

APPENDIX Q

Waste Management Strategy



**The Northern Beaches Hospital
State Significant Development Infrastructure SSI_6792 (Stage 2)
Environmental Impact Statement
Appendix Q: Waste Management Strategy**

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1. Executive summary

This waste management strategy addresses those parts of the Director General's Environment Assessment Requirements (DGRs) for waste generation and management associated with The Northern Beaches Hospital (Stage 2).

The strategy:

- identifies likely waste streams to be generated during hospital construction works and operation, and commits to quantify and classify the waste streams prior to commencement of hospital operations.
- describes the measures to be implemented to manage, reuse, recycle and safely dispose of this waste.
- Identifies appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site.

The waste management strategy demonstrates how:

- Healthscope, as Operator of the proposed Northern Beaches Hospital understands the critical importance of providing a waste management system that protects the health and safety of personnel, patients and the public, and minimises overall environmental impacts by focusing on strategies for minimisation, safe disposal and auditing of waste management within the facility.
- Healthscope takes a proactive approach to accurately segregating waste to protect personnel from injury and infection. Our waste management system prevents hazardous waste from entering inappropriate waste streams and diverts problematic waste from incorrect waste streams.

2. Description of The Northern Beaches Hospital

2.1. Scope of work

The proposed Stage 2 Northern Beaches Hospital development includes:

- Bulk excavation works
- Construction of an nine storey Hospital building
- Staff, patient and visitor car parking, including construction of a eight storey multi-deck Car Park
- Site works including internal roads, pathways and landscaping
- Utility amplification works

2.2. The Northern Beaches Hospital

The NBH will comprise a new Level 5 Hospital including, but not limited to:

- Main entry and reception, administration, bookings/admissions, ambulatory care.
- Pathology, medical records, physiotherapy and retail.
- Emergency department.
- Kitchen, hard FM/engineering services, mortuary, back of house facilities.
- Chemotherapy unit, renal dialysis unit, transit lounge, medical imaging & nuclear medicine, pharmacy.
- Interventional suite, endoscopy, recovery, day surgery unit, SSU, ICU/HDU.
- Birthing suites, maternity IPU, neonatal special care nursery, paediatric IPU, paediatric day surgery unit.
- Mental health.
- Medical/surgical/CCU IPU, teaching and research centre.
- Consulting suites.
- Helipad.

The Gross Floor Areas for the Hospital and Car Park will be in the order of 69,800m² and 38,250m² respectively.

3. Waste

This section of the report provides:

- a plan to quantify and classify the likely waste streams generated during construction and measures to be implemented to manage, reuse, recycle and safely dispose of this waste to reduce the load on landfill availability
- a description of the likely waste streams to be generated during operation and describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste.
- identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site.

3.1. Waste management (during construction)

A Waste Management Sub-Plan will be prepared as part of the Construction Environment Management Plan. This plan will be prepared prior to the commencement of construction works and will, in addition to describing the objectives of the plan, detail the involvement of the waste contractor and any other specific requirements as identified during the pre-planning of the construction works.

A key focus of the Waste Management Sub-Plan will be to identify appropriate mitigation measures to reduce off site impacts. At this stage identified mitigation measures may include:

- removal of wastes from the site would only be undertaken by a licensed contractor as required by the Protection of the Environment Operations Act and with appropriate approvals obtained from the NSW Office of Environment and Heritage
- all wastes generated by the project would be beneficially reused, recycled or directed to a licensed waste facility lawfully permitted to accept the materials
- dockets for the pickup, transport and delivery of the waste to appropriate landfills would be kept and recorded
- maximise reuse of concrete, bricks, earthworks and other structural waste materials
- WorkCover NSW licensed contractors will be engaged to remove hazardous materials. Contractors will use all appropriate protection including nitrile gloves, disposable overalls, face shields, respirators, dust suppression and air monitoring
- worksites and all construction areas will be maintained, kept free of rubbish and cleaned up at the end of each working day

3.2. Waste management (during operations)

Operational waste management services for the NBH will be provided in accordance all relevant regulations and Codes of Practice, including infection control guidelines, Department of Environment and Conservation guidelines, and the Industry Code of Practice for the Management of Clinical and Related Wastes.

