

Cigarette Butt Audit Analysis

Blessington Street & St Kilda South Beach

August – November 2011



No butts were harmed building these castles

A. Introduction

Cigarette butts are the most common litter item in Australia and around the world. Around 7 billion butts are littered in Australia annually, which is about 1 in 3 cigarettes manufactured. The Clean Up Australia 2011 report cites cigarette butts as the most common litter item found at beaches, parks, streams, schools, and other public places since Clean Up Day survey began in 1995. Cigarette filters are specifically designed to accumulate smoke components including toxic chemicals, such as cadmium, lead, arsenic and zinc. Littered butts leach these chemicals polluting surrounding soil and water¹.

An estimated 350,000 cigarette butts enter Port Phillip Bay every day. Most have been dropped on streets in the Bay's catchments and are washed into the stormwater system by rainfall. This local study aims to identify cigarette butt litter 'hotspots'. Local solutions involving the whole community are urgently required to improve butt disposal infrastructure, increase education, and deliver enforcement to reduce this pollution from our streets, footpaths, bay and beaches².

Study method:

Butt collection/audits were conducted fortnightly between August 6 and November 6 on a section of Blessington Street St Kilda and St Kilda south beach (between Port Phillip EcoCentre and Brookes Jetty). The survey area contains a mix of residences, businesses, parks, a foreshore car park, and a 200m beach.



To provide precise data, separate audits were conducted on the north and south sides of the street. The number of butts found in front of each property was recorded in order to identify consistent butt litter 'hotspots'.

Conducting the surveys over 3 months (August to November 2011) enabled numbers of butts on the beach to be correlated with rainfall events.

Special thanks to

- Seb Wood and fellow students of Ormond College (Butt Safari teams)
- Alicia Hooper (City of Port Phillip Community Pulse)
- Adam Cauley & Ally Henthorn (statistical charts)
- the Queens Road Sacred Heart artists (creators of 'butt castles')
- Everyone who helped pick up butts to gather the data for this report.

Authors Adam Cauley, Ally Henthorn and Neil Blake, August 2012

¹ buttfree.org

² Sustainability Victoria litter report 2007

2. Executive Summary



Distribution of butts

The total of 25,728 butts found in 7 surveys was distributed as follows:

- 44% beach
- 17% footpath trading areas
- 13% businesses without footpath trading
- 16% residences
- 5% Marina Reserve car park
- 3% parkland
- 3% streets and lanes

Rainfall impacts

On the beach: the highest record followed heavy rainfall.

On the street: the lowest record followed heavy rainfall.

Stormwater from Blessington Street and other drainage outfalls in the region would contribute to butts on the beach.

Butt litter 'hotspots' on the street

On Blessington Street: 59% of all butts were recorded in front of businesses. Businesses comprise 12% of the street frontage.

Street corner properties on the east side of Barkly Street consistently had the highest numbers of butts on the street. Contributing factors may be:

- the concentration of footpath trading and the convenience store;
- higher volumes of through pedestrian traffic to and from Acland Street;
- location at the bottom of the steepest slope in the street.

Initiatives required

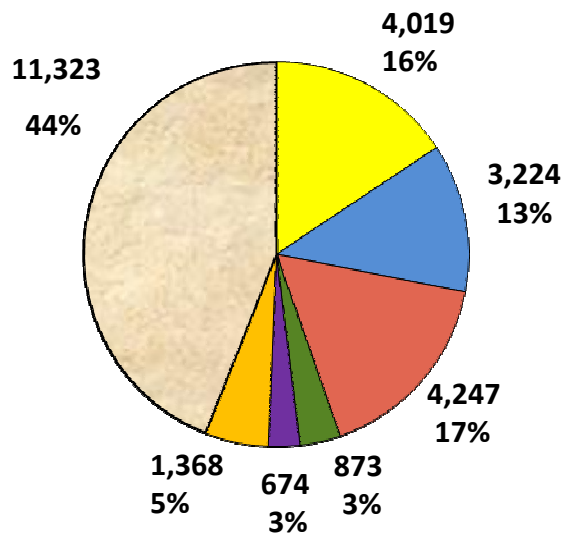
The data indicates current clean-up measures fail to capture a significant number of littered butts. More infrastructure and pro-active preventative measures can help traders comply with local laws and reduce the number of butts on the street.

Active involvement of all stakeholders to improve education, infrastructure and enforcement are required to change human behaviour, particularly in higher traffic trader areas. Increased monitoring and street cleaning frequency in butt 'hotspots' also warrants consideration.

