

# Relative Sustainability

BY SEAN MCCALLUM

Two years ago, I found myself floating down the Amazon River on a barge loaded with pigs, plantains, and people; the capacity of said barge having been stretched beyond the limits of what might be considered reasonable, even by Peruvian standards.

We spent the days lying in hammocks and watching the virgin Amazonian wilderness drift lazily past, gawking in disbelief as we began to realize that the locals were carelessly throwing every last plastic wrapper and piece of refuse over the railing and into the muddy waters below. The group of us foreigners – there were maybe eight of us in total – looked on in dejected disbelief, and in silent protest decided to make a kind of crusade out of gathering the garbage of the locals and placing it into the sole container provided.

As you might imagine, it didn't take long for this particular receptacle to fill up. Believing myself to be a leader amongst men, I sought out the Captain of the boat and in

my broken Spanish, brought to his attention the fact that our garbage can was filled to the brim. The Captain gave me the kind of wink which assures one that everything is under control. 'Now we're getting somewhere', I thought to myself, leading him back to the repository with a contented sense of accomplishment, feeling as though I had actually made a difference, minimal though it may have been in the grand scheme of things.

It was with abject horror, then, that I stood and watched as the Captain picked up the garbage can and dumped it over the side, the sum of our tree-hugging crusade falling haphazardly into the muddy waters below.

The point of this little parable is that sometimes, when it comes to sustainability, people just don't know any better. Take my Peruvian riverboat Captain: he encountered a problem – in this case, his boat's lone garbage can was overflowing – and he decided to solve it in the quickest

and most cost-effective way possible. He probably didn't know that his actions would cause an incalculable number of problems in the future. At the time, dumping a can full of Oh Henry wrappers and beer bottles into the river probably seemed the most logical thing in the world. And what's more, this man genuinely *believed* that he was doing the right thing; not simply because he was ensuring the cleanliness of his vessel, but because, as he would later explain to me, he knew that, like every other thing that entered the mighty Amazon, this garbage would be washed downriver, eventually winding up in Brazil, where *they* could decide whether or not to deal with it...

I guess what I'm trying to say is: We no longer need to treat our future as if it were Brazil. Because, unlike my Peruvian friend, we do know better.

'Greenwashing' is a term that has been around for the better part of twenty years, but it has only recently made its way into

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the colloquial lexicon, due in large part to the fact that its existence in everyday life has become unequivocally undeniable.

*Greenwashing* is an expression used to describe the act of misleading consumers into believing that a product or service is more environmentally friendly than it actually is. The term is generally used when a company spends significantly more time and money on *advertising* being green than on actually ensuring that sustainable practices are being employed, or that their products are actually upholding their pledge of environmental friendliness.

A perfect example of greenwashing might be an automobile manufacturer. Most auto manufacturers have multiple, highly visible webpages dedicated to their 'Environmental Commitment', and many more highlighting the advances they've made in the realm of developing alternative fuels... What those web pages *fail* to mention, however, is that auto manufacturers continue to produce the single most toxic product we have on the planet, and that in 2001 one of their manufacturers sued the State of California to ensure that the State overturned its zero emission vehicle mandate; a visionary program which would have catalyzed the production and commercialization of solar and electric vehicles by forcing auto makers into offering a limited number of zero emission vehicles to be available for sale in the state. The lawsuit essentially killed the mandate, and the zero emissions vehicle in the process... But hey, they have a picture of a forest on their website...

Unfortunately, our buildings are far from immune to the ravages of rampant greenwashing. As I'm sure you've noticed, manufacturers are presently inundating us with everything from windows and lighting to masonry walls and HVAC systems, each proclaiming that theirs is the 'greenest' and most 'environmentally friendly'. With manufacturers gleefully extolling the largely unsubstantiated virtues of their product's post-consumer recycled content, conservation of natural resources, and energy efficiency, it can be difficult to decipher where swashbuckling ends and sustainability begins.

And as far as greenwashing is concerned, the roofing industry is no better than the others. You need look no further than the Green Roofs for Healthy Cities website to see the innumerable roofers and roofing manufacturers staking their collec-

tive claims as the most eco-friendly in the industry. So how does one choose when it comes to the myriad 'sustainable' options at our disposal?

The answer is quite simple: we educate ourselves.

We decide on our own whether or not the benefits of an inexpensive 'cool' white roof are worth the means of that inexpensive membrane's production, a process which in most cases involves extremely large quantities of chlorine-rich hazardous wastes to be emitted into the atmosphere.

We decide for ourselves whether or not the highly toxic plasticizers added to PVC that have been known to leach out over time justify the money we're saving on the installation of the white 'environmentally sensitive' roof. And we formulate an educated opinion on whether or not a single ply of white roofing membrane will be capable of remaining white, and subsequently 'cool', over the course of its life cycle.

We decide for ourselves whether or not quality and durability are worth paying a premium for. By making an educated deci-

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sion, we can determine whether or not durability brings sensibility to sustainability, and whether or not long-term sustainability involves prolonging the life of the *entire roofing system*. Because chances are, you will be approached by certain membrane manufacturers boasting that theirs is the only recyclable membrane on the market. What they will almost certainly fail to mention, however, is that when their membrane fails prior to its stated life expectancy even as that particular membrane is fulfilling its vaguely defined 'recycling' destiny, everything beneath that membrane – the insulation, the coverboard, the fasteners, and oftentimes the deck itself – will be headed directly to the landfill, the gigantic mass of it utterly unsalvageable. By making an educated determination as to what it means to be truly sustainable, we can decide for ourselves whether or not first cost savings are worth the price, both environmentally and financially, of having to prematurely replace an entire system's worth of components.

And we decide for ourselves exactly what we wish to gain from a green roof assembly. We have to be educated enough to understand that, when putting down the cheapest green roof available, we run the very real risk of finding ourselves with a system incapable of delivering the very benefits which make vegetated roofing assemblies the breathtaking and buzz-worthy innovation they are.

We have to know the benefits of stormwater retention and how each vegetated system differs in its ability and capacity to hold water. We have to be aware of how certain plants and soil blends will interact, the fundamentals of evapotranspiration and how it functions in relation to reducing the urban heat island effect, and the possi-

bility that certain aggregate-based mediums and failing sedums can actually increase the surrounding ambient air temperature.

And perhaps most importantly, we have to understand that, at the end of the day, a vegetated roofing assembly is still a roofing assembly, and that at its most basic level, it needs to function as a means of keeping water from entering your building. Because investing in a quality vegetated roofing assembly can be a large and at times daunting expenditure; but the price of tearing that assembly off in order to find the source of a leak is exponentially greater, both in terms of finances, and in terms of the effect such a calamity will invariably have on the green roofing movement as a whole.

In the end, we have to be educated enough to determine whether we wish to go green for the purposes of greenwashing *others*, or whether we're looking to go green because we're genuinely committed to long-term sustainability.

So let's try to make sure we know better. Be educated about what it means to be truly sustainable. Be informed as to who is greenwashing what. And understand that anything worth doing, is worth doing *right*.

Because the last place we want to find ourselves is up that aforementioned creek.

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