

# AUDITING SUSTAINABILITY OF OUR BUILDINGS

**2015** is the year where we all gear up for solutions to climate change. All are invited to join not only by minimising our carbon footprints but also to be part of that crucial journey in changing our hearts and minds as reflected through our attitudes and lifestyles.

Coming from the perspective of “finding God in all things,” in our communities and also in how we care for our community through our houses and how we care for creation, we understand how in 2010, Reconciliation with Creation, Fr. Nicolas asked us to clean up our own act before we go out into the world preaching on what we do in our environment.

In the same way Pope Francis is asking us to be responsible, globally, showing how the Vatican is becoming carbon zero and divesting not only in armaments but in fossil fuels.

Healing a Broken World invites Jesuit communities and apostolic works to discern the management of our institutions and to exchange and develop more ecologically sustainable lifestyles in our communities. We are encouraged in our education, research and formation to engage students in transformation education and to explore new themes and areas of interdisciplinary research.

It is on this basis that we are looking at physical features of a household, the physical features such as walls, drainage, waste disposal facility, kitchen area, ventilation and the greenery that surrounds around us are essential to the house we are managing. These features may drain our resources and impact on our environment.

## How do we go about our household/ building audit?

A building audit is a systematic approach to problem solving and decision-making. The primary goals of an audit are to:

- 1) address the present cost of energy, water and air pollution, and solid waste,
- 2) identify how that performance can be improved, and
- 3) plan the outcome of those improvements both in financial and non-financial terms.

The financial benefits from building audit assessments include tangible benefits of savings due to improvements in energy efficiency, reduced water use, materials use and waste. Intangible benefits include improvements in productivity in workplaces, better health and comfort in office settings, reduced burdens on infrastructure, quality of life, and humble recognition of how others have to live.



## SUSTAINING STRUCTURES FOR WHOLE BUILDING AUDITS



### Land use and Ecology

Tackles the existing techniques and technologies that were incorporated in the site development, which reduces the effects on the local environmental conditions. This includes the utilisation of previously developed land, the protection of ecological features and biodiversity, and the consideration of flood risks and fire.



### Water

Tackles the existing potable water consumption and wastewater discharge, and how the building can reduce this. It is directed at efficient water management, provision of monitoring water meters, and the means by which the building diminishes its usage of water for maintenance and operational purposes.



### Energy

Reviews existing energy consumption and reduction measures being employed by the existing building, as aspects affecting use of this resource is an integral part of this category. It encompasses how the consumption is monitored, the integration of sustainable design, and the incorporation of technologies and equipment, which make energy utilisation as efficient as possible. There is an effective monitoring system in place to track and record performance of these systems; records may be used as basis for energy saving opportunities in operations.



### Waste

Reviews existing organisation of waste recycling and disposal. Examines existing waste stream of the building. As a result of conducting a waste stream audit, waste products are identified and classified, and means of disposal is tracked. From this a program for reducing waste production, segregation and sorting, and more eco-friendly means of disposal including re-use and recycling can be adapted.

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## Transportation

Tackles the impact of existing establishment on transport circulation, how alternative means of travel are encouraged, lowering the building's contribution to emissions. This includes the distance of the building from key establishments, its accessibility to public transport systems, and the availability of transportation amenities on-sites. Aims to encourage and recognise the use of bicycles as an alternative form of transport by the incorporation of cyclist facilities in the design.



## Indoor environment quality

The category stresses the existing human comfort value of the building represented by the elements that contribute to the effectivity of its interior atmosphere. This encompasses the establishment's lighting, thermal levels, and acoustic treatments. Aim to ensure lighting has been designed for comfortable illumination as per specified area type of function.



## Materials, products and equipment

Materials deal with the physical components used in the establishment, including the measure of recycled content used and the probability of future emissions. It covers ongoing consumables, alterations, cleaning products and equipment, and implementation of sustainable purchasing plan. Reduce the environmental impacts of materials acquired for use in the operations, maintenance and upgrades of buildings.



## Emissions

Focuses on the existing state of carbon and pollution release of the building and looks into the preventive measures being enforced to reduce them. It includes carbon inventory, prevention, and control of emissions. Aims to provide a record of equivalent carbon emissions of the building.



## Heritage conservation

Recognises development's preservation of heritage, historic, or cultural sites, structures and/or properties; and its promotion of heritage marks.



## Innovation

Showcases the incorporation of groundbreaking technologies and incentive techniques for better environment performance. It provides additional recognition for pioneering initiatives in the field of sustainable design and development.

For further information:

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