

# TESTING SUMMARY

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## Coventry Report Coventry University, United Kingdom

**Summary:** The School of the Built Environment, Coventry University assessed the performance of a full scale Stormceptor<sup>®\*</sup> under steady flow conditions (9 l/s) with the addition of oil and inorganic/organic sediment. The tests were conducted to investigate the effectiveness of the Stormceptor for oil retention and sediment trapping. The test was conducted in May-August 1996. A summary of the test follows:

- Oil removal = 97.8%
- Inorganic sediment removal = 83%
- Organic sediment removal (peat) = 73%

**Methodology:** Two flow tests were performed on the Stormceptor in accordance with the draft European Standard pr#N858-1:1992 for oil retention. Oil was added continuously during each test at a rate of 5 ml/l (4100 mg/l). Tests were conducted to assess the trapping efficiency for sand added at a rate of 210 mg/l (three flow tests) and with peat added at a rate of 154 mg/l (one flow test). These concentrations are thought to be typical of highway stormwater runoff in moderate/highly polluted conditions.

The results obtained showed that the Stormceptor was capable of limiting the through-flow of oil to approximately 90 mg/l (mean of 10 samples with a standard deviation of 8.7 mg/l). This performance complies with that required of Class 2 Oil Interceptors in the UK, limiting the through-flow of oil to less than 100 mg/l.

**Project Details:** Oil was introduced upstream of the unit at a consistent rate of 4100 mg/l for a 20-minute period. Samples were taken at the outlet during the last five minutes to determine the oil removal performance. The same procedure was also performed with inorganic sediment (sand, S.G. = 2.2) and organic sediment (peat, S.G. = 0.45).

The first series of tests in the United Kingdom on the Stormceptor indicate the potential effectiveness of the product for oil and sediment removal from stormwater.

\*The Stormceptor is also known as the X-Ceceptor Bypass Interceptor in the United Kingdom.