

6 Human Settlement

Human settlement is about reaching a balance to achieve a good quality of life for the community. Population growth, housing, waste generation and noise in an urban setting are all factors that impinge either positively or negatively on the community. Human settlement indicators have been selected to measure regional issues of population pressures, noise complaints and waste generation.



Pressures on Human Settlement

Key pressures include:

- waste generation
- growing population
- increased packaging
- illegal dumping
- electronic waste, (e-waste), and
- noise from various sources (e.g urban developments, companion animals, transport, construction and recreation).

Condition of our Human Settlement

The SHOROC region is home to over 272,616 people, is bordered on three sides by water and continues to experience higher density living. The increased number of people living in the area can have both positive and negative implications. Negative implications include an increase in waste and noise which may have an effect on human health and wellbeing, whilst positive implications include a greater sense of community.

Regional Snapshot

Table 14: Regional Human Settlement Condition

Indicator	SHOROC Region				
	06/07	07/08	08/09	09/10	4 Year Trend
Estimated population at 30 June 2009	263,134	265,666	266,727	272,616	↑
Total waste to landfill per capita, including general cleanup (kg)	221	227	222	219	↔
Total waste to recycling per capita including metal and green waste (kg)	218	226	221	230	↔
Noise complaints including general and barking dogs	3,143	2,946	2,626	1,585	↓



Local Snapshots

Table 15: Population

Indicator	Year	Council			
		Manly	Mosman	Pittwater	Warringah
Estimated population of each LGA - at 30 June 2009	2006/07	39,103	27,936	56,619	139,476
	2007/08	39,677	28,152	56,920	140,917
	2008/09	39,667	28,356	57,018	141,686
	2009/10	40,939	28,767	58,818	144,092
Residential density (persons per hectare)*	2006/07	25.82	32.79	6.25	9.33
	2007/08	26.21	33.04	6.28	9.42
	2008/09	26.20	33.28	6.29	9.47
	2009/10	27.04	33.76	6.49	9.63

*Residential density calculates persons per hectare. Land included in the calculation may not be used for habitation e.g. shopping centres, national parks, large bodies of water, which is why Warringah and Pittwater which have larger open space land areas have a lower residential density than Mosman or Manly whose LGA's are predominately residential housing.

Table 16: Noise

Indicator	Year	Council			
		Manly	Mosman	Pittwater	Warringah
General noise complaints received by council	2006/07	40	50	186	730
	2007/08	90	79	92	825*
	2008/09	87	71	325	640
	2009/10	117	51	235	249
Barking dog complaints received by council	2006/07	7	45	260	1825
	2007/08	67	41	127	1625*
	2008/09	16	38	221	1228
	2009/10	30	50	207	646

*Figures for Warringah LGA in 2007/08 are sourced from two information systems as well as anecdotal information due to a system changeover mid year.

Table 17: Waste

Indicator	Year	Council			
		Manly	Mosman	Pittwater	Warringah
Total waste to landfill including general cleanup (tonnes)	2006/07	7,921	6,791	12,029	31,256
	2007/08	8,402	6,891	12,692	32,796
	2008/09	8,416	6,363	13,420	31,984
	2009/10	8,453	6,409	13,293	31,522
Total waste to recycling including paper, co-mingled, metal and green waste (tonnes)	2006/07	7,479	5,637	11,304	32,832
	2007/08	7,576	5,609	11,636	35,243
	2008/09	6,618	5,567	11,729	34,936
	2009/10	7,407	5,528	11,674	37,975
Total waste to landfill including general cleanup per capita (kg)	2006/07	203	243	212	224
	2007/08	212	244	223	233
	2008/09	212	224	235	226
	2009/10	206	223	226	219
Total waste to recycling including metal and green waste per capita (kg)	2006/07	193	202	200	235
	2007/08	191	199	204	250
	2008/09	167	196	205	246
	2009/10	181	192	199	264
Green waste diverted from landfill per capita (kg)	2006/07	41	39	36	102
	2007/08	44	54	41	109
	2008/09	30	56	46	112
	2009/10	45	59	45	134
General cleanup sent to landfill per capita (kg)	2006/07	22	16	20	33
	2007/08	22	16	36	35
	2008/09	30	14	29	34
	2009/10	24	14	29	33