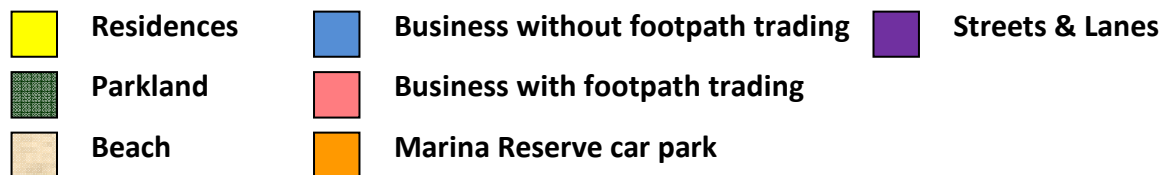
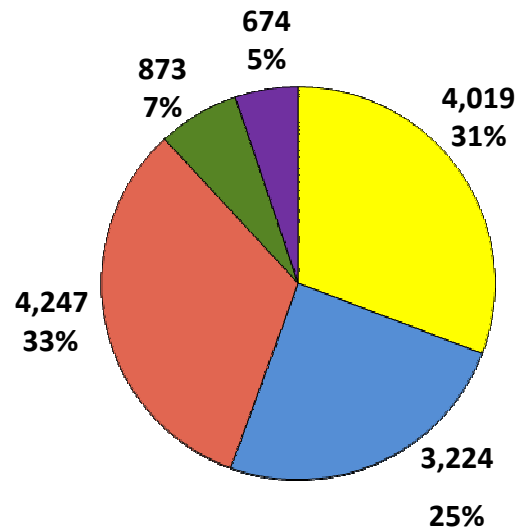
3. Butt Survey Analysis – All Areas



Total Butts Collected



Total Butts - Blessington St



The highest percentage of butts by property type was collected from the beach (44%); more than half in a single survey after heavy rain.

Trader areas recorded the second highest percentages (17% with footpath trading and 13% without footpath trading).

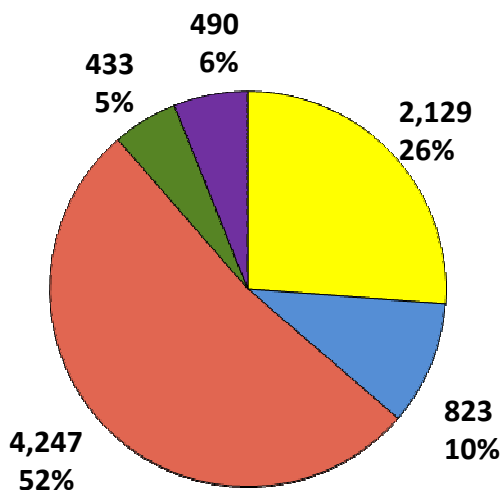
Businesses, including eateries, bars, clothing stores, a laundrette, 2 community centres, a convenience store, and motel comprise around 13% of the total street frontage (footpath trading areas 6% and businesses without footpath trading 7%).

16% of butts were found near residences (40% of total street frontage).

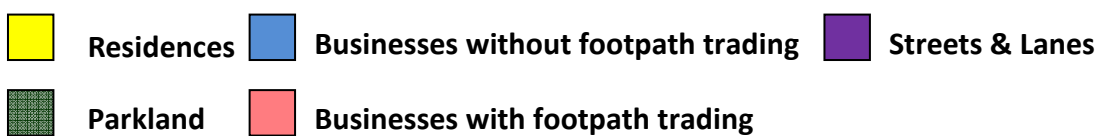
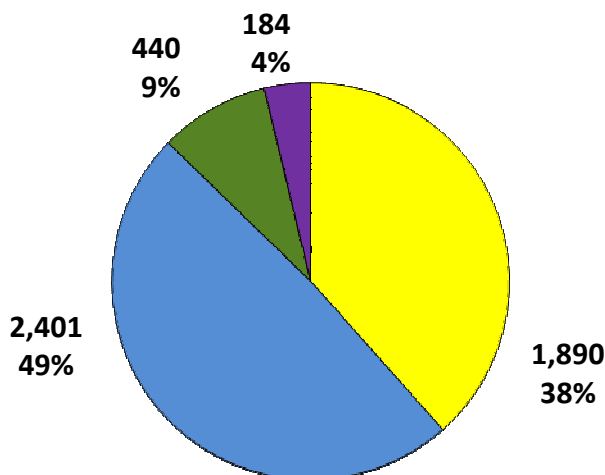
3% of butts were found near parkland (33% of total street frontage).

