

Kimbriki Resource Recovery Centre

As from 1 July 2009 the Kimbriki Resource Recovery Centre has been operated by a private company, Kimbriki Environmental Enterprises Pty Ltd, with Northern Beaches Council and Mosman Council as sole shareholders.

Visit Kimbriki

You are welcome to visit the site by car and to take photos although prior arrangement is necessary. Kimbriki management would prefer teachers to ask students to visit as a group, rather than multiple individual visits.

Please contact Kimbriki during office hours (02) 9486 3512 to book a suitable time to visit the site and be aware we cannot offer personal interviews to answer student's questions.

Recycling has made a difference to the life of Kimbriki

The site opened and started receiving waste for landfilling in 1974. Recycling operations began in 1990 and since then over 2 million tonnes of resources have been recycled through the site. The landfill capacity is now expected to last at least until the mid-2050's. After the landfill is closed there are plans for some of the site to be playing fields along with the continuation of the important recycling functions. The Kimbriki site is expected to remain as an important site for recycling and waste management for the foreseeable future.

Kimbriki Eco House and Garden

The Eco House and Garden is Kimbriki's education centre which specialises in the education and practice of the science of ecological living. This focuses on creating a low waste, everyday lifestyle through household recycling, composting, worm farming, mulching, organic gardening & permaculture ethics.

Workshops for adults, families and school groups are held regularly.

Kimbriki and the 4R's

This is the overarching philosophy at Kimbriki and at the core of everything we do.

Rethink, Reduce, Reuse, Recycle

Rethink: There is NO such thing as Waste – It **IS** a decision we can rethink.

Reduce: Reduce the amount of waste we make in every aspect of our lives.

Reuse: Use it again. Make things last longer. Second hand is good!

Recycle: Make new things from the resources we can't reuse.

How we practice the 4 R's at Kimbriki Resource Recovery Centre

Kimbriki recycling and landfill statistics for financial year 2019/20

In 2019/20 Kimbriki recycled/reused approximately 80% of the approximately 265,000 tonnes of waste material received at the site.

In 2019/20 Kimbriki recycled approx. **82,000 tonnes** of vegetation, **85,000 tonnes** of concrete/bricks, **6,000 tonnes** of metal products, **40,000 tonnes** of mixed containers & paper, **350 tonnes** of computers and TVs and **340 tonnes** of reclaimed goods sold through the Buy Back Centre with **52,000 tonnes** of waste going to landfill.

Note: All figures are close approximations for 2019/2020

Reused & Recycled = 82,000 + 85,000 + 6,000 + 40,000 + 350 + 340 = **213,690 tonnes**

Landfilled = **52,000 tonnes**

Total received = 213,690 + 52,000 = **265,690 tonnes**

% Reused & Recycled = **80.4%**

Approximately 80% of all resources that are delivered to Kimbriki are recycled or recovered.

Services provided by contractor's

There are four contractors onsite; **Australian Native Landscapes (ANL)** operating the vegetation and wood waste processing making mulches and composts; **Concrete Recyclers'** crushing concrete and brick, making aggregates and sands; **IQ Renew** collecting and sorting household recycling; and **Morris Civil** operating site machinery e.g. the landfill compactor.

			
<p>Australian Native Landscapes</p> <ul style="list-style-type: none"> operates the vegetation and wood waste recycling area. Receives vegetation and wood waste from Council collections, self-haul residents and commercial customers. 	<p>Concrete Recyclers</p> <ul style="list-style-type: none"> operates the construction and demolition recycling area. receives waste concrete, asphalt, brick and roof tiles from local contractors and residents. 	<p>IQ Renew</p> <ul style="list-style-type: none"> operates the household recyclables area for council yellow and blue household bins, as well as public drop off. recyclables are transferred off-site to sorting facilities. 	<p>Morris Civil</p> <ul style="list-style-type: none"> provision of plant and operators to support landfill operations. operates the transfer station recovery and haulage.

Paint

Kimbriki has established a collection point under the Paintback® scheme which is open to householders as well as trade painters. Paintback® is an independent not-for-profit organisation which is funded by the Australian paint industry and the major companies that supply around 95% of all the architectural and decorative paint sold in Australia. The founding members of Paintback® are Dulux, Haymes, PPG, Resene and Valspar.

<https://www.paintback.com.au/>

Asbestos

Kimbriki accepts BONDED ASBESTOS material only, things like old fibro sheeting and mouldings. These must be double-wrapped and deposited in our separate asbestos drop zone. We then prepare a special burial point in the landfill where the asbestos waste is entombed under a minimum of 1m thick cover material immediately as its emplaced.

Mattresses

At Kimbriki mattresses are partially recycled on site. Mattresses are loaded into a shredder, and a magnetic mechanism separates the springs from the rest of the mattress ready for recycling. The shredded fabric covers, fibre fill and any latex, or foam fill is removed separately and currently goes to landfill.

Motor Oil

Kimbriki accepts motor oil in volumes up to 50L per trip. The oil is collected by Nationwide Oil and is recovered by a unique chemical process that removes water and heavy metals allowing the oil to be re-used.

Lead acid Batteries

The used Lead Acid Batteries dropped at Kimbriki are collected by local recycler Associated Scrap Metals, Brookvale who deliver them to several Sydney based battery recyclers. These recyclers feed the batteries into a battery breaker which separates the lead metal, lead paste, polypropylene and weak acid into discrete streams ready for treatment prior to recycling in secondary lead smelters, with chemical manufacturers, and plastics recyclers.