Likely waste streams include:

- General waste
- Cardboard and paper (including confidential paper)
- Bottles and cans
- Sterilisation products (Kimguard)
- Organics (including food)
- Fluorescent tubes
- Batteries
- Clinical waste
- Anatomical waste
- Cytotoxic waste

- Sharps
- Grease (from grease traps)
- Chemicals.

Healthscope will further quantify and classify these likely waste streams into an appropriate schedule prior to hospital operations commencing.

Healthscope has a national contract in place with Veolia for waste management. It also has national agreements in place with Rentokil Initial (PINK) for The Northern Beaches Hospital hygiene solution and with Sterihealth's Sharpsmart system for the safe disposal of sharps and syringes.

Environmental staff at The Northern Beaches Hospital will be responsible for the provision of waste management services across the facility. Waste will be collected from departments across the facility via a waste disposal system with a central collection area model. Designated waste collection areas (disposal rooms) will be specified for all clinical and some non-clinical areas. Waste collections from clinical areas and support services areas will occur at regular intervals throughout the day. Waste will be moved to the disposal room, and will then be transported from disposal rooms to the central waste area.

As a general principle, waste will be segregated into different waste streams at the point of waste generation (e.g. separate bins for different types of waste).

From there, Healthscope's external contractor Veolia will collect the waste for treatment, disposal or recycling. NBH will also have contracts with Rentokil Initial (PINK) for hygiene waste, and with Sterihealth for the provision of their 'Sharpsmart' disposal system for sharps and syringes.

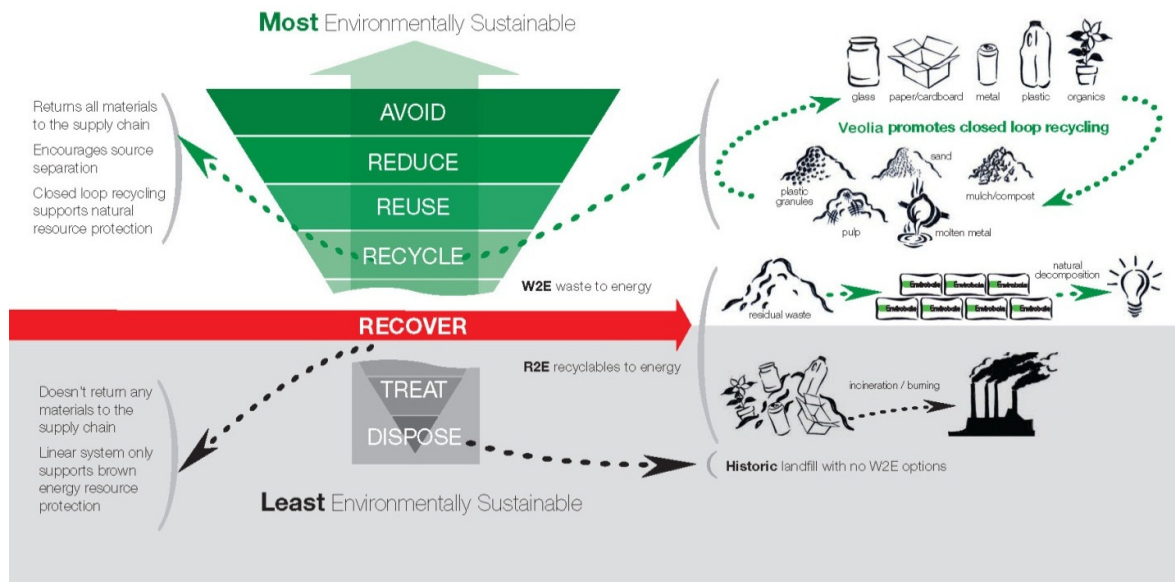
Waste management will also be reported against patient bed day figures to provide statistics such as:

- Total dollars spent on waste per patient bed day for general waste, recycling and medical
- Total kilograms of waste per patient bed day for general waste, recycling and medical

Healthscope will benchmark these results to other hospitals to rank The Northern Beaches Hospital's performance and understand where improvements can be made.