Responding to Human Settlement Issues

Regional Responses

E-Waste Recycling Kerbside Collection

From 1 January 2010 the SHOROC member Councils, were the first in Australia to ban the general kerbside collection and disposal of e-waste (electronic waste) to landfill. This means e-waste such as televisions, computers, printers, scanners, modems, DVD players, CD players, VCRs and gaming machines are no longer picked up in general kerbside collection across the region.

This ban and lobbying by SHOROC led to the Federal Minister for the Environment announcing the introduction of a nationwide e-waste recycling scheme from 2011 and the introduction of legislation for extended producer responsibility (EPR) to make manufacturers responsible for the recycling and safe disposal of e-waste.

As a solution for residents to dispose of their e-waste in the meantime, until the Commonwealth Government legislation is put in place, the SHOROC member Councils implemented a number of options for residents, including special kerb side e-waste recycling collections, drop-off days and the provision of a facility for residents to drop off items for free for recycling at Kimbriki resource recovery centre.

For example, Mosman Council held a two day e-waste collection in March in partnership with Apple, collecting a total of 50 tonnes. An additional kerbside e-waste collection was conducted during the week of 31 May - 4 June 2010, with a total of

9.92 tonnes collected from the kerbside. Pittwater Council also hosted an e-waste collection event for residents, collecting a total of 52.8 tonnes

The e-waste ban has been a success and raised awareness about the issues of e-waste and the importance of waste reduction, reuse, recycling and waste avoidance. It is estimated 400 tonnes of e-waste will be diverted from landfill and recycled annually.

Kimbriki Resource Recovery Centre

Kimbriki is a general, solid waste (non-putrescible) landfill and recycling centre operated by Kimbriki Environmental Enterprises Pty Ltd. Warringah, Manly, Mosman and Pittwater Councils are the shareholders of this new company.

Recycling and re-use processes developed at Kimbriki result in only 26.4% of the 170,900 tonnes of waste material received at the site going to landfill. In 2009/10, Kimbriki recycled 75,300 tonnes of vegetation, 46,100 tonnes of concrete/brick including stockpiles and 3,100 tonnes of metal products with 45,200 tonnes of waste going to landfill.

Construction of the new Eco House and renovation of the Eco Garden were completed, using recycled materials. The poles in the structure are rescued power poles, wall panels came from the ABC studios, and the timber floor and front doors were from timber sources destined for disposal. The improvements to the garden include an outdoor classroom and more seating throughout the themed 'rooms' in the garden.

The venue has hosted workshop days for teachers in the local Ready Set Grow program. Many schools and seniors groups have visited Kimbriki this year for an informative site tour and session with Peter Rutherford, Senior Ecologist and teacher. Eco gardening workshops for adults continued with a variety of topics including 'Growing Fruit Trees' and 'Small Space Edible Gardens'.



Kimbriki Eco House. Source: Warringah Council

Noise Management

Noise pollution is regulated under the *Protection of the Environment Operations (POEO) Act 1997* and councils use a range of measures to ensure noise in the community is kept at an acceptable level. Noise impacts are carefully considered during the development approval process and consents are appropriately conditioned to regulate and control noise. Noise requirements are also considered and included within planning instruments such as development control plans to reduce and control noise.

Companion Animal Education

Manly, Pittwater and Warringah separately host Dog Days and Mosman hosted a Pets Day Out. These events provide residents and visitors with a forum for companion animal social interaction. The events also provide Councils with a valuable opportunity to communicate with dog owners and raise awareness of responsible dog ownership such as minimising barking.

