig sample above the bottom sand a 14C age of 8120 ± 40 cal yr BP. On the southern side, at Site Mid Yell 5 a peat sample above a sand layer gave an age of 3320 ± 30 cal yr BP.

Mid-Yell Voe



Figure 4 Google Earth Image of Yell with locations of tsunami deposits (in red), possible deposits (yellow), no deposits (white).

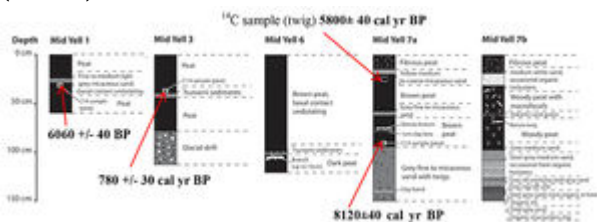


Figure 5 Cores from mid Yell with lithology's and 14C dates.

Whale Firth



Figure 6 Google Earth Image of Whale Firth with core locations (Location Fig 3).

At Whale Firth (Fig. 6) a twig overlying a sand at Site Whale 4 returned a 14C age of 4760 ± 20 cal yr BP (Fig. 7).

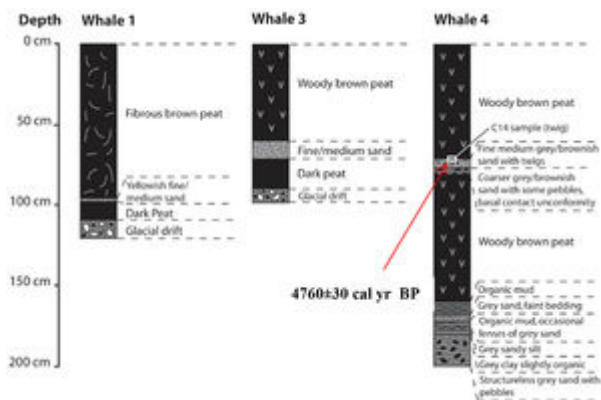


Figure 7 Cores from Whale Firth with lithology's and ^{14}C dates.



Figure 8 Photograph of tsunami sand at Whale Firth.

Detail of the sand (palaeotsunami?) layer and dated twig at Whale Firth 4 (Fig. 8). Note the twig in a horizontal position in the contact between the peat and the sand layer (but still within the sand layer).

In addition to Mid Yell and Whale Firth, Burra Voe (Fig. 9) on the south coast of Yell and Gloup, at the northern tip of Yell, were visited but only cursory examinations were carried out and no samples acquired.

Burra Voe



Figure 9 Google Earth image of Burra Voe (Location Fig. 3).

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