FOOT NOTE: This highlight summary has been prepared by Keep New Zealand Beautiful to summarise the key findings of the National Litter Behaviour Research that they commissioned Sunshine Yates Consulting to undertake in association with Community Change. This is a highlights only document that includes key extracts from the Draft 0.3 report Sunshine Yates shared with KNZB on March 28th 2018. It is intended as a summary document only. To view the full copy of the Draft 0.3 National Litter Behaviour Research Report as prepared by Sunshine Yates Consulting please see www.knzb.org.nz. The final report will be released by 30 April 2018.
This Littering Behaviour Study (LBS) is a benchmarking project to measure and monitor littering behaviour in a variety of locations throughout New Zealand.

In September 2017, Keep New Zealand Beautiful Society Inc. (KNZB) commissioned Sunshine Yates Consulting Limited (SYCL) to undertake this project. The objectives of the project were to “Reveal insights and attitudes to litter amongst New Zealanders to inform future KNZB communications, programmes and interventions”.

SYCL entered into a Working Together agreement with Community Change (CC) to deliver on the project, and a licence to use the methodology was purchased from CC. CC were contracted to provide training and expertise in litter behaviour change, measurement, and evaluation.

The methodology used in the LBS – the Observational Approach (OA) – was used across Australia from 1997 to 2004 and forms the most valid and reliable research tool for tracking levels of littering behaviour throughout Australia. As well as being used to assess littering behaviour, it also includes indicators of environmentally desirable behaviours such as binning. Behaviour is characterised using the Disposal Behaviour Index (DBI), developed as a categorical representation of both positive and negative behaviour.

The New Zealand OA research outlined in this project was undertaken using the same Australia methodology as a foundation, adapted through trials to suit the New Zealand context.

Fieldwork in New Zealand covered areas from the greater Auckland region, from Orewa to Pukekohe, as well as the Wellington region, including Porirua and Lower Hutt, in the North Island and Canterbury, including Christchurch, Rangiora, Oxford and Akaroa in the South Island.

The methodology includes the use of observations of people disposing of items of litter, and surveys with members of the public, some of whom were observed disposing of items. The methodology is focussed on the behaviour of New Zealanders in public places.

The fieldwork was undertaken between 23 November and 13 December 2017, with 16 days of fieldwork undertaken by two separate teams, resulting in a total of 32 days of research. Each team comprised an observer, trained by Community Change, and an interviewer.

Core sites: Shopping streets, parks, transport hubs, public buildings, public squares, markets, waterfronts.

Speciality sites: Beaches.
Litter Disposal Observations – Key Findings

Over the 32 days of fieldwork, 1,705 disposal observations were made (that is, observers recorded over 1,700 items being disposed by people in public places either into bins or littered).

1. When all observations are combined, New Zealand’s national DBI score is 6, which is a ‘High’ DBI score. This means that overall, at all surveyed sites combined, “binning greatly exceeds littering and appropriate bin use occurs most of the time. Minimal action required to recover resources to prevent litter and keep places clean.”

2. Wellington has a top result with a score of 7 (Peak score: Minimal littering with prominent and appropriate bin use and good potential to recover resources. Little maintenance required for keeping area clean and largely litter free).

3. Auckland and Canterbury both score 6 on the Disposal Behaviour Index (High score: Binning greatly exceeds littering and appropriate bin use occurs most of the time. Minimal action required to recover resources to prevent litter and keep places clean).

4. Five of the seven core site types score 7 on the DBI index (Peak score: Minimal littering with prominent and appropriate bin use and good potential to recover resources. Little maintenance required for clean and largely litter free area). This shows in many of the different sites in New Zealand people are doing the right thing consistently with used items.

5. Outcomes for the two remaining site types were less consistent and indicate that some areas require further investigation to bring disposal actions up to the same standard as shown elsewhere.

Transport hubs score 5 (High-mid score: Sites where people clearly were doing the right thing but where littering or inappropriate use of bins remains an issue to be addressed).

Public buildings scored 3 (High-base score: Binning is greater than littering. Action is needed to create opportunities for effective binning and to reduce littering expected behaviours). It is of concern that these community buildings and assets were associated with the higher rates of littering in many locations around the country.

There were insufficient disposal observations at all combined special site types (beaches) to calculate a DBI score (a minimal sample of 30 observations is required).

6. Nationally, the litter rate was 16% - of all observations of disposal acts, 16% were littering while 84% of people did the right thing when disposing of items.

Results

| 16% | Litterers |
| 84% | Did the right thing |
7. The lowest litter rate (8% litter rate) was in the Canterbury regional centres (Akaroa, Rangiora and Oxford). This was followed closely by Wellington city (9% litter rate). The highest litter rate was in Christchurch city (22% litter rate). Auckland’s city and regional rates were 18% and 19% respectively. The litter rate includes unintentional acts of littering, where an item is dropped my mistake, and unnoticed, or where, for example, a serviette blows away while a parent has their attention on their children.

