



*MSS LAS Level 6, Conventional HVAC
Heat Recovery Coil – Exhaust Discharge*

The University of Adelaide

HVAC Heat Recovery System

A new HVAC heat recovery system at the North Terrace Campus, Medical School South, Laboratory Animal Services Facility will help Property Services staff and maintenance Service Providers improve their understanding and control of building HVAC costs and thereby reduce energy consumption.

Reason for the Heat Recovery System

The Laboratory Animal Services (LAS) Department operates the animal accommodation facility on Level 6 of the Medical School South Building at the University of Adelaide, North Terrace Campus, Frome Road.

The laboratory accommodates pathogen free animals (predominately mice and rats) for scientific experimentation in a confined space environment. The animals are segregated into three classes of accommodation:

The facility operates 24/7, with a 100% fresh air HVAC system. The facility was originally constructed in 1971 and has completed 30 years of operation. As the system operates as a once flow through system, significant energy is being wasted.

A complete upgrade to the facility required compliance under the new BCA Energy Efficiency measures.

These factors motivated Property Services to invest in the Laboratory Animal Services Heat Recovery System.

Project Overview

Systems Design Engineering Consultants Pty Ltd designed the Heat Recovery Systems which includes run around coils and glycol pumps recovering and transferring heat of rejection between the 100% exhaust discharge and the 100% supply air (outdoor air) system

The LAS HVAC Upgrade Project has currently achieved Practical Completion in September 2006.

Energy Savings Ahead

The economies that can accrue from a well-designed heat recovery system can be substantial.

Run around coil heat performance is between 22% to 35% heat recovery.

Predicted Energy Savings:
Approx 203,000 Kw.hr pa

Greenhouse Gas Savings:
Approx 195 Tons of CO² pa