LITTATRAP™
Beresford Street Trial

PROJECT UPDATE 25/03/15

The Beresford Street Trial is a pilot study of the use of the Gross Pollutant LittaTrap™ under the supervision of Stormwater360. A single catchpit insert was installed on the corner of Beresford Street and Hopetoun Street, Auckland. The aim of the trial is to provide quantitative and qualitative data on the gross pollutants captured by the LittaTrap™ in a typical inner city Auckland catchment.

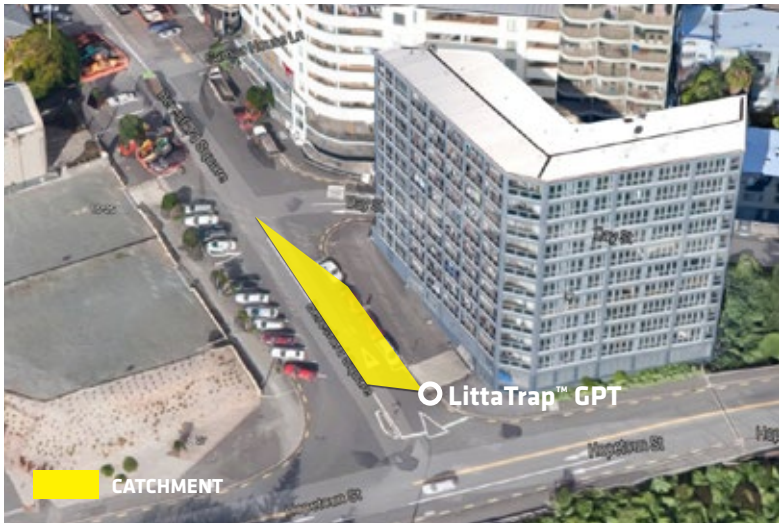


Figure 2. Beresford Street site. Approximate catchment area shaded.

CATCHMENT

The Beresford Street catchment is part of a steeply sloping street in Auckland's Karangahape Road district. The catchment area is nominally ca. 300 m2 (see Figure 2), however in periods of high flow it probably receives runoff from a substantially larger area, due to bypass of the uphill catchments on the steep slope.

The catchment has relatively low vehicle traffic loads, but receives substantial foot traffic. It is adjacent to several high density apartment developments and has both on-street and off-street car parking. The uphill end of Beresford Street has several bars and cafes. It attracts substantial night-life and the associated phenomenon of outdoor cigarette smoking.

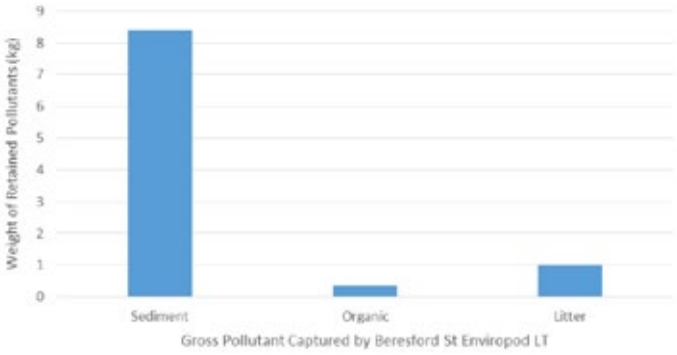
The LittaTrap™ is a versatile catchpit insert system. It is readily installed in new or existing catchpits and may be configured to capture sediment or gross pollutants. For this trial the LittaTrap™ had a 1000micron burnproof liner installed. By capturing the bulk of gross pollutants in its removable insert it allows fast hand maintenance and significantly reduces the frequency of costly suction maintenance of each catchpit. In addition it significantly improves the capture of positively and neutrally buoyant materials which are typically washed through the system, particularly in periods of high flow.

Stormwater360®
BETWEEN SKY AND SEA

Results

The LittaTrap™ was first installed June 2012 and the content was emptied 3 times for analysis purposes on March, April, and May 2013. In approximately 11 months of service, the LittaTrap™ captured 10.72 kg (wet, drained weight) of gross pollutants (see Figure 3).

GROSS POLLUTANT CAPTURED



ACCUMULATED WEIGHT

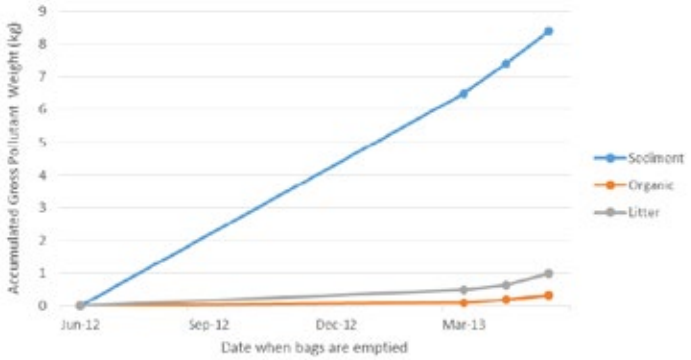


Figure 3: Accumulated Gross Pollutant Weight

Figure 4: Thousands of cigarette butts captured by the LittaTrap™

Figure 5: Other gross pollutants captured by LittaTrap™

CIGARETTE BUTTS
in 10.72 kg of debris

Gross pollutants captured by the system were a mixture of predominantly negatively buoyant road sediments, neutrally buoyant organic material and positively buoyant trash and debris. Most notably the number of cigarette butts found in 10.72 kg of debris was estimated at 2000. In addition, a considerable amount of debris, such as cans and plastic and glass shards were found. These gain entry to the catchpit via the large kerb entry slot, rather than the grate. Also found in the captured material were wrappers, straws, wine corks and bottle caps.