Veolia will provide waste management services for NBH across the entire waste value chain, including solid and liquid non-hazardous and hazardous waste collection, treatment and disposal, recycling and recovery of resource streams and energy. The figure below summarises Veolia's hierarchy for waste management.

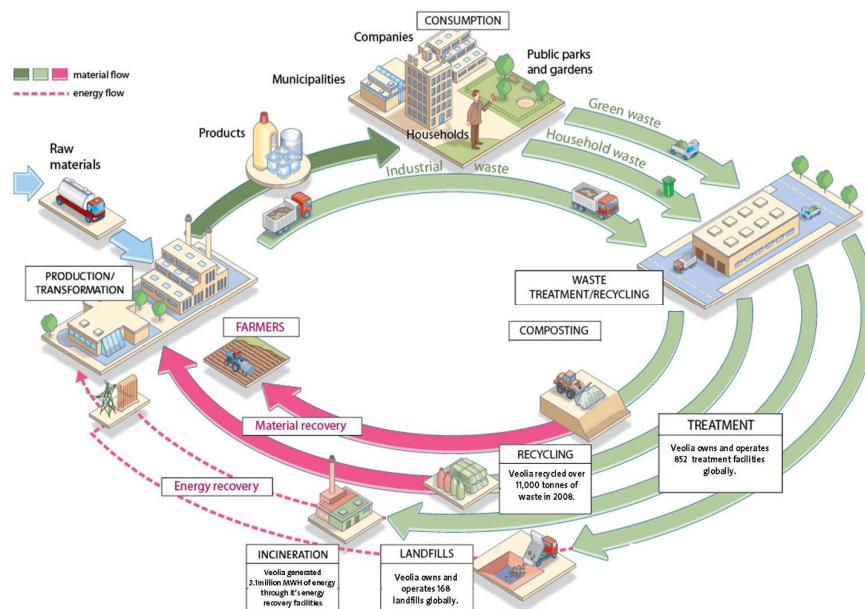
Figure 1: Waste management hierarchy



Veolia continues to seek and implement innovative and technical solutions throughout its Healthscope contract to improve recycling processes for the recovery of materials and resources.

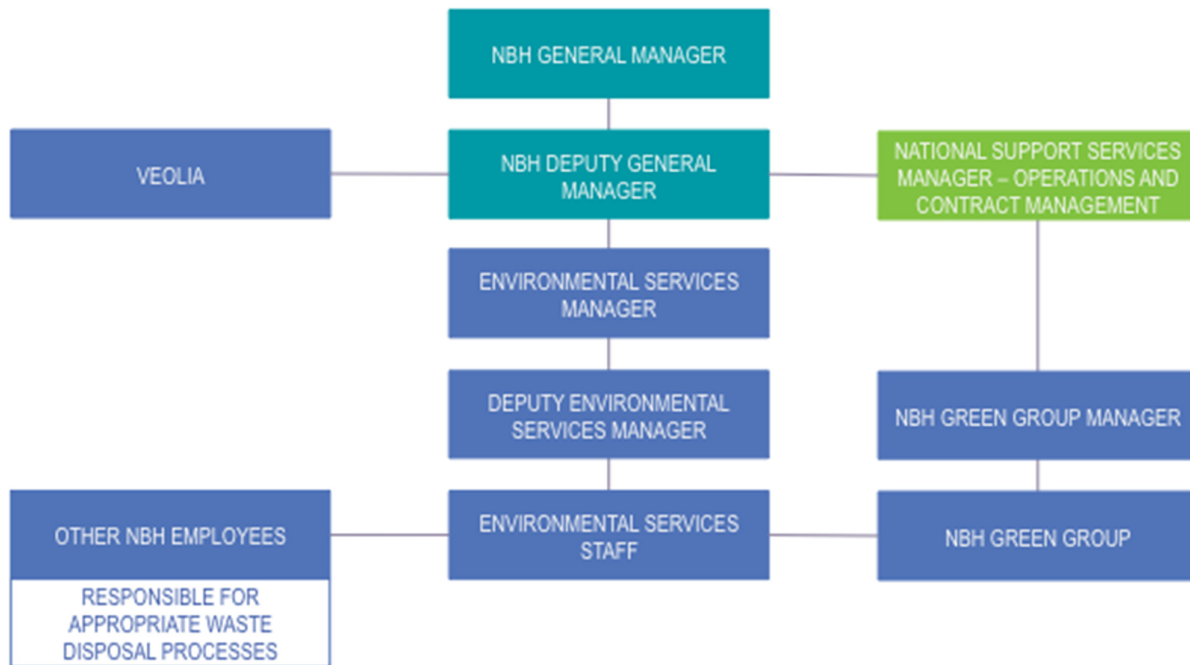
Healthscope and Veolia's approach to waste management aims to 'close the loop' on the entire process, as seen below. This approach focuses on reuse, recycling, and remanufacturing to direct renewable waste back through the same channels of production by which it was originally made.