SHOROC Waste Tip Collaborative Ad Series

A series of monthly waste tip advertisements were developed jointly by the waste officers in each of the SHOROC member Councils, and advertised in both the Mosman Daily and Manly Daily to encourage residents of SHOROC to reduce their waste to landfill, increase their recycling rates, shop sustainably to reduce packaging and food waste, as well as inform residents on what to do with unwanted household items, green waste, and metals, and provide tips and activities that residents can take to reduce their ecological footprint. Regular evaluations show the ads continue to be a popular information format. Local residents feature with a waste tip on avoiding waste and recycling.

Clean Up Australia Day

Each of the SHOROC member Councils took part in the 20th Annual Clean Up Australia Day on Sunday 7 March 2010. Councils offer support to the Clean Up events to help raise awareness of litter issues and how litter affects our terrestrial and aquatic environments. Clean Up Australia established that 15560 tonnes of rubbish was removed from beaches, waterways, parks and bushland across Australia, with approximately 588,000 volunteers taking part at 7073 registered sites, which was a 6% increase on volunteer numbers since 2009.

Household Chemical CleanOut

The Household Chemical CleanOut program is delivered in partnership with DECCW and local councils. CleanOut enables the environmentally responsible disposal of common household hazardous waste reducing community and environmental exposure to hazardous waste. The CleanOut program has facilitated the collection, treatment, recycling and safe disposal of household hazardous waste throughout the Sydney, Hunter and Illawarra regions of NSW. The SHOROC member Council's supported the Chemical CleanOut event in April 2010. A total of 58810.5 kg was collected at the collection point in Pittwater, with 1772 people attending, and 2,355 people dropped their chemical items at the collection point in Warringah, with a total of 85,330kg of items collected. In addition, 84 Mosman residents also disposed of their chemical items at the collection point in Willoughby.



Household Chemical Cleanout. Source: Warringah Council

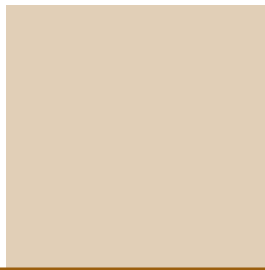


Figure 3: Types of Hazardous Waste Disposed of During the Chemical Cleanout Collection Held at Pittwater.

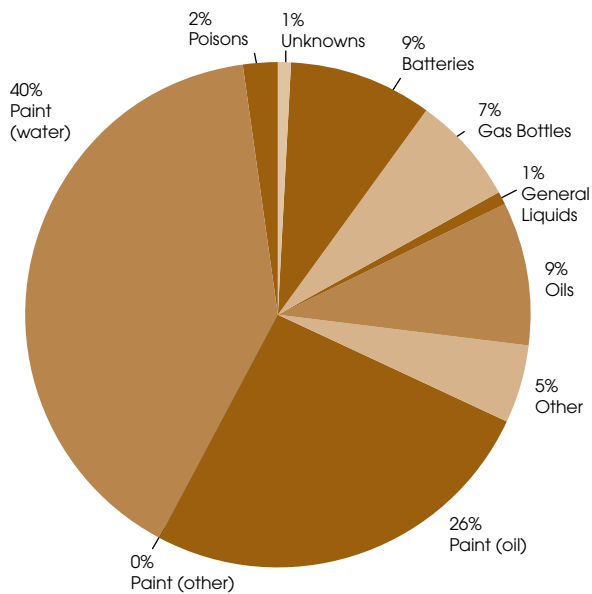
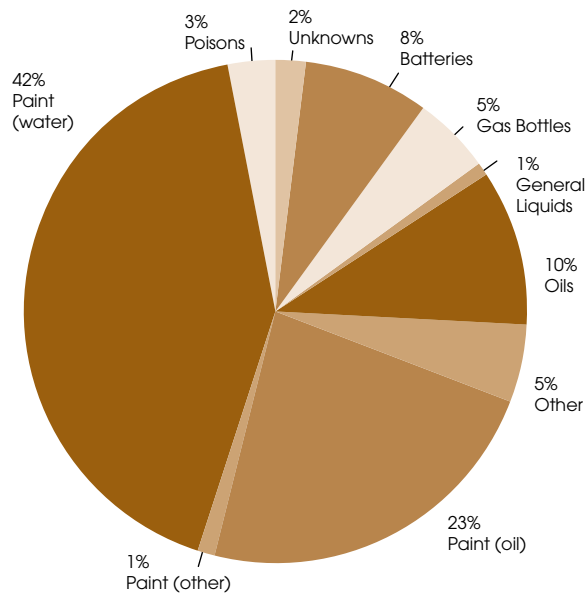