4. Butt Survey Analysis – Blessington Street Only

South Side Analysis



North Side Analysis



A total 13,037 butts were collected from Blessington Street.
The south side had 8,122 butts compared to 4,915 on the north.

52% of south side butts were in front of footpath trading businesses.
49% of north side butts were in front of businesses without footpath trading.

The only significant difference in property types between the two sides of the street is that all footpath trading businesses are on the south side.

The north side has approximately 100m of street frontage adjacent to businesses without footpath trading. Otherwise, the two sides of the street have similar frontages of parkland and residences.

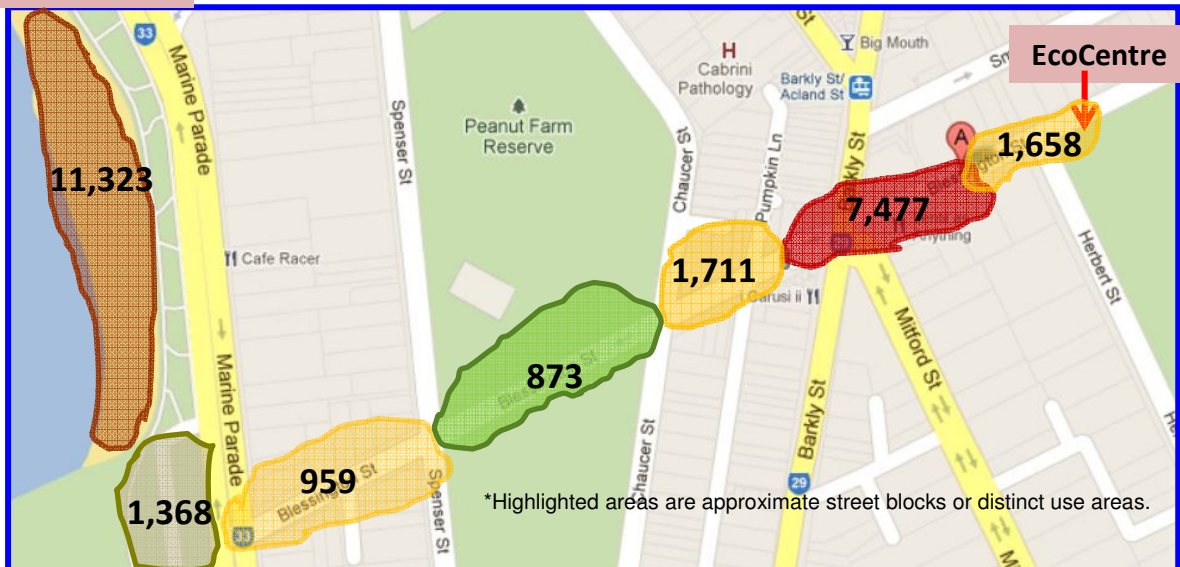
Butts found when crossing streets and lanes (including median strips) made up 6% of the South side total and 4% of the North side.

Note: Footpath trading refers to businesses that have 'table & chairs, display of goods, advertising sign, café barriers/screens, glass screens, heaters, awnings etc' (portphillip.vic.gov.au/footpathtrading.htm)

5. Cigarette Butt 'Hotspots'

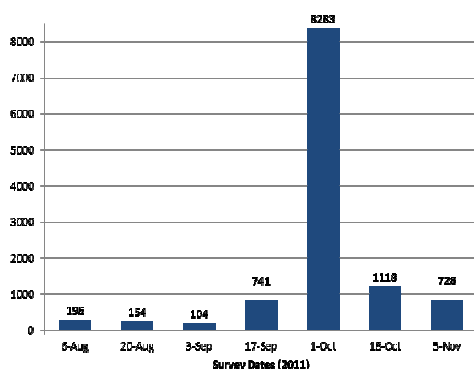
The following chart shows the number of butts per area. The red area, the trader precinct, is the only area with butt disposal infrastructure. This infrastructure included two rubbish bins without designated cigarette disposal poles, ashtrays randomly scattered among footpath trader tables, and a small 'Please put your cigarettes here' box.

