

The Robustness of Litter Transect Data Collection by Different Survey Groups

**A. T. Williams ⁽¹⁾, K. Pond ⁽²⁾, D. T. Tudor ⁽¹⁾, H.
Jansen ^(1,3) and Hong Bin Liu ⁽¹⁾**

⁽¹⁾ Faculty of Applied Sciences, Bath Spa University, Newton Park Bath, UK

Tel +44-1225-865585 Fax +44-1225-875776

e-mail: a.t.williams@bathspa.ac.uk

⁽²⁾ Robens Institute, University of Surrey, Guildford, UK

Tel +44-1483-259209 Fax +44-1483-503517

e-mail: k.pond@surrey.ac.uk

⁽³⁾ UCTRA, University of the Algarve, Campus Gambelas, Universidade do

Algarve, 8000, Faro, Portugal Tel +351-936-404737

Fax +351-89-818353

Abstract

The study attempted to establish if distinctions could be made between findings of disparate groups of people undertaking beach based marine debris surveys. Final year undergraduates and 16+ years of age secondary school students collected and analysed litter from beaches in South Wales, UK. At Tresilian, the pocket beach was subdivided into 1 metre strips for 30 m and then every 5m. The undergraduates were divided into groups and recorded all litter found in the transects. Between Swanbridge and Lavernock, the coastline was divided into 0.5km stretches and litter was recorded on pre defined sheets by the school children (11 groups of four persons per group). In all cases - except for one undergraduate group, no statistical difference was obtained between groups recording litter from the same profile. The exception in the undergraduate group was due to recorder error. In both student groups, potentially hazardous containers were wrongly identified. The study indicates that litter counts by volunteer groups can be carried out at a sound level of confidence. The width of the beach transect needed to encompass all categories of litter for this particular beach was found to be 14 metres.