8. New Zealand has a very low baseline level of littering in this first national study of littering behaviour. Based on this data the expectation is for the country to be relatively litter free and clean. Litter in public places is likely be the result of a range of factors, from a small percentage of people who do litter, to people who only litter in the evening (potentially once alcohol and/or a group mentality or herd behaviour is involved), to litter being disposed of from cars, blowing out of bins, being disposed of beside full bins, and litter potentially caused by waste and recycling collections.

9. Of the 16% of disposal acts that were littering, nationally, 78% were of cigarette butts. Only 4% of the 1,705 disposal acts observed during the research were littering of something other than a cigarette butt.

10. Of all of the cigarette butts observed being disposed of during the project, 57% were littered, and 43% were binned.

11. In 84% of observed disposal acts, the item was binned.

12. Nationally, the items disposed of most frequently, to a bin or as litter, were ‘Takeaway packaging/wrappers’ (25% of items), followed by ‘Cigarette and accessories’ (cigarette butts) (23% of items).

13. The item most likely to be littered nationally, and in each region, is cigarette butts ("Cigarettes and accessories"). These account for 78% of all items littered nationally.

14. The second most common item to be littered was ‘Takeaway packaging and wrappers’, accounting for 5% of all littered items nationally.

15. ‘Cigarettes and accessories’ was the largest category of littered items at all sites, except for markets, where it was the highest equal (with ‘Food’).

16. The differences in littering behaviour associated with site types reflect the major activities of people in the locations.

17. Overall, cigarettes were the only item that was more likely to be littered rather than being binned.

18. On average, the distance travelled by a bin user to use the bin was 4.2 metres. This includes many occasions when people dispose of items as they

In Canterbury, 71% of cigarette butts observed being disposed of were littered.
walk past a bin, thus reducing the average. The average distance walked by a bin user when they were not walking past a bin, was 8.1 metres. The average distance between a litterer and a bin, when they littered an item, was 8.4 metres. 44% of litterers were within 5 metres of a bin when they littered.

19. The DBI results show that the most littered site types are Public buildings and Transport hubs. The increase in littering at these sites seemed to be associated with an increase in smoking activity in those sites compared to other sites. People may tend to have a cigarette immediately before or after getting onto a bus or train and may step outside of a public building to have a cigarette. In Canterbury, the waterfront areas had lower DBI results with one waterfront location close to the hospital where staff congregated to smoke. The higher likelihood of littering cigarette butts explains the lower DBI at waterfront sites in Canterbury.

20. In Auckland and Wellington, the sites with the least littering (and therefore the highest DBI), were waterfront sites and markets. Markets had the highest DBI in Christchurch too. It appears from observations made during the survey that people in these site types took appropriate action to do the right thing.

Surveys were undertaken with general members of the public, who were observed binning or littering items, as well as, with members of the public who were not seen disposing of items.

The surveys gather data on people’s attitudes towards litter, as well as providing the basis for an objective comparison between what people say they do with their litter in public places and what they actually do with it.

Overall, 765 surveys were undertaken as part of this research, 269 (or 35%) of which were linked to an observation.

1. “What do you think gets littered in this area?”
The item most commonly stated as being littered in the area was ‘Take-away packaging/food wrappers’ (31% of responses), followed by ‘Cigarettes and accessories’ (18%) and ‘Drink bottles’ (15%). This matches with the top three items observed being littered during the research.

2. “Why do people litter here?”
Sixty-six per cent of respondents’ put forward that people litter in that location because people are lazy or don’t care. A further 19% of responses stated that it was because there was a lack of bins.

3. “How would you stop people littering here?”
Thirty-three per cent thought more bins were necessary, 21% suggested more signage, 16% suggested fines or other types of punitive measures, and 17% suggested education or advertising. A further 20% had other ideas, including having more visible bins, using social media, installing surveillance or monitoring, and telling people not to litter.

The survey asked respondents to rate the next three questions, on a scale of 1 to 5, where 1 is not at all important, 2 is slightly important, 3 is moderately important, 4 is very important, and 5 is extremely important.

1. “How important is it to you that this area is clean”
72% of respondents indicated that it was extremely important, and a further 21% said it was very important.

2. “How important is it to you that people do not litter here?”
75% stated that it was extremely important, an 18% said it was very important.
3. “How important is it to you that we maintain our Clean Green NZ image?”
Eighty-nine per cent of respondents thought that it was extremely important that we maintain our Clean Green NZ image, and further 10% thought it was very important.