Brookes Jetty

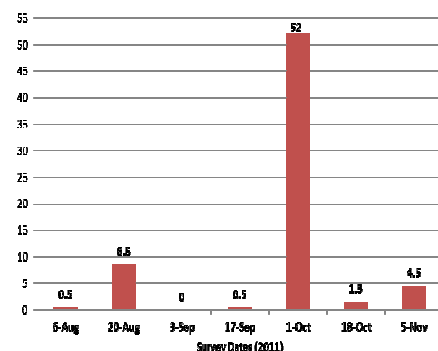


Butts vs Rainfall: The survey results clearly demonstrate the impact of rainfall on transferring butts from streets to the beach.

Number of of butts on beach



Rainfall (mm) in week prior to survey



Strong correlation between rainfall and butts found on the beach was indicated in the October 1 survey with 8,283 butts on the beach after the highest rainfall week during the survey period (52mm). Coincidentally, the October 1 survey recorded the least butts on the street (29% less than average for the area surveyed).

Existing litter management measures include the Council street cleaning program and footpath traders required to manage litter in their area. Both of these measures lack the flexibility and capacity to respond to impending rainfall.

Appendix 1 – Street butts data by property

South Side of Blessington Street

Street Number / area	6-Aug	20-Aug	3-Sep	17-Sep	1-Oct	18-Oct	5-Nov	Total
EcoCentre 55A	125	20	70	28	18	49	43	353
Herbert St	4							4
#55	40	39	27	37	23	49	35	250
#53	55	34	17	32	23	41	39	241
#51	105	76	59	71	41	79	68	499
#49	34	39	7	16	2	10	7	115
#47	29	57	7	15	9	15	9	141
#45	24	40	32	63	16	41	20	236
#43	28	35	8	27	12	15	4	129
#41	39	44	10	13	34	15	10	165
#39	30		34	5	45	37	24	175
#37	341	184	232	328	228	461	465	2239
Barkly St	44		31	70		45	32	222
#229 Barkly	44	20	42	32	ns	43	56	237
#33A	8	38	69	19	ns	30	16	180
#31	37	88	19	37	ns	104	60	345
#29	30	80	4	41	ns	90	52	297
#27	38	26	7	3	ns	28	38	140
#25A	15	24	8	1	ns	40	5	93
#25	39	10	19	35	ns	79	223	405
#23	32	30	30	10	ns	21	76	199
laneway	15	13	14	13	ns	9		64
#21	37	15	30	22	ns	23	3	130
#19	18	7	14	21	ns	32	20	112
#17	7	11	11	5	ns	20	8	62
#60 Chaucer St	11	17	13	7	ns	12	19	79
Chaucer St	2	17	11	12	ns	2		44
Renfrey Gdns	105	77	67	80	ns	72	32	433
Spencer St	4	8	21	0	ns	3		36
#51	27	17		13	ns	10	8	75
Blessington Crt	3	10	14	3	ns	32	1	63
#9	4	6	1	14	ns	17	7	49
#7	15	13	28	2	ns	24	8	90
#3	52	17	15	26	ns	32	21	163
Marine Pde	36	7	10	4	ns		36	57
Total	1,477	1,119	981	1,105	451	1,580	1,445	8,122

Appendix 2 – Street butts data by property

North Side of Blessington Street

Street Number / area	6-Aug	20-Aug	3-Sep	17-Sep	1-Oct	18-Oct	5-Nov	Totals
#38	9	89	14	37	29	28	8	214
#36	48	8	17	24	16	13	19	145
#34	32	5	19	20	9	12	18	97
#32	68	18	34	41	30	23	26	214
#30	57	13	21	27	8	14	21	140
#28	24	8	73	38	20	13	20	176
Car Park	48	24		39	11	20	24	142
#214 Barkly Street	322	102	293	148	82	90	107	1144
Barkly Street								
#227 Barkly Street	80	32	99	69	ns	68	97	445
#22	97	26	69	22	ns	55	42	311
#20	60	25	43	24	ns	27	33	179
Pumpkin Lane					ns		11	11
#18	35	18	36	11	ns	20	19	120
#16	66	14	37	12	ns	17	8	146
#12	215	76	126	70	ns	76	72	563
Chaucer Street					ns		2	2
Peanut Farm Oval	122	42	84	87	ns	63	42	440
Spencer Street					ns			
#10	43	13	23	21	ns	15	15	115
#8	15	2	8	1	ns	2	3	28
#6	24	2	13	13	ns	15	15	67
#29 Marine Pde	9	6	3	7	ns	20	8	45
Marine Pde	76	19	14	27	ns	19	16	171
Total	1,374	523	1,012	711	205	591	610	4,744

For additional information please contact Neil Blake

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