Figure 4: Types of Hazardous Waste Disposed of During the Chemical Cleanout Collection at Warringah.



Delivering Local Responses

Manly Council

Second Hand Saturday

Second Hand Saturday is a program aimed at promoting reuse and repair as opposed to disposal by encouraging residents to host a garage sale prior to their general clean up. This may effectively reduce the amount of waste that is sent to landfill and reduces demand on resources for new goods.

Second Hand Saturday also promotes community spirit by encouraging neighbours to get together to organise a garage sale or street sale. Council supports residents by advertising their garage sale in the Manly Daily and providing posters to assist with promotion. Over the past year over 35 households participated which means goods that may otherwise end up in landfill have been acquired by someone else.

Litterguards

The Litterguards Program was developed in response to community pressure to reduce littering on and around the Ocean Beach area of Manly during the peak summer period.

The main objectives of the program are to:

- decrease litter on the beach and in the marine environment
- educate the public about the social, economic and environmental impacts of litter, and
- encourage best practice waste management in public places and litter avoidance.

Litterguards wear distinctive clothing and directly approach groups and individuals on the beach reminding them to properly dispose of their waste and recycling. The focus for 2009/10 was visitors and youth, who were observed to be the most prolific offenders by Council rangers, compliance staff and Litterguards alike. Litterguards patrolled more than 200 hours on our beaches over the summer months and also spoke with over 6000 individuals reminding them to take their rubbish with them and dispose of it appropriately.

Beach litter levels decreased visibly during the 2009/10 reporting period, according to Council

cleansing staff, with beach litter weights recorded by council's beach rake reduced by approximately one quarter compared to the 2005/06 season before the introduction of the Litterguards Program. Overall the response to the Program from both visitors and locals was extremely favourable and Litterguards received many positive comments during their 2009/10 beach patrols.

Food Wine and Sustainability Festival

Manly Council's annual Food and Wine Festival attracts around 30,000 people. The festival is an opportunity to provide information on waste and recycling and encourage home composting. The 2010 Food Wine & Sustainability Festival featured biodegradable cutlery and crockery that was collected after use at numerous bin stations for large scale composting. More than 86% of the total waste generated by this year's 20,000 – 30,000 participants was diverted from landfill for recycling, which is our best outcome yet. This included 3.06 tonnes of plastic, glass, aluminium and steel containers, 2.5 tonnes of paper and cardboard recycling and over 1 tonne of food organics which was composted at the WSN UR3R facility. There were over 100 volunteers assisting with waste awareness and helping festival goers use the correct bins.



Manly Food and Wine Festival. Source: Manly Council

Mosman Council

Public Place Recycling

An additional twelve public place recycling bins were installed along Balmoral Foreshore, Rosherville and Sirius Cove Reserves, and Clifton Gardens, to encourage the public to recycle away from home, maximising resource recovery from public places.

Balmoral: Each of the 16 x 240L recycling bins at Balmoral are emptied twice daily in summer, and usually filled to capacity. Approximately 7,680L recyclables and 15,360L waste are collected each day during summer. In winter approximately 3,840L recyclables are collected on weekends.

Clifton Gardens and Rosherville Reserve: The 4 x 240L recycling bins are collected daily, twice daily in summer with a maximum volume of 1,920L recyclables collected.

