

The Green Wave: Sink or Swim

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As the green movement has reached a critical mass, sustainability is on the minds of every industry. In the short time frame of fifteen years, green architecture and sustainable technologies have evolved from a radical fringe of ardent supporters to a generally accepted public mandate that is revolutionizing the entire world economy. Below the surface is a monumental shift in corporate thinking, which is refining this brave, new, green world. Every industry will be challenged to make the shift to a new paradigm in order to prosper or even survive. There can be no denying the magnitude of the sustainability movement as it becomes increasingly codified in our daily life. The time is fast approaching for the landscape and nursery industry to assess its future and decide to either sink or swim in the mounting green wave. The commitment to become leaders in the sustainability movement will require dedication and innovation from individual businesses, as well as trade organizations.

What Does It Mean To Be Green?

The first question that arises is “what does it mean to be green?” Unfortunately, there are no publicly established policies or guidelines which are definitive, but rather a series of sometimes vague and confusing principles.

Being green is easiest described as a way of thinking, in that every action shall do no wrong or diminish the Earth’s resources for future generations. The difficult part is that every industry will be required to define these sustainable principles for their specific industry. Be assured that this

process will not be simple and the rules will constantly change, but every industry will struggle in defining its role in the new green economy.

The origins of this green tidal wave can be traced back to a single document. In 1992, the City of Hanover, Germany, hired architect William McDonough to craft a series of environmental principles to guide architects and planners in the development of exhibits for the 2000 World Expo to be held in Hanover. This short list of environmental goals came to be known as the Hanover Principles. Although over the years these sustainable principles have been expanded, interpreted, defined and debated, they are still the fundamental foundation of the sustainability movement. [see sidebar on page 14].

As other industries begin to define their role in sustainability, they contribute useful tools which can help the landscape and nursery industry to find its way. Places to look for current thinking and valuable information include:

- The United States Green Building Council (USGBC), www.usgbc.org, has established the Leadership in Energy and Environmental Design (LEED) green building rating system.

- The American Society of Landscape Architects (ASLA), www.asla.org, has established a strategic partnership with a number of environmental organizations called the Sustainable Site Initiative, www.sustainablesites.org, to establish a green site rating system for individual sites. [see page 5].

- There are a number of organizations such as “Cradle to Cradle



Certification,” www.mbd.com/certified.html, which help customers purchase and specify products that are pursuing a broader definition of quality, environmentally intelligent design.

- Industry specific guides are emerging, such as the Certified Forest Products Council (CFPC), www.certifiedwood.org, which provides information about sustainable forestry and includes a directory of sustainably harvested lumber.

Although these organizations provide some insight in how sustainability is interrupted by other associations, none of the documents will address in detail the needs for the landscape and nursery industry. This will come from within the industry as we begin to look critically at opportunities for changing traditional practices and replacing them with more environmentally friendly business practices. The initial areas for consideration are easy to identify, particularly business practices that negatively impact air quality, water quality, biodiversity and consumption of natural resources.

Let’s look at each of these four simple opportunities in more detail as they might relate to traditional industry practices, knowing that there are dozens of other subjects that should be considered in mainstreaming sustainability into every aspect of the landscape and nursery industry.



Air Quality

With emissions from operating and refueling landscape equipment, vehicles have a significant impact on air quality. A sustainable approach would minimize air pollution by investing in hybrid or fossil free vehicle fleets, as well as a mileage optimization on how those fleets are deployed each day. Small gas-powered engines can be replaced with electric powered equipment. While electric still has environmental impacts, primarily in the manufacturing process, the cost of the total embodied energy used during the equipment's life cycle is much less. The most environmentally friendly grounds maintenance equipment is human powered, which does not rely on a power source. I believe there could be an emerging niche in the market for a premium-priced, high sustainability ground maintenance service.



Water Quality

An enlightened chemical approach that reduces generic broad based preventative treatments in favor of selective targeted solutions would

shift the chemical industry's investment toward development of new softer solutions. A serious discussion in the landscape industry needs to challenge the reliance on traditional chemical approaches and foster greater acceptance of ecologically based approaches.

The greatest impact the landscape and nursery industry has on water quality is in the management of construction activities vis a vis the primary responsibility for erosion control. No other trade has a greater opportunity to express leadership in managing water quality during site grading and establishment of vegetation. This industry should be the foremost advocate and expert in site erosion control implementation. Accepting responsibility for the site can expand revenues for forward thinking companies.

