THE FOOTPRINT COMPANY™
BUILDING SOLUTIONS FOR ONE PLANET

ECOLOGICAL FOOTPRINT 1.0 PLANET EQUIVALENT

Smoking the Planet – the inconvenient back story of responsible retail

The Footprint Company has completed over 1000 retail life cycle assessments. We have analysed the data to provide insights on trends, performance and improvement opportunities.

In this research note we focus on the retail sector and where opportunities lie to help improve environmental and economic productivity.

Explore where retailers and shopping centre owners have the opportunity to half their environmental impact and improve profit performance through a focus on every efficiency.

Overview

The average operating energy related carbon emissions intensity of retail tenancies is up to 8 times higher than the retail base building. Retail energy efficiency to date has been almost solely focussed on the base building, through NABERS ratings at the expense of tenancies. Unlike the base building, tenancies typically “turnover” once every 5 to 8 years and demonstrate significant opportunity to radically improve efficiency in a short space of time.

There are 1,564 Australian shopping centres containing over 65,000 tenancies (18.7m m2 in all). According to the Shopping Centre Council, this is only 37% of the total retail area in Australia, which equates to about 1 m2 per capita. On current forecasts, an additional 10-12million m2 of retail GLA is needed by 2025 to support Australia’s growing population. In an environment of sluggish financial performance, retailers and shopping centre owners have the opportunity to half environmental impact and improve profit performance through a focus on energy efficiency.

We argue, that there is a prime opportunity to improve environmental and economic productivity of one of Australia’s largest employment sectors, with the introduction of a retail tenant NABERS system. The NABERS scheme recently added Data Centres to their list. There are only 229 data centres in Australia, and the scope to improve their efficiency is limited as compared to the opportunities in retail. This article discusses the issues.

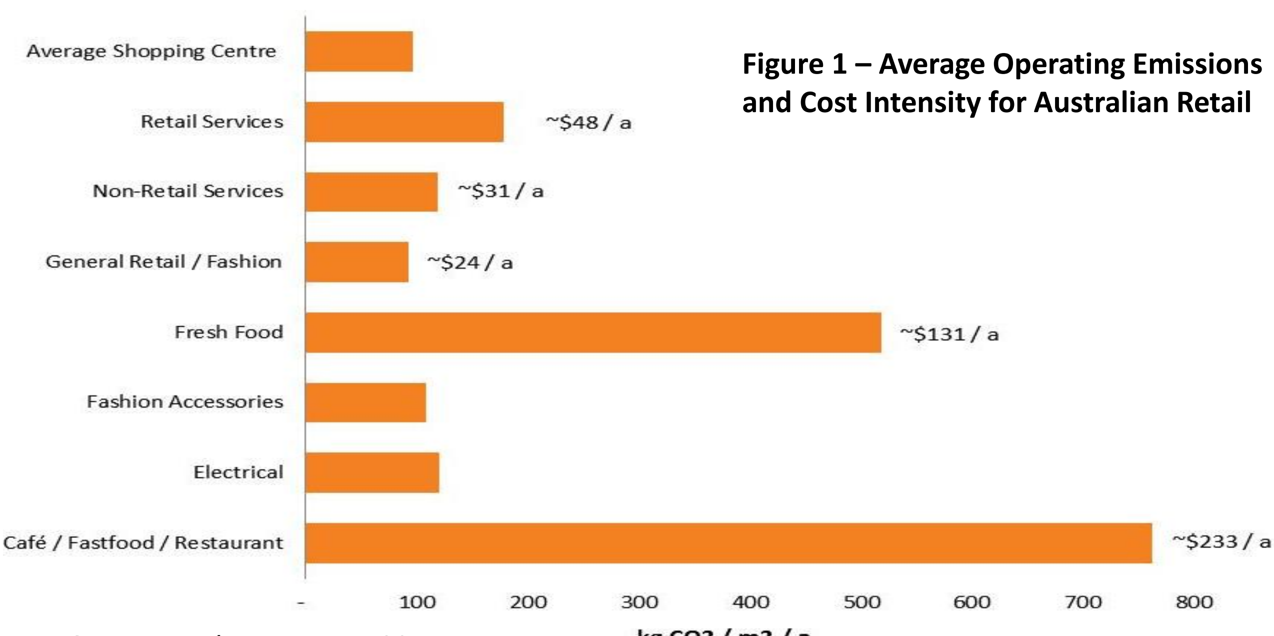

Figure 1 – Average Operating Emissions and Cost Intensity for Australian Retail

Figure 1 shows a comparison of emissions intensity for retail, measured in kilograms of carbon per metre square of GLA per annum. The launch of NABERS has driven the demand for over 130 centre ratings, but it can be seen that a focus on the base building misses the real issue and needs to be challenged. Depending on the retail centre, up to 80% of base building emissions intensity is driven by the tenant services and air-conditioning (and is charged back to the tenant as an operating cost for common area, making the disparity even larger).