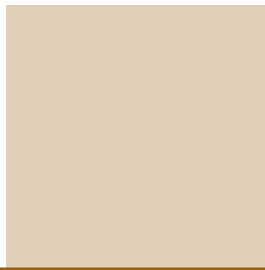
Sirius Cove: The 2 x 240L recycling bins are collected daily, twice daily in summer with a maximum volume of 980L of recyclables collected.

Waste Education Programs

As a member of Keep Australia Beautiful, Council is able to provide the Waste Watchers Program to local primary schools. The Waste Watchers Program was implemented during 9-16 March 2010 at four Mosman primary schools, involving 512 students. These students were able to learn about waste consumption, the three R's – Reduce, Reuse, Recycle, and organic waste.

In 2010, Council undertook Worm Farming Workshops in two primary school classes with 35 students in each. The students were able to learn how to build and care for a working worm farm at school, to use for their lunch food scraps.

The Northern Sydney Region Rubbish Free Lunch Challenge was held in August 2009, with four out of nine schools in Mosman participating, involving approximately 180 primary school students. These students were involved in undertaking a waste audit at their school during lunch time before and after the challenge, and on a specific day all participating students took up the challenge of packing a lunch with minimal waste.



BOXWORLD Event

BOXWORLD is a spectacular miniature city made almost entirely of recycled materials. It is created by one man, Warren Thomas, an environmentalist and model maker, originally from Tasmania. The BOXWORLD Exhibition opened at the Mosman Art Gallery in June 2010, and was exhibited until 18 July 2010. A BOXWORLD workshop was held on World Environment Day 5 June 2010, with thirty people in attendance, to raise awareness of the three R's - Reduce, Re-Use and Recycle.



Top: BOXWORLD. Source: Mosman Council
Public Place Recycling Bins. Source: Pittwater Council

Pittwater Council

Reduction of Waste to Landfill at Council Facilities

Council has implemented a number of initiatives to reduce the amount of waste to landfill and to encourage recycling by staff members. Council installed workplace recycling in kitchens, installed a worm farm at Boondah Depot and Mona Vale Library, and placed both mobile and battery recycling boxes at each council administration facility.

Public Place Recycling Bins

Pittwater installed 20 public place recycling bin enclosures at its parks and beaches. The enclosures include separate bins for general waste and commingled (container) recyclables with a cigarette butt disposal facility installed on the sides.

Commercial/Industrial Recycling

As part of Councils 'Commercial/Industrial Environmental Inspection Program' in the Mona Vale basin area and Councils 'Food Inspection Program' business were educated and recommended to recycle waste products such as paper, commingled (containers), waste oils, metals and batteries.

Land Use Planning Strategy

During 2009/10, Council commenced the process of writing the Pittwater Land Use Planning Strategy which will inform Councils comprehensive Local Environmental Plan in the future. This strategy will provide a framework for the management of existing and future development to ensure that the ecological processes on which life depends are maintained and the needs of the community are met without compromising future generations. The Land Use Planning Strategy will cover the period until 2031, and will provide a basis for the preparation of a new comprehensive Local Environmental Plan (LEP).

Warringah Council

Public Exhibition of the Draft Local Environmental Plan and Development Control Plans

Warringah's LEP 2009 and the Warringah Development Control Plan (DCP) will replace Warringah LEP 2000 and its associated development control plans and policies. Warringah's draft LEP and DCP were on public exhibition until 11 December 2009, and then adopted by Council on 8 June 2010. The DCP has been approved and will come into force from the date of publishing. The draft LEP has now been forwarded to the Minister for Planning for publishing. The LEP and DCP are made in accordance with the NSW environmental planning and assessment legislation.

Unleashed Dog Exercise Area Review

A review was undertaken of potential additional dog unleashed exercise areas in Warringah. Following consultation with the community and stakeholders and taking into account flora and fauna assessments, four new areas were put under a six month trial which concludes in September 2010. Of these areas two are open unlimited hours while two involving sporting fields are open only in the early morning. In one of the limited hour locations a contractor was employed to remove any dog faeces on the grounds prior to the weekend sports to help solve the issues raised by the sporting associations.