When the responses to the survey questions about how important it is to keep areas clean, to not litter, and to maintain our Clean Green New Zealand image are compared, the proportion of respondents for whom it is very or extremely important that New Zealand maintain its Clean Green image is only marginally lower for those that self-report littering. However, there is a more distinct difference when asked how important it is that people do not litter here or that the area is kept clean. Ninety-four per cent of all respondents think that it is very or extremely important that people do not litter here, versus 86% of respondents who self-report having littered.

4. “If that bin was overflowing, would it be okay to put your rubbish next to it?”
70% of people said that it would not be okay. People who said it was okay often backed that up by saying that it was better than the alternative. Or that it was okay as long as it wasn’t going to blow away.

5. “What litter prevention campaigns are you aware of?”
Seventy-one per cent of respondents were not aware of any litter prevention campaigns. Keep New Zealand Beautiful and Do the Right Thing were mentioned by 8% of respondents, a further 21% were classified as ‘Other’.

6. All survey respondents were asked “When was the last time you littered?”
Six per cent of respondents said that they had littered today. A further 7% said that they had littered within the last week. Forty-five per cent of respondent claimed to have never littered, and 42% had not littered for ‘ages’.

7. Respondents that had littered in the area in which the survey was taking place, on that day or within the past week, were asked “Why did you litter here?”
Over half of the respondents said that they had littered there either because there were no bins (27%) or they are lazy, don’t care, or were too busy (27%). A further 15% said that they had littered there because the item was only small or compostable. While the interviewer did not ask them what type of item had been littered, over half of these respondents admitted that the item they had littered was a cigarette butt.

8. A subset of the people who were surveyed had also been observed littering an item prior to being approached by the interviewer. These people were asked “When was the last time you littered?”
53% replied that they had littered today. Of the 42% of respondents observed littering who had replied that they “Never” littered, or had last littered “Ages ago”, all had been observed littering cigarette butts.

Of the people who were observed littering and admitted having littered that day, 44% said that it was because there were no bins, and 25% said that it was habit. Other reasons given were that they didn’t want to set the rubbish bin alight by disposing of a cigarette butt, or because there was no ashtray.

Smokers also made comments that infer that they don’t relate to cigarette butts as litter, such as “I never litter, well, apart from cigarette butts, but they’re not really litter”, or stating that it is okay to litter cigarette butts as they are biodegradable. Others appeared to litter through habit or laziness.

9. Those who self-reported littering in the last week, were asked the question “How would you stop people littering?”
Forty-six per cent of the survey respondents that self-reported littering in the last week stated that more bins were required. Eighteen per cent said more signs were required, and another 16% thought that there should be fines or other punitive measures. Some respondents gave multiple answers.

All of the sites that were surveyed included at least one litter bin. Therefore, one could conclude that some of the respondents who said that they littered due to a lack of bin had not put much effort into finding a bin or were not telling the truth. In areas where there was a shortage of bins, there did appear to be an increase in litter.
1. Overall, 55% of observations (of people disposing of items to bins or littering) were of males, and 45% were of females. The average age of all of the people observed was 38 (based on the observers’ estimates of peoples’ ages).

2. Of the people observed littering, 53% were men and 47% were women. Of all people surveyed, and self-reporting that they had littered within the last week, 62.5% were men and 37.5% were women. Although it appears that men litter slightly less than women, based on the overall demographic of 55% of observations being of males, the difference is very slight.

3. Of the people observed littering, 25% were aged between 25 and 34. A further 23% were aged between 35 and 44. Those that were least observed littering were people aged 65 plus (5%) and people under 18 (7%). The age of people observed littering is based on the observers’ best judgement at the time of the observation.

4. Twenty-five per cent of the people who self-reported having littered within the last week were aged between 25 and 34. A further 24% were aged between 18 and 24.

5. A much higher proportion of people under 24 admit to littering, than were observed littering. This corresponds to the findings of research described in the book ‘Litter-ology: Understanding Littering and the Secrets to Clean Public Places’ written by the founders of Community Change. The research noted that people under 25 are just as likely to litter as anyone else, but are more likely to admit it.

6. Of the people who self-reported having littered in the last week, 66% were in full or part-time employment.

As a proportion of the overall sample, few retired people self-report littering, and more people that are not working self-report littering. As the employment status of people observed littering, but not surveyed, is unknown, the employment status of all people observed littering is not available.

7. Approximately the same proportion of people who self-reported littering had degrees, trade/diploma/apprenticeships, or a secondary education. However, when compared to the overall sample of people surveyed, fewer people with degrees, and slightly more people with a trade/diploma or apprenticeship self-reported littering.

As the highest education of people observed littering, but not surveyed, is unknown, the highest education of all people observed littering is not available.
Thank You.