



## Draft Environmental Management Plan – Hurstville Private

Prepared by Inspira Property Group

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## Document Control Register

<b>Project No.</b>	016_4
<b>Project Name</b>	Hurstville Private Hospital Redevelopment
<b>Project Address</b>	37 Gloucester Road, Hurstville, New South Wales
<b>Document Title</b>	Draft Environmental Management Plan
<b>Issue Type</b>	Email Copy
<b>Client</b>	Hurstville Private Pty Ltd

<b>Document No.</b>	<b>Status of Issue</b>	<b>Report author/s</b>	<b>Reviewed by Director</b>	<b>Reviewed by Client</b>
016_4:EMP	Draft	H Spira	J Spira	M Sweeney
016_4:EMP	Final	H Spira	J Spira	M Sweeney

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# 1.0 Environmental Management Plan

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## 1.1 Introduction

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This draft Environmental Management Plan is submitted as a component of the Environmental Assessment Requirements issued by the Director General of Planning and Infrastructure for the preparation of a Project Application for the redevelopment of Hurstville Private Hospital located at 37 Gloucester Road, Hurstville, New South Wales.

The report has been prepared by Inspira Property Group on behalf of the owners of the Hospital, based on information prepared by the proponent and appointed consultants.

This report is based on NSW Health Facility Guidelines issued by NSW Health and a Manual specifically for Hospitals produced by the Environment Science Centre, Augsburg Germany with support from Bristol-Myers Squibb Company.

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## 1.2 Environmentally Sustainable Design of Buildings

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The following guidance notes are extracted from the Engineering Services and Sustainable Development Guidelines Version 2.0 December 2007.

The NSW Government aims to reduce the impact of buildings on the environment by reducing the demand on non-renewable resources such as energy and water, and reducing pollutants and greenhouse gas emissions. Sustainable development principles and strategies are to be applied to health facilities.

Mechanical services and building passive design shall complement each other in design and operation to jointly achieve the functional outcomes for the building, including providing an energy-efficient, healthy, thermally comfortable and acoustically acceptable indoor environment.

- Water conservation and water cycle management are to be included in the design (e.g. rainwater reuse, stormwater management, water recycling).
  - Environmentally-sound materials (with minimal impact on the environment, minimised use of non-renewable resources, non-hazardous substances, minimised impact on indoor air quality and high recycled/recyclable content) are to be used wherever possible.
  - The development shall be designed to improve upon the minimum requirement of Section J of the Building Code of Australia.
  - Life cycle cost analysis should be undertaken for building services.
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## 1.3 Environmental Management Plan Components

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The draft EMP will address the following topics:

- Environmental management systems
- Laboratory, cleaning, laundry, kitchen
- Waste management
- Energy management
- Hazardous substances
- Water management
- Wastewater management
- Air emissions
- Purchasing and materials management

This plan does not address Occupational Health and Safety Issues which are addressed in different hospital policy documents.

The aim of implementing the EMP is to:

- identify and reduce environmental pollution
- reduce energy, water and waste disposal costs
- control the handling of hazardous substances
- limit air emissions
- improve the quality of patient care
- enhance the Hospital's image as an ethical, responsible community business
- comply with applicable laws and regulations and
- reduce operating costs.

Hospitals can serve as environmental role models, for their staff, patients, visitors, and the general public by:

- designing and maintaining energy-efficient buildings
- implementing programs to conserve energy and water
- using non-disposable, multi-use materials
- recycling paper products and packaging
- serving fresh food and
- supporting the use of sustainable travel options.

Implementation of the EMP is to be supported by staff training.

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## 1.4 Hazardous Substances

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Hazardous substances should be assessed, monitored, and controlled.

Management of these substances is an essential part of a hospital's day-to-day activities. Proper registration, handling, and training are necessary to guarantee a safe workplace and to prevent potential risks to employees, patients and the environment.

Management of hazardous substances is addressed in detail in the Hospital's Workplace Health and Safety policies.

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## 1.5 Waste Management

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Waste is managed in accordance with the NSW Health Waste Management for Health Facility Guidelines.

