



Landscape Design

Drawing a Landscape Plan: Site Analysis

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Designing a beautiful landscape for the home can be a very enjoyable and satisfying experience. With a little homework, a landscape plan is within reach of most homeowners.

Before great ideas can become a plan, you must determine the limitations and assets of the site. The amount of site research determines the success of the project. Great landscape design cannot compensate for poor growing conditions or improper plant selection.

The easiest way to conduct a site analysis is to record observations on an existing plan or map of the site, so the first step is to draw a base map of the site (See Fact Sheet 103, *Landscape Design - Drawing a Landscape Plan: The Base Map*, for information on how to prepare a base map). Make several copies of the base map for recording a variety of information. Most site characteristics are difficult and expensive to alter, so knowing where they exist can help you take advantage of positive aspects and develop creative solutions to overcome problem areas.

Light

All plants require a certain amount of light to grow and flower properly — some more than others. It is common to have a mix of light conditions on a site. Full-sun plants require at least six to eight hours of full, direct sun. Shade-loving plants require fewer than four hours of direct sun. Partial sun/shade plants require four to six hours of direct sunlight. Matching the light conditions of the site with the light requirements of plants ensures healthy growth and reduces the need for supplemental water. For example, shade plants grown in full sun require additional water and may experience leaf scorch. Full-sun plants grown in too much shade will not flower well and may grow spindly.

Establish which direction is north. The sun will always be in the southern half of the sky, even in the middle of summer. Track the movement of the sun throughout the day. Make notes on the base map as to how many hours of sunlight each area receives. If observations cannot be made for a full year, imagine light availability with the sun closer to the

horizon, as it would be in the winter. In the winter, even a small structure can cast a large shadow.

Water Movement

In the landscape, water either moves into the soil or across the soil surface. Water availability can be a problem or an asset in terms of plant survival and is critical to plant selection. For dry areas, redirected water from sidewalks, gutters or foundation drains may help, though drought-tolerant plants may be the best solution.

If poor drainage is the problem, the solution may be to remedy the problem before planting, or select plants that tolerate “wet feet.” Conduct a soil drainage test in various locations on the site, since it is very possible drainage and soil moisture vary throughout the site. Make note of downspout locations and drain lines, if they exist. Check to see if water from the roof is running away from the foundation. Observe the site during a downpour. Make notes of areas where water pools or moves rapidly.

Climate and Microclimate

Climate includes rainfall and the temperature highs and lows of an area. Plants grown in their preferred temperature zone will survive cold winters and will require less water in the summer. Though nothing can change the climate, this information is useful when selecting plants for the landscape. The cold hardiness zone can be determined by consulting the USDA Cold Hardiness Zone Map available in most plant reference books. Much of Georgia is in cold hardiness zones 7 or 8. Plants are typically sold with a label that provides their cold hardiness zone.

“Microclimate” is a term that relates to a small area affected by the surroundings. A small pocket area may have a microclimate that permits a plant to survive in an otherwise harsh environment. Examples are a courtyard that stays warmer than nearby areas, or a wet area near a downspout. Make notes on the base map about any micro-climates observed.

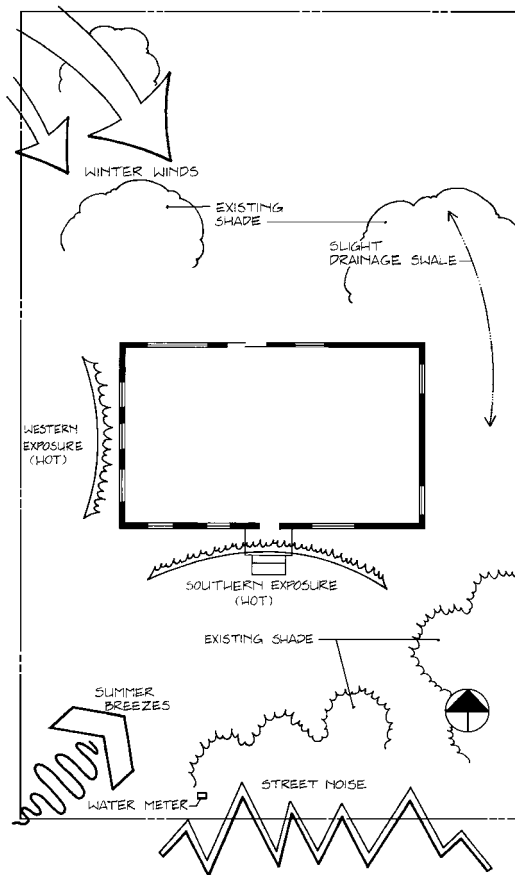


Figure 1. Example of site map.

Wind

In open areas, a strong wind can knock over newly-planted trees or dry out plants that are not well established. Constant winds can cause plants to grow crooked. In coastal areas, offshore winds bring salt spray, which can injure salt-intolerant plants. Because wind direction naturally shifts with the seasons, it is difficult to determine wind direction and speed. If wind problems are suspected, make observations throughout the year or ask neighbors for a history of wind direction and speed.

Utilities

Identify utility locations during a site analysis. Digging near underground gas or electric lines is dangerous. Phone and cable lines are typically buried very shallowly and are best moved before landscaping begins. Where a well or septic system is used, locate the lines prior to digging. These lines are seldom easy to locate unless they have been recently installed. In Georgia, all major utility companies belong to the Georgia Utility Protection Center, which provides free utility location prior to major landscape work. Contact this service while conducting a site analysis, and mark the locations of all identified utilities on the plan (Toll free: 1-800-282-7411).

Existing Plants

The site analysis should include an inventory of existing plants. If they are already established, existing plants are likely adapted to the site. Existing trees can provide shade and protection until the new plants become established.

A large, established shade tree is worth thousands of dollars and should be protected during construction or landscape work. Note hazardous trees or those in poor health, whether from construction damage, insects or disease. These will need professional care. Evaluate turfgrass areas, if any, for overall vigor. All of this information will help when it comes time to make important decisions about which plants to keep and which ones to remove to make way for the new landscape.

Wildlife

Wild animals can be enjoyable visitors, or they can be a serious problem. None are more bothersome than deer. Bambi might look cute in the front yard, but he is there to feed on landscape plants. The presence of deer varies with neighborhoods and seasons, but they have become a major problem in many parts of Georgia. If you have no personal experience with the site, ask neighbors to determine if deer are a problem. If unsure, introduce plants slowly until the extent of the problem can be determined. (See Circular 985, *Deer-Tolerant Ornamental Plants*, for more information.)

Other Landscape Features

Every site offers different features and opportunities. Walk the entire property, looking for features such as a rock outcropping, an old farm terrace, a small stream, a clearing or a path through a wooded area. These features could be incorporated into the design.

Putting It on Paper

Once all the site information is recorded on the base map, it's time to pull the information together. Shade or outline areas to represent the levels of sunlight available. Draw utility lines in different colors to represent each utility. Draw trees as big circles to represent the distance of their roots from the trunk. Label all existing features. Keep the base map free of messy notes by drawing on a piece of tracing paper laid over the base map. However the information for the site analysis is drawn, having it close at hand when drawing the landscape plan will keep the site at the forefront, ensuring the design fits the site.