Figure 2 shows the energy emissions footprint of a NSW regional shopping centre. It can be seen that tenant end use (light, power and gas) emissions account for 63% directly. When air-conditioning and other common areas services are allocated a total of up to 96% is tenant related.

Responsible REIT's have been focussing on base building efficiency; however, the most cost effective investment would be increasing tenant energy efficiency, and in a climate of slim margins and growing competition, a focus on managing the bottom line is the cheapest and most certain means of improving profit margins.

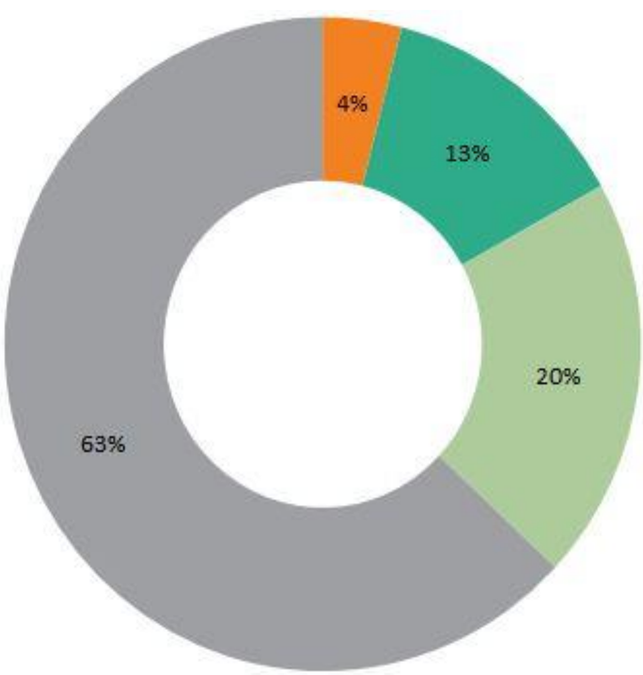

Figure 2 – Operating Emissions for NSW Regional Centre (91,800m2 GLA)

Owners Common Area	2,020 T CO2/a
Tenant Common Area	6,544 T CO2/a
Tenant AC	10,098 T CO2/a
Tenant End Use	31,838 T CO2/a

The energy provisions of the Australian Construction Code Section J, has done little to improve energy efficiency (as lighting represents only 5-35% of total end use) and designers have grown adept at avoiding requirements by increasing the use of digital media screens and display lighting for general illumination and promotions.

A growing number of speciality retailers talk “responsibility and sustainability” but energy efficiency is generally limited (both in performance and design), including a number of the big household names in responsible retail. The big banks have adopted the approach of spending millions of dollars of shareholder funds purchasing “offsets” for retail tenancies to present as “carbon neutral”, rather than challenging real efficiency. Bank retail tenancies have an operating carbon footprint that is three or more times higher than their head offices.

With the exception of Lendlease, “responsible” REIT’s are almost exclusively silent on this issue, even though they have a significant ability to drive efficiency improvements and or provide incentives to do so via leases and design guidelines. The growing trend towards on-selling electricity to tenants presents Landlords with a conflict between energy revenues and assisting retailers to save energy.