Waste-management criteria include:

- Avoidance
- Recycling
- Proper Disposal.

Waste Management Plans have been documented in the Environmental Assessment Report and include:

- Avoiding waste such as using electronic documents rather than paper documents
- Minimising the purchase of toxic substances and items that cannot be re-used or recycled
- Minimising use of disposable products if at all possible
- Recycling paper and other materials wherever possible.

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## 1.6 Energy Management

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Energy conservation measures will include:

- Audits of energy use
- Identification of areas/equipment/systems having maximum energy consumption (undertaken as part of the project design)
- Develop and implement projects such as buying and installing energy-efficient equipment and
- Performing preventative maintenance.

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## 1.7 Heating Ventilation and Air Conditioning Systems

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Opportunities for reducing energy consumption through HVAC systems are identified in the Erbas ESD report attached in the Appendix to the Environmental Assessment Report.

Opportunities for reducing heating ventilation and air-conditioning (HVAC) costs may include:

- re-circulating air
- reducing air-supply volume
- adjusting optimum temperature
- installing variable air-handling units
- recovering heat from exhaust air
- improving building insulation and
- Use of solar power for partial heating of hot water systems.

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## 1.8 Lighting

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Lighting is an important component of the redevelopment of the Hospital which will assist with reducing energy consumption and utility costs. The following measures are proposed:

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- Use incandescent bulbs with fluorescent lamps
- reducing overhead lighting where possible,
- installing motion-sensors on light switches in less frequently used rooms such as meeting rooms
- using T5 lamps
- incorporating monitoring of lighting-control settings and natural light (daylight).

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## 1.9 Renewable energy

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Renewable energy sources are reviewed in the ERBAS report in the Appendix of the Preferred Project Report.

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### 1.10 Water management

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A specific measure to reduce water consumption in the new development is to use efficient tapware. Other items to be introduced or trialled will include:

- autoclavable bubble fittings that inject air into the water stream
- electronically controlled valves that open only when a person washes his/her hands, and close as soon as the hands are withdrawn
- automatic water volume controls that operate independently of the water pressure to control the amount of water
- shorter hand-wash cycles (reducing the time the water runs from three shorter hand-wash cycles (reducing the time the water runs from three minutes to one minute results in savings of about 16 litres of water per hand-wash)
- reduced-flow showerheads, thermostats, and single-lever fittings or self-closing mixing taps, saves as much as 50 litres per shower
- water-less urinals.

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### 1.12 Wastewater Management

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The redeveloped Hospital design will assist to:

- use water resources carefully
- reduce wastewater pollutants
- monitor and control water cycles.

To reduce volume and improve quality of wastewater, the hospital will assess and monitor:

- water consumption
- wastewater quantities and quality
- wastewater sources.

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### 1.13 Air Emissions

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Hospitals contribute to air pollution indirectly by using electricity from fossil-fuel generating plants, and directly, by burning fuel for space heating and hot water.

There are also potential emissions from sterilisers and anaesthetic gas emissions.

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Finally there are fossil fuel emissions associated with employee and visitor use of private motor vehicles.

The ESD Feasibility Assessment report prepared by Erbas addresses those measures to be introduced as part of the redevelopment project.

A Sustainable Travel Plan for employees has been developed by Colston, Budd, Hunt and Kafes and is attached in the Appendix of the Preferred Project Report.

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## 1.14 Environmentally Preferable Purchasing

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Staff involved in purchasing will be trained in the identification of environmentally “friendly” products.

Preferred products and services will be identified for all products regularly ordered by the Hospitals.

The life cycle of all products will be evaluated to determine their impacts on the environment.

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## References

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NSW Health, Waste Management Guidelines for Health Facilities.

NSW Health Facility Guidelines: Engineering Services and Sustainable Development Guidelines Version 2.0 December 2007. Report prepared for NSW Health.

Wissenschaftszentrum Umwelt, Augsburg, Germany, with support of Bristol-Myers Squibb: Greener Hospitals: Improving Environmental Performance. (undated).