Introduction of a New Residential Waste Contract

The commencement of a new Waste Contract with United Resources Management (URM) in July 2009 saw substantial benefits flowing to Warringah residents. The new service makes it easier for residents to recycle, minimising waste going to landfill. Regardless of recycling number or symbol, all containers with firm sides and which are not made of polystyrene can be recycled. This includes all plastics, cartons, metal and glass containers.

Residents also received a free lime lidded vegetation recycling bin and collections are now fortnightly. This resulted in approximately 50% more (4,500 tonnes) vegetation being collected in kerbside collections than the previous year. A waste and recycling calendar was distributed and a comprehensive advertising and publicity campaign ensured residents knew about the changes and how to get more information.

Waste Presentations, Events and Workshops - Revitalising Recycling

Community engagement was emphasised this year as Warringah's Waste Education Officers went "on the road" as guest speakers to talk about reducing waste, recycling better and providing the opportunity for residents to have all their waste and recycling questions answered. There were 165 community engagements reaching 12,352 residents.

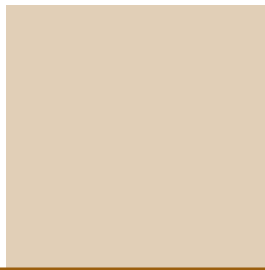
Council's Waste Education Officers delivered 11 presentations to 571 residents, including local clubs such as Probus and View Club. Two high profile speakers - Ian Kiernan and Tanya Ha - were also sponsored to speak at Council's Hilltop to Headland Sustainability Series. In addition, 6 practical workshops were delivered on reuse activities, worm farming, composting, sustainable shopping and recycling. The increasing participation in these programs is a clear indicator of Warringah's waste messages being integrated into residents' consciousness and activities.

Second Hand Mystery Tour

As part of the Living Green Festival, celebrating World Environment Day in June 2009, Warringah residents were invited to venture on a mystery tour and discover more about shopping for uniqueness, environmental and economic benefit. Approximately 40 residents thoroughly enjoyed seeing what happens at the Toy Repair Workshop and browsing through a variety of shops with preloved items before having a low waste lunch and tour at Kimbriki. The response was so positive that 120 residents had to be put on the waiting list for the next tour.

School Program

The schools program continues to be very popular with 19 schools taking up waste education opportunities which reached 1,378 students. Three schools had edible gardens with composting and worm farming systems established; other schools had the popular Waste Watchers program delivered while yet more schools took the opportunity to attend a tour and workshop at Kimbriki.



Swap A Lots

A new level of participation and awareness in re-use was introduced to events with Swap-A-Lots. Residents eagerly exchanged cds at Council's Music in March event, teens exchanged games and music at Youth Week, and everyone swapped children's clothes, accessories, books, cds, dvds and games during National Recycling Week as part of the 'Big Aussie Swap Day'.

Waste to Art Competition and Exhibition

The Waste to Art category was introduced as a separate category in the Warringah Art Exhibition adding a very interesting dimension to the Exhibition, further promoting an awareness of waste and the importance of reuse. A photographic exhibition of the 30 works was displayed over 48 days at public events and locations across Warringah, focusing attention to issues around our disposable society and Council's awareness and actions in relation to sustainability.



Swap Day. Source: Warringah Council

LGSA Waste Avoidance Commendation Award for Avoiding Food Waste Campaign

Avoiding Food Waste has been a major campaign theme in Warringah with residents receiving worm farms, compost bins, workshops and extensive information. The campaign's success was recognised with a Commendation Award in Waste Avoidance at the Local Government and Shires Associations of NSW 2008/09 Excellence in the Environment Awards.

Publications

Four target brochures were distributed to residents as part of the contract with Council's waste contractor URM. The 'A-Z of Waste' was also compiled, put on the web, advertised and printed. This publication provides disposal methods for a myriad of items. In addition further in-depth information and links are provided to residents on Council's web site.



Warringah Council Waste to Art. Source: Warringah Council