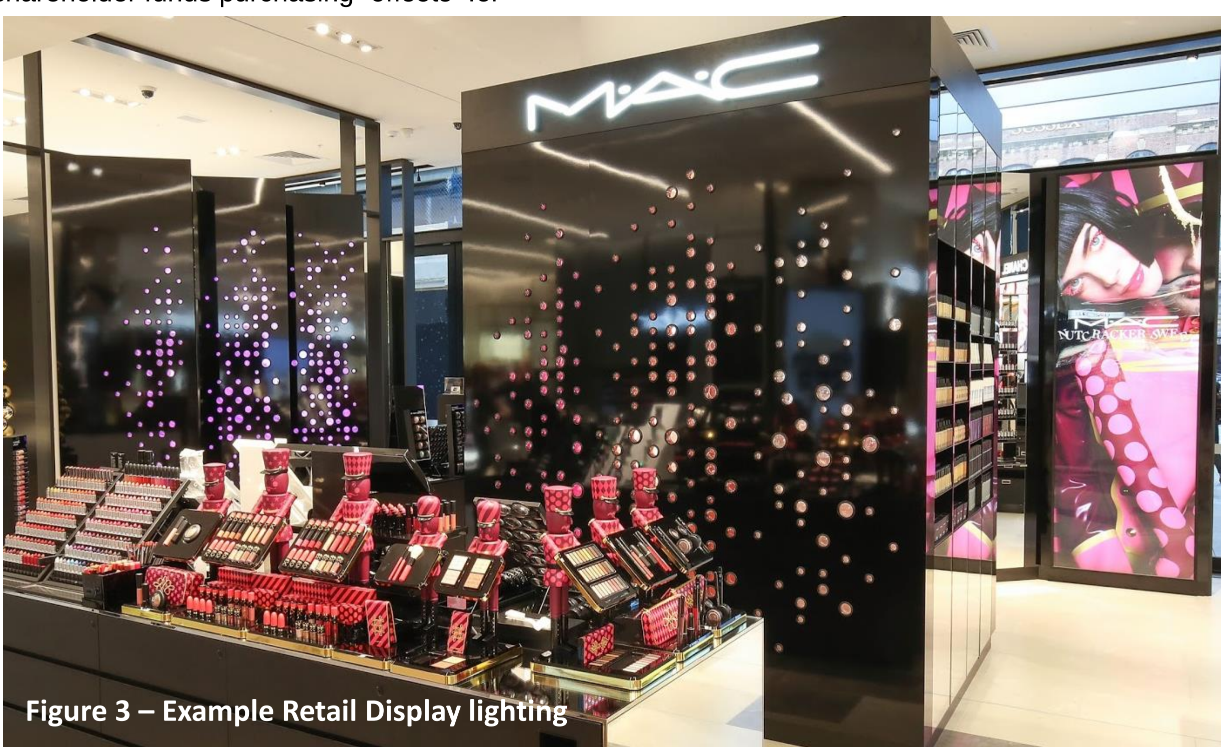

Figure 3 – Example Retail Display lighting

Ultimately, high emissions intensity presents a financial sustainability risk to shopping centre owners in an environment where tenant occupancy costs are already well above their long-term supportable levels. A scan of the energy emissions performance of recent retail bankruptcies shows that managing energy was not a focus of operations. As Responsible Rating agencies suggest, “management of ESG issues is a proxy for outperformance overall”.

Australian speciality retail has the highest operating cost base in the developed world and energy costs represent 5-10% of the total cost of operations. With low cost / no cost pathways to reduce intensity by 10-30% being available and an additional 5-20% improvement available with 12 month payback or less. The difference between standard and best-in-class espresso machines is up to 46%, with an almost immediate payback. Our experience shows that there are six key design and equipment features which, combined have the potential to deliver 20% energy reduction in retail tenancies.

There is both an environmental and financial imperative for carbon emissions rating scheme for retail or a mandatory program akin to BASIX, whereby a cost effective on-line rating and certification is required for the development approval process. An on-line system of assessment is necessary to ensure that positive cost benefit is delivered. Such a system could be at aimed initially at the institutional REITS given the high rate of churn in their assets.

Research suggests that higher valuations and improved performance follows lower emissions. In an environment of sagging retail profit margins and energy cost volatility – it seems an easy win for REITS to pro-actively invest in tenant emissions mitigation incentives to tackle the massive inconvenient back story of tenant and ultimately real estate emissions.

Take Out

The Footprint Company has completed over 1,000 specialty retail operating energy assessments, and has emissions performance rating bands for all retail types and works actively with retailers to increase the efficiency of their designs. Its on-line retail energy and emissions software allows low cost estimates to be completed to improve and benchmark designs against peers.

DEDICATED TO MAKING THE WORLD A MORE ECOLOCICALLY AND ECONOMICALLY PRODUCTIVE PLACE

The Footprint Company are passionate about the built environment and its contribution to the wellbeing of society.

We believe that sustainability done “right” is the delivery of economic, environmental and social gains simultaneously for all stakeholders.

We strive to deliver smart, simple and sustainable outcomes which enable stakeholders to live well within the means of one planet. That’s why Australia’s property leaders and game changing professionals turn to us.

Get in touch to understand how we can enrich the financial and environmental success of your world.

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