With the increased development of suburban areas, more frequent and pronounced flooding has occurred. Several compelling best-management practices exist that the industry can use to help to reduce flooding and reuse a precious natural resource. These stormwater-based solutions such as rain harvesting, rain gardens, green roofs and bioswales, while not new, have garnered a new wave of public interest. The best thing about these stormwater technologies is that they easily fall into the traditional market of the industry. A concerted effort in promoting integrated stormwater solutions within the industry would represent another leadership position the industry could assume.

Declining Biodiversity

Over 15,000 plant and animal species are now considered at risk of extinction, representing an increase of 3,330 species since 2003. A shift in conventional thinking is necessary to address sustainability in the core of the landscape and nursery industry.



The industry can contribute in developing viable solutions to lawns and corporate landscapes in favor of diverse ecological natural communities that value biodiversity. As we shift the basis of the green economy from low-skilled lawn maintenance labor, to more technically knowledgeable resource managers, the paradigm shift brings increased market value and revenue opportunities. The need for biodiversity can be a catalyst in reforming traditional practices into a sustainable future.

Consumption of Natural Resources

Principles for reducing consumption of natural resources can be applied to every aspect of business when

we look at such areas as packaging, recycling, specifying locally produced goods, and using low environmental-impact materials. Specific opportunities emerge when we focus on such landscape and nursery business operations as reducing fuel for landscape equipment, conserving water when irrigating plants, mitigating soil lost through erosion, and eliminating peat moss or other harvested organic materials to amend soils. Guidelines for reduction or elimination of irrigation water are commonly available and the green industry can be a powerful advocate in promoting sustainable solutions.



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The world is shifting toward an environmental paradigm that fundamentally changes how we conduct every aspect of our lives. This green wave of change is upon us, and it is our decision to sink or swim. We can choose to participate as leaders riding the wave to a prosperous future of limitless opportunities. The future will be best defined for our industry internally by creative, innovative professions who have a passion for environmental change and civic commitment. By embracing the challenges to redefine our businesses practices at the most basic levels, our industry will be guaranteed a meaningful front-row seat in the new green economy. There is a lot of work to be done and a short amount of time available, so let's get started building a new green foundation for the future.



This article is reprinted From Blue Planet Village, www.blueplanetvillage.com. Jeffrey L. Bruce, FASLA, is owner of

Jeffrey L. Bruce & Company (JBC), a national landscape architectural firm. Founded in 1986, JBC provides highly specialized technical support to many of the nation's leading architectural and landscape architectural firms on a wide variety of project profiles including engineered soils, green roof technologies, urban agronomy, performance sports turf, and irrigation engineering. Bruce will present at the 2008 Management Clinic.

Hanover Principles

1. Insist on the right of humanity and nature to co-exist in a healthy, supportive, diverse and sustainable condition.
2. Recognize interdependence. The elements of human design interact with and depend upon the natural world, with broad and diverse implications at every scale. Expand design considerations to recognize even distant effects.
3. Respect relationships between spirit and matter. Consider all aspects of human settlement, including community, dwelling, industry, and trade in terms of existing and evolving connections between spiritual and material consciousness.
4. Accept responsibility for the consequences of design decisions upon human well-beings, the viability of natural systems, and their right to co-exist.
5. Create safe objects of long-term value. Do not burden future generations with requirements for maintenance of vigilant administration of potential danger due to the careless creation of products, processes, or standards.
6. Eliminate the concept of waste. Evaluate and optimize the full life-cycle of products and processes, to approach the state of natural systems, in which there is no waste.
7. Rely on natural energy flows. Human designs should, like the living world, derive their creative force from perpetual solar income. Incorporate the energy efficiently and safely for responsible use.
8. Understand the limitations of design. No human creation lasts forever and design does not solve all problems. Those who create and plan should practice humility in the face of nature. Treat nature as a model and mentor, not an inconvenience to be evaded or controlled.
9. Seek constant improvement by the sharing of knowledge. Encourage direct and open communication between colleagues, patrons, manufacturers, and users to link long term sustainable consideration with ethical responsibility, and re-establish the integral relationship between natural processes and human activity.