Disposable and recyclable batteries

These are collected and delivered to Ecocycle who are specialist battery recyclers. They use an automated plant to separate the batteries into their different chemical types then break them down to recover the raw materials for remanufacture. <https://ecocycle.com.au/>

Florescent tubes and globes

These are also collected and delivered unbroken to Ecocycle who have a fully contained mercury recovery facility at St Marys in Sydney where the tubes are broken down and the aluminium, glass and mercury all separately recovered for reuse. <https://ecocycle.com.au/>

Scavenging

No scavenging is allowed on the site. Increased sorting by Kimbriki staff over recent years has meant more resources and materials have been extracted for recycling and reuse and the establishment of the **Kimbriki BUY BACK Centre**. Many good second-hand items are for sale at reasonable prices from this "Re-use" Shop.

Collecting for charity

Kimbriki collects old clothing for **King Cotton**, a charity that exports old clothes for reuse as well as making rags. There is also a collection point for the **Peninsula Senior Citizen's Toy Repair Group**, who clean and repair toys and give to children's charities.

Bikes 4 Life have a drop off point and conducts monthly workshops on site to restore and pack old bicycles for export and donation to marginalised and impoverished communities, around the world.

Environmental Compliance at Kimbriki Resource Recovery Centre

Kimbriki is licensed and monitored by the NSW Environmental Protection Authority (EPA), please look at the Kimbriki website, www.kimbriki.com, 'About Us' tab then click on the 'Environmental Compliance' tab which has a link to our two Environmental Protection Licences issued by the NSW EPA. These licences contain a series of conditions that regulate the environmental footprint of the site. Kimbriki is required to conduct detailed monthly monitoring of dust, surface, and ground water to demonstrate compliance. Monthly summaries of EPA monitoring data including explanatory notes, as well as a map of the monitoring points and frequency are available in this section of the website.

Vegetation regeneration and sediment control

Disturbed areas of the site are targeted with vegetation regeneration programmes and steep banks on the site are covered with coarse mulch and hand planted. Many of the roads have recently been sealed, drains improved, and open areas planted to reduce dust and control sediment on the site. A series of drains and structures have been installed to capture sediment as water travels through the site and these all drain into a series of large settling ponds at the bottom of the site to allow for further treatment and testing to ensure compliance prior to the water being released off site.

Reducing greenhouse gases and odour

A gas flare completes a landfill gas collection system that was installed in late 2013. The system vacuums landfill gas from a network of pipes that has been installed in the landfilled waste. The collected gas is then burned at a high temperature of approximately 800 degrees C. Annually the system typically collects > 4.0 million m³ of landfill gas and reduces Kimbriki greenhouse gas emission by 30,000 tonnes CO₂-e. The landfill gas collection equates to more than 1,600 olympic-sized swimming pools every year. Landfill gas typically contains methane (45-60%), carbon dioxide (40-60%), nitrogen (2-5%) and other components such as oxygen, sulphur compounds, hydrogen, and carbon monoxide, which comprise less than 1%. The global warming potential of methane is 21 -26 times that of carbon dioxide, so it is better to burn the landfill gas and convert it into Carbon Dioxide and water, rather than releasing into the atmosphere. This reduces Kimbriki's greenhouse gas emissions by 30,000 tonnes of CO₂-e each year. Recent trials with horizontal gas collection pipes laid in trenches have shown that gas can be collected from quite newly buried waste in landfill, with good results.

Water conservation and management

Stormwater is collected in a freshwater dam at the southern end of the site and used by the site water truck for spraying internal roads for dust suppression.

Leachate, which is a contaminated liquid that seeps from the landfilled waste, is collected, and stored in a fully lined dam. The collected leachate is treated in a specialised treatment plant on the site (constructed in 2018), which processes up to 500,000 litres per day of potentially harmful leachate and discharges the treated leachate into the local sewerage system in accordance with an agreement with Sydney Water.

Recent improvements

During 2015-16 a fully lined landfill cell was constructed to prevent leachate polluting the surroundings. This was one of the first in NSW to meet new standards in landfill practice required by the NSW Environment Protection Authority (EPA). This is done to prevent landfill leachate polluting local groundwater and surface waters. In 2019 a second fully lined landfill cell was constructed and is currently in use.

Mixed waste is now dropped off at a safely managed drop-off area, inspected and sorted prior to being delivered to the landfill area in large skips.

During 2016 two additional weighbridges were installed so that all vehicles could be more expediently weighed in and out of the site, for accurate assessment of loads.

Kimbriki Achieves Certification to ISO 9001:2015 ISO, 14001:2015 and ISO45001:2018

In September 2020 Kimbriki successfully gained ISO 9001:2015 ISO, 14001:2015 and ISO45001:2018 certification for its Integrated Management System. ISO means International Standards Organisation, an independent, non-government international organisation which is recognised globally and currently works with more than 700 organisations and over 100,000 experts from different industries and sectors.

The three standards Kimbriki were accredited for covered the three key areas of Quality, Safety and the Environment and this Certification process ensures that Kimbriki has well established systems to achieve a high standard in these three key areas as well as providing on-going, annual audits to ensure this standard is maintained.

This achievement represents the culmination of 12-months work, with the whole Kimbriki team working together to ensure success. It has been a comprehensive process, but at Kimbriki following best practice is always at the top of mind in everything that is done onsite and in our corporate operations, and we are very proud to have gained the ISO 9001:2015 ISO, 14001:2015 and ISO45001:2018 certification.