

CHAPTER 15


Sustainable Landscaping

The landscaping surrounding a home can protect and preserve ecosystems as well as add beauty and grace to the structure. “Landscaping” encompasses both hardscape (walls, sidewalks, stone work) and softscape (trees, shrubs, flowering areas, lawn). Thinking about the natural community surrounding the construction site will enable you to integrate sustainable landscaping approaches throughout the construction process.





Create protection zones before construction begins to protect soil from becoming compacted by machinery and foot traffic, and to preserve large sections of plants, not just individual trees, will be beneficial. This can be achieved by placing protection barriers beyond tree-drip lines and by not parking vehicles or equipment, or storing heavy materials, within the root zone of trees. All staging areas should be located away from trees. This is a functional measure – the ground around a home should be porous enough to support planting and also absorb rain and stormwater drainage from the roof of the house. Preventing soil erosion from stormwater during construction is required in many building code regulations.

Where you place trees is also important. Too close and root systems may damage the foundation and underground plumbing. Too far from the house, or in the wrong direction, and you lose the cooling value of shade during hot summer months. For instance, if evergreens are placed on the north side of a building and deciduous trees on the south side, the trees help to break cold prevailing winds in winter while letting sun in on the south; in summer, leafy shade is welcome. In addition, a dense hedge or tree planted on the west side of a house can provide shade and deflect westerly winds in the winter. In contrast, a loose-foliage tree planted on the east side of a house allows some protection from the sun in summer but lets in winter sun.

Always use native plants in new plantings. Native plants will survive local growing conditions better, and tend to use less water than non-native plants. 

Consult the resources below for more specific ideas in your region.

Implementation of Sustainable Landscaping

- Create a plant protection zone.
- Protect trees by fencing during construction at the drip line.
- Shade west and east sides of house with trees or trellises on at least 50 percent of wall area.
- Trunks and stems of plants and trees should be a minimum of 36 inches from the foundation.
- Retain existing trees and vegetation (50 percent of vegetation retained in pervious area).
- Avoid trenching within the drip line of any mature tree.
- Move existing plants rather than cutting down existing plants. (This helps save money on plant purchases.)
- Use landscaping plants that are native (instead of ornamental turf grass), and from the city's approved list. These native plants (for example, native fescue grass) will often be less  expensive and will require less or no watering.
- Use water-wise plants such as coreopsis, yarrow, verbena, ceanothus, buddleia, lavender, rosemary, and Russian sage, which need little supplemental water to survive.
- Use a low-volume irrigation system if necessary, such as a drip-soak system, not a spray one, and time it to come on at night, when less water will evaporate from the sun.
- Use edible plants in place of non-edible landscaping (for example, geographically appropriate fruit trees).
- Harvest plants by inviting plant-rescue groups to harvest plants prior to site clearing.
- Mulch all beds (all open soil) with a minimum of two inches of plant-based mulch.
- Planting beds should have at least 6 inches of good topsoil (a proper mix of sand, clay, organic material).
- Provide a backyard compost bin.
- Use terracing, retaining walls, and swales to reduce long-term erosion and allow more water to soak in.
- Minimize the amount of lawn needed, as lawns require extra maintenance and use  unnecessary fossil fuel mowers. One to two thousand square feet of lawn, or less, is adequate.

Benefits of Sustainable Landscaping

- Replacing turf grass with native plants can save water, help avoid the need for fertilizer, and save money.
- Using native plants will reduce yard maintenance.
- Shade trees can reduce ambient air temperature by 15 degrees.
- Planting shade trees will cut down cooling costs.

Challenges of Sustainable Landscaping

- Having an agreed-to plan before the final grading is done.
- Providing a modest amount in the budget for landscaping.



Link and Learn

Many resources are connected to university systems with histories as land-grant institutions; or to the federal resources available through USDA. Here are a few:

Sustainable Landscaping Council (based in Florida):

<http://www.sustainablelandscapecouncil.com/>

Sustainable Landscaping Handbook (Delaware):

<http://ag.udel.edu/udbg/sl/main/sustain.landscape.01-27-09.pdf>

California emphasizes reducing construction site waste and conserving and protecting water. This site includes many useful links to other landscaping themes, such as composting and irrigation systems:

<http://www.calrecycle.ca.gov/organics/Landscaping/>

Green landscaping case studies in a variety of geographic areas, with many building types. Visit often for new examples:

<http://www.sustainablesites.org/cases/>

EPA maintains several useful green landscaping links:

<http://www.epa.gov/greenacres/> and <http://www.epa.gov/greenkit/landscap.htm>

Information from the EPA on Integrated Pest Management (IPM) practices, which reduce pesticides and encourage healthy insect and wildlife populations, can be found at:

<http://www.epa.gov/agriculture/tipm.html>

RSMeans, Green Building. *Project Planning and Cost Estimate* (Contributing Authors, 2002)

Recycle Works: A program of San Mateo County:

http://recycleworks.dev.ikorb.com/greenbuilding/sus_plantings.html

Environmental Assistance, *Building an Eco-home*:

http://www.recycleworks.org/greenbuilding/sus_landscape.html