Figure 2: 'Closing the loop' on waste management



The organisational chart below summarises Healthscope's waste management

Figure 3: Organisational chart



Rentokil Initial (PINK)'s service frequency will depend on the number of bins present at NBH, but will generally visit monthly.

Sterihealth's service frequency will depend on the volume of sharps and syringes disposed, but service will likely be fortnightly.

Veolia's service frequency is summarised in Table 1 below.

Table 1: Veolia service frequency

Waste and Recycling Management	Bins	Frequency	Comments
General Waste	1 x 25m ³ Auger Compactor with bin lifter	1–2 times per week	Average load of around 6t
Cardboard Recycling	1 x 35m ³ Single Auger with precrusher with bin lifter	Fortnightly	Average load of around 5t
Paper Recycling	20 x 240L bins	N/A	Bins located on floors and tipped into cardboard compactor
Confidential Paper destruction	20 x 240L bins	Weekly	Services from the floors
Comingle Recycling	3 x 660L bins	Twice weekly	
Kimguard Recycling	Bagged	Twice weekly	
Organic Recycling	4 x 120L bins	Three times weekly	
Fluorescent Tube Recycling	5ft Box	Adhoc	
Battery Recycling	20L Pail	Adhoc	
Clinical Waste	20 x 120/240L	6 days	

Waste and Recycling Management	Bins	Frequency	Comments
Anatomical Waste	4 x 240L	6 days	
Cytotoxic Waste	4 x 240L	6 days	
Sharps Waste	Various	6 days	
Grease Trap	TBA	Specified by Sydney water	
Chemical Disposal	Various	Adhoc	Manifest completed for each collection

3.3. How legislative or other quality standard requirements will be adhered to

Veolia currently reports to Healthscope through their SAP system. This system is expected to be updated in 2014 with the roll-out of Veolia's online reporting system.

As The Northern Beaches Hospital waste management contractor, Veolia will provide online reports to maintain a standard of service excellence.

Healthscope has a detailed documentation system in place with Rentokil Initial (PINK) to ensure that no service or hygiene bin can be introduced into The Northern Beaches Hospital until approved by the General Manager. These rigorous processes ensure that we remain up-to-date with what services operate on site, allows the reduction of risk and improvement of safety, and the management of costs. Rentokil Initial (PINK) provides reporting through an online portal, and PINK representatives will also leave reports with the Environmental Services Manager.

Sterihealth will perform clinical waste audits as requested by NBH and suppliers. Sterihealth will also provide monthly reporting to the National Support Services Manager; the NBH Environmental Services Manager will also be able to request these reports.

3.3.1. Safety, Quality and Environment

Healthscope has engaged Veolia as its preferred waste management provider. Veolia has a triple national certification to:

- AS/NZS ISO 9001:2008 (Quality Management System)
- AS/NZS 4801:2001 (OHS Management Systems)
- AS/NZS ISO 14001:2004 (Environmental Management Systems)

4. Definition of acronyms and terms

Table 2: Definition of acronyms and terms

Acronym/Term	Definition
DGRs	Director General's Environment